APPENDIXES

APPENDIX A

GREENHOUSE GAS REDUCTION MEASURES MATRIX

TABLE 1 GREENHOUSE GAS REDUCTION MEASURES FOR DANVILLE SUSTAINABILITY ACTION PLAN

Measure Number	Measure Text	GHG (MTCO2e) and VMT Reduction (Per Year)	% of Total Reduction for this Sector	% of Total Reduction	Cost Effectiveness	Responsible Party
	TRANSPORTATION & LAND USE **Because the transportation and land use measures are interrelated and support one another, an independent GHG reduction value cannot be calculated for a single individual measure. However, the approximate contribution of each measure to the total GHG reduction value for this sector can be estimated based on the reduction in VMT that was projected for each measure.**	4,808 GHG 12,975,371 VMT				
LT-1	Update the zoning ordinance to further promote telecommuting and to provide additional operational flexibility for home-based businesses in existing and future residential neighborhoods, provided that neighborhood impacts are minimized, and the residential nature of structures and their surroundings is maintained. Subject to limitations, consider further flexibility to allowances for non-occupant employees in home-based businesses.	5,961,460 VMT	46%		High	Town/Development
LT-2	Encourage Employer Commute Trip Reduction Programs, such as ride-share programs, provision of end-of-trip facilities (showers, lockers), guaranteed ride home programs, promotion of telecommuting, and preferential parking permit programs.				High	Town/Employers
LT-3	Continue—and expand as feasible—the TRAFFIX program to reduce peak hour congestion around school campuses. The TRAFFIX program reduces traffic caused by parents driving their children to and from school. TRAFFIX is administered through a joint-powers agreement with other participating jurisdictions, and uses Measure J funds to provide low-cost school bus service as a means of avoiding congestion around school campuses.				High	Town/Program Partners
LT-4	Seek grant funding for continuation of the "Street Smarts" program, a collaborative effort by the Town of Danville, the City of San Ramon, the San Ramon Unified School District, and Contra Costa County. Through implementation of the program, or an equivalent successor program, increase traffic safety education through community events, school activities, neighborhood initiatives, and other public outreach measures. Continue to implement other pedestrian safety improvements, access-ways, and connections which make it safer and easier to walk to school.				High	Town/Program Partners
LT-5	Integrate new high-density multifamily housing that accommodates persons of all incomes and ages within Danville's newly designated Priority Development Area. An emphasis should be placed on linking such housing to nearby shopping areas, transit facilities, and civic uses to promote a more walkable, vibrant and economically successful Downtown.	3,156,312	24%		High	Town/Development
LT-6	Identify and eliminate barriers to the development of new multifamily projects within the Priority Development Area on lands already planned and zoned for such development.				Moderate–High	Town
LT-7	Initiate and implement zoning text amendments to accommodate the recalibrated multifamily density ranges created through the adoption of the Danville 2030 General Plan and the new Multifamily High Density land use designation. Revise the Danville zoning ordinance to include provisions for resident-supportive commercial uses within high density residential areas, thereby reducing trip generation rates for local services. Consider additional revisions to the existing Downtown Business District to incentivize mixed-use development and undertake other changes in order to advance the goals of reducing driving, promoting walking, and creating a complete community.				High	Town
LT-8	To the extent permissible by law, require affordable housing through imposition of the Town's inclusionary housing ordinance, and consider expansion of zoning incentives that would lead to the development of more affordable housing in the Downtown area and other areas served by public transit.				High	Town/Development
LT-9	Revise the parking standards for multifamily development within the Priority Development Area to reflect the greater availability of transit, greater proximity to workplaces and services, opportunities for shared parking, and walkable, mixed use character of the area. In addition, provide allowances for reduced parking for projects where it can be demonstrated that lower rates of auto ownership are likely or reduced dependency on vehicles will be experienced (for example, senior housing)	1,928,626	15%		High	Town/Development
LT-10	For new transit-oriented multifamily projects in the Priority Development Area, allow parking spaces to be sold or rented separately from housing units (i.e., allow the parking to be "unbundled" from the housing units).				High	Town/Development

TABLE 1 **GREENHOUSE GAS REDUCTION MEASURES FOR DANVILLE SUSTAINABILITY ACTION PLAN** (CONTINUED)

Measure Number	Measure Text	GHG (MTCO2e) and VMT Reduction (Per Year)	% of Total Reduction for this Sector	% of Total Reduction	Cost Effectiveness	Responsible Party
LT-11	Work with CCCTA (County Connection) to study the feasibility of a fixed-route shuttle system from the Sycamore Valley Park and Ride Lot to Downtown, major employment centers, and major retail centers.	1,578,156	12%		Unknown	Town/CCTA
LT-12	Work with regional transit agencies to increase the frequency and coverage of buses connecting Danville to other cities, such as Walnut Creek and San Ramon, as well as the BART stations in Walnut Creek and Dublin/Pleasanton.				Unknown	Town/Regional Transit Agencies
LT-13	Promote the safety and livability of Danville neighborhoods through continued use of the Neighborhood Traffic Management Program (NTMP), a citizen-based approach to traffic calming. Where appropriate, install NTMP-traffic calming measures to dissuade cut-through traffic, reduce vehicle speeds and volumes, and stimulate enhanced pedestrian and bicycle circulation. NTMP-traffic calming measures may include, but are not limited to, the following: speed humps, curb bulb-outs, textured pavement, bike lanes, and medians.	350,817	3%		Low	Town
LT-14	Work with established car-share businesses and non-profits to accommodate car-sharing in the Danville area.				Unknown	Town/Car-share organizations
LT-15	Implement General Plan policies to create a safer, more connected, and enhanced bicycle network in Danville, making it more feasible to travel within the Town without a motor vehicle.	--			Unknown	Town
LT-16	Continue investment in Downtown streetscape improvements which make it safer, more convenient, and more attractive to walk to, and within, Downtown Danville.	--			Unknown	Town
LT-17	Create opportunities for innovative workplaces within the Town which respond to the needs of the growing number of residents who telecommute, or who are self-employed and/or operate small businesses. This could include shared workplaces or "co-working" environments with shared administrative and support services. Accommodating such workplaces in Danville would reduce commuting to offices located in more distant communities, thereby reducing vehicle miles traveled.	--			High	Town/Development
Energy and Green Building						
EG-1	Encourage residential projects to participate in the California Energy Commission's New Solar Homes Partnership (and its successor program, as applicable). *The New Solar Homes Partnership provides rebates to developers of six units or more who offer solar power in 50 percent of new units, and is a component of the California Solar Initiative.*	0–658 GHG	0–73%		High	Town/Development
EG-1 Support Measures						
EG-1a	Provide technical assistance in conjunction with the plan review process, and continue to disseminate available information regarding green building, energy-efficient practices, and available rebates. Target these efforts to residents, property owners, development professionals, schools, and special districts.	--			Unknown	Town
EG-1b	Adopt the 2013 Building Energy Efficiency Standards, which require development applications for new and renovated buildings to accommodate design features facilitating the later installation of solar energy systems. *Where incorporated, "solar-ready" features should include: appropriate solar orientation; clear access on the south sloped roof electrical conduit installed for solar electric system wiring; plumbing installed for solar hot water system; and space provided for a solar hot water storage tank.*	--			High	Town/Development
EG-1c	In partnership with Pacific Gas and Electric (PG&E) and local alternative energy companies, provide for the development and installation of alternative energy facilities within the town, such as solar photovoltaic (PV) panels on urban residential and commercial roofs. *Such efforts would include the identification of optimal locations for such facilities and the implementation of best practices to avoid noise, aesthetic, and other potential land-use compatibility conflicts.*	--			Unknown	Town/PG&E

TABLE 1 **GREENHOUSE GAS REDUCTION MEASURES FOR DANVILLE SUSTAINABILITY ACTION PLAN** (CONTINUED)

Measure Number	Measure Text	GHG (MTCO2e) and VMT Reduction (Per Year)	% of Total Reduction for this Sector	% of Total Reduction	Cost Effectiveness	Responsible Party
EG-1d	Maintain low permitting fees for energy efficiency improvements and alternative energy system installation as a means to continue to incentivize such upgrades for Danville homes.	--			Unknown	Town
EG-1e	Disseminate information on applicable California Energy Commission energy efficiency requirements for the replacement of heating, ventilation, and air conditioning (HVAC) systems at the time of permit application, and ensure that these standards are fully enforced by the Building Division's plan examiners and building inspectors, and by the Town's consultant plan examiners.	--			Unknown	Town
EG-2	Within one year of any update to the State Building Code which increases energy efficiency requirements, amend the Danville Building Code to align with the new requirements and use available means to announce and summarize the changes to the public.	0–90 GHG	0–10%	<1%	Unknown	Town
EG-2 Support Measures						
EG-2a	Provide incentives for green building projects, such as by offering priority processing and field inspection services. *Green building projects would be projects that secure LEED-Silver certification or equivalent GreenPoint rating.*	--			High	Town
EG-2b	Identify and consider the merits of removing regulatory or procedural barriers to implementing green building practices, such as use of outdated codes, restrictive design guidelines, or zoning rules which serve to discourage green construction.	--			Unknown	Town
EG-2c	Train all Town plan examiners and building inspection staff in green building materials, techniques, and practices.	--			Unknown	Town
EG-2d	Coordinate with other local governments, special districts, nonprofits, and other public organizations to share resources, achieve economies of scale, and/or to develop green building policies and programs that are optimized on a sub-regional scale.	--			High	Town/Other Agencies
EG-2e	Review and amend the Town's Design Guidelines, landscaping requirements, and street tree planting and maintenance procedures with the goal of balancing the desire for solar access with the desire to expand the urban forest and reduce the "heat island" effect of pavement.	--			Unknown	Town/Development
EG-3	Maintain existing code requirements which require outdoor lighting fixtures to be energy-efficient, and expand these requirements as State codes are revised. Consider additional measures to reduce energy consumption from lighting fixtures, such as limitations on all-night outdoor lighting in construction sites, and encouraging the use of variable output lighting fixtures, timers, motion sensors and photocell-controlled fixtures	48 GHG	5–41%	<1%	Unknown	Town/Development
EG-4	Partner with PG&E and other appropriate energy providers to promote energy conservation, including the following: 1) Promote the purchase of ENERGY STAR appliances, the use of compact fluorescent light (CFL) or light-emitting diode (LED) bulbs, and the replacement of halogen lamps with more energy-efficient lamps; 2) Promote energy efficiency audits of existing buildings to check, repair, and readjust heating, ventilation, air conditioning, lighting, water heating equipment, insulation, and weatherization; 3) Encourage energy audits when residential and commercial buildings are sold, so that information regarding the opportunities for energy efficiency improvements are presented to the buyer; 4) Promote individualized energy management planning and related services for large energy users; and 5) Schedule periodic energy retrofits or "tune ups" of existing municipal buildings.	47 GHG	5–40%	<1%	Unknown	Town/PG&E
EG-5	Encourage the use of GreenPoint Rated Building Guidelines by providing the GreenPoint "checklist" to building permit applicants. *The use of GreenPoint guidelines should be particularly encouraged for new homes and projects that include remodels of at least 50 percent or more of a residence's square footage. The Town will publicize the link to the website maintained by the Build It Green organization to provide applicant access to the GreenPoint checklist. Build It Green is a membership supported non-profit organization whose mission is to promote healthy, energy- and resource-efficient homes in California.*	0–31 GHG	0–3%	<1%	Unknown	Town

TABLE 1 **GREENHOUSE GAS REDUCTION MEASURES FOR DANVILLE SUSTAINABILITY ACTION PLAN** (CONTINUED)

Measure Number	Measure Text	GHG (MTCO2e) and VMT Reduction (Per Year)	% of Total Reduction for this Sector	% of Total Reduction	Cost Effectiveness	Responsible Party
EG-6	Support efforts by Pacific Gas and Electric and other appropriate energy providers to provide incentives for solar water heater installation, pursuant to AB 1470 (Section 902 and Sections 2860-2867.3 of the California Public Utilities Code). *AB 1470, the Solar Hot Water Energy Efficiency Act of 2007, directs the California Energy Commission to establish a ten-year, statewide incentive program to encourage the installation of 200,000 solar water heating systems to offset natural gas usage for water and space heating. The incentives would be funded by energy providers (e.g. Pacific Gas and Electric) and typically include rebates to the customer; funds for this program would be provided by a surcharge of up to $250 million over ten years on certain major natural gas customers.*	18 GHG	2–15%	<1%	High	Town/PG&E
EG-7	Identify and remove regulatory and permit processing barriers that limit the ability to readily incorporate renewable energy generation improvements into mid- to large-size commercial or office projects undergoing rehabilitation and/or remodeling efforts.	0–9 GHG	0–1%	<!%	Unknown	Town
EG-7 Support Measures						
EG-7a	Utilize available rebates and incentives for energy efficiency and distributed generation installations. *Such rebates and incentives could receive support from State or regional programs, which are typically funded by a public good surcharge on monthly utility bills.*	--			High	Town/Utilities/Businesses/Residents
EG-7b	Facilitate the installation of parking lot solar arrays into commercial or office projects by eliminating the discretionary review "layer" for such projects. *The 1978 California Solar Rights Act does not necessarily bar reasonable restrictions on solar installations. It does establish the legal right to a solar easement, defines which solar energy systems are covered by its provisions, and limits local governments from adopting ordinances that would unreasonably restrict the use of solar energy systems.*	--			High	Town/Development
EG-8	Require new development to comply with Title 20 standards for energy efficient appliances and to use energy efficient lighting technologies that meet or exceed Title 24 standards. *Title 20 is an existing California state appliance efficiency regulation that has broad-reaching implications aimed at the reduction of energy consumption, reduced dependence on oil and strategies for addressing global climate change. A portion of this law mandates the efficiency of indoor and outdoor metal halide luminaires.* *Title 24 represents California's existing development standards for building energy efficiency Adopted in 2008, these standards address building insulation, HVAC systems, lighting, water heating, and other aspects of building construction and operations, and apply to all new buildings constructed within California.*	4 GHG	0–3%	<1%	Moderate	Town/Development
EG-9	Architects, landscape architects, and design-build contractors for new development and major rehabilitation and/or remodeling projects shall incorporate design measures which improve insulation and building energy efficiency, and reduce heat gain from impervious surfaces (roads, sidewalks, courtyards, parking lots, driveways, etc.), as required by the Town. *Measures to reduce heat gain include shade trees, paving materials with a Solar Reflectance Index (SRI) of at least 29, the use of open grid pavement, and the placement of parking beneath commercial structures, rather than in surface parking lots.*	1 GHG	0–1%	< 1%	Unknown	Town/Development
EG-9 Support Measures						
EG-9a	Participate in the CaliforniaFIRST program, which provides innovative, low-interest financing for energy efficiency projects for existing and new development. *The CaliforniaFIRST Program is a statewide Property Assessed Clean Energy (PACE) program authorized by the passage of AB 811 and AB 474. The CaliforniaFIRST Program provides financing for energy efficiency and renewable energy projects on residential and commercial properties. Under CaliforniaFIRST, the property owner repays the cost of the clean energy project through a line item on their property tax bill.*	--			Unknown	Town/Development
EG-9b	Continue to maintain information on funding sources that local residents, businesses, or the Town may access to fund energy audits so that homeowners and businesses may improve the energy-efficiency of their homes and buildings.	--			Unknown	Town

TABLE 1 **GREENHOUSE GAS REDUCTION MEASURES FOR DANVILLE SUSTAINABILITY ACTION PLAN** (CONTINUED)

Measure Number	Measure Text	GHG (MTCO2e) and VMT Reduction (Per Year)	% of Total Reduction for this Sector	% of Total Reduction	Cost Effectiveness	Responsible Party
EG-9c	Continue implementation of a low income weatherization programs sponsored and administered by PG&E and by Contra Costa County. *The Contra Costa County Weatherization Program is a federal and State funded program whose purpose is to assist low and/or fixed income residents throughout the County in making their homes more energy efficient. The program offers home improvements that will reduce monthly energy costs, including anything from caulking, weather-stripping doors, repair or replacement of gas water heaters, stoves and/or refrigerators.*	--			High	Town/PG&E/ Contra Costa County
EG-9d	Partner with local design professionals to create a brochure or web page to educate citizens on how to save energy through effective building design.	--			Unknown	Town/Designers
EG-10	Implement planned landscaping and streetscape capital improvements projects in the North Hartz area to make the area more comfortable for pedestrians, increase shade, and potentially reduce cooling costs for adjoining structures.	--			Unknown	Town
RW-1	Require submittal of Waste Management Plans for mid- to large-scale construction and renovation projects. Continue to undertake measures which move toward 75 percent diversion of construction waste, consistent with the 2020 goals of AB 341. *Under current Town Ordinance requirements, qualifying projects are required to divert 50 percent of non-hazardous construction materials and to use certified waste facilities. Qualifying projects are construction and renovation projects with a value of over $50,000 and/or have an affected construction area of over 1,000 square feet.*				High	Town/Development
RW-2	Consistent with AB 341, require all newly constructed multifamily developments and existing multifamily developments undergoing significant remodels to install or upgrade recycling areas for their residents, and to do so in a manner that meets Town and CCC Solid Waste Authority design standards. *Significant remodels are defined as those that add or alter 50 percent or more of the square footage or wall area. AB 341 requires the expansion of recycling to every multifamily dwelling and business, and would charge CalRecycle with the responsibility for ensuring that the state is diverting from landfills at least 75% of the garbage that it generates by 2020.*				High	Town/Development
RW-3	Encourage the use of salvaged materials; recycled-content materials; and/or other materials that have low production-energy costs, for building materials, hard surfaces, and non-plant landscaping.				Unknown	Town/Development
RW-4	Continue to work with public and private waste disposal entities to keep food and green waste out of landfills. *One potential program would be the expansion of the current "Food Recycling Project". That program entails a partnership between the CCC Solid Waste Authority, East Bay Municipal Utility District, and Allied Waste Services (AWS) to provide an innovative new program that diverts commercial food waste from landfill disposal for conversion into renewable energy. This project began as a pilot program in November 2008 and is currently available to serve restaurants, grocery stores, and other large commercial or institutional food waste generators in the Central Contra Costa County service area of the CCC Solid Waste Authority.*	1,934	100%	18–20%	High	Town/Waste Handlers
RW-5	Expand educational programs to inform residents about reuse, recycling, composting, waste to energy, and zero waste programs. *By 2010, Central Contra Costa residents had exceeded state regulations by recycling and composting 58% of their waste to make more efficient use of their landfill.*				Unknown	Town
RW-6	Support efforts by public and private waste disposal entities to reduce methane emissions released from waste disposal, and promote methane recovery at the landfill to use for energy production.				Unknown	Town/Waste Handlers
RW-7	Implement a pilot program for recycling containers in the Downtown area, and expand the program if the pilot containers experience adequate usage.				Unknown	
RW-8	Continue to partner with the CCC Solid Waste Authority to promote and encourage Danville residents to make us of the Authority's curbside pickup service for discarded holiday trees.				Unknown	

TABLE 1 **GREENHOUSE GAS REDUCTION MEASURES FOR DANVILLE SUSTAINABILITY ACTION PLAN** (CONTINUED)

Measure Number	Measure Text	GHG (MTCO2e) and VMT Reduction (Per Year)	% of Total Reduction for this Sector	% of Total Reduction	Cost Effectiveness	Responsible Party
WW-1	For new development, require all water use and efficiency measures identified as mandatory in the California Green Building Standards Code, and consider more stringent targets based on the Code's voluntary requirements. As feasible and appropriate, partner with local water conservation entities on the development and implementation of supportive efforts to reduce outdoor use of potable water. *California Green Building Standards Code requirements include: 1) reduce indoor potable water use by 20 percent after meeting the Energy Policy Act of 1992 fixture performance requirements, and 2) reduce outdoor potable water use by 50 percent from a calibrated mid-summer baseline case, for example through irrigation efficiency, plant species, recycled wastewater, and captured rainwater.or new development, require all water use and efficiency measures identified as mandatory in the California Green Building Standards Code, and consider more stringent targets based on the Code's voluntary requirements. California Green Building Standards Code requirements include: 1) reduce indoor potable water use by 20 percent after meeting the Energy Policy Act of 1992 fixture performance requirements, and 2) reduce outdoor potable water use by 50 percent from a calibrated mid-summer baseline case, for example through irrigation efficiency, plant species, recycled wastewater, and captured rainwater. As appropriate, partner with local water conservation companies on the development and implementation of supportive efforts for this measure.*				High	Town
WW-2	Continue to require new development to use native plants or other appropriate non-invasive plants that are drought-tolerant.				High	Town/Development
WW-3	Implement a revised Water Efficient Landscape Ordinance (WELO) with improved conservation programs and incentives for non-residential customers that are consistent with the Tier 1 water conservation standards of Title 24. As part of this new WELO, develop measures to encourage the use of low volume irrigation systems rather than sprinkler systems or other irrigation systems which use a larger volume of water.				Unknown	Town
WW-4	Require new multi-family and mixed use projects on Housing Opportunity Sites and other mid- to large-size development projects to install dual piping for reclaimed water use, in anticipation of the eventual availability of a reclaimed water supply for non-potable water use.	2,843	100%	27–29%	Unknown	Town/Development
WW-5	Continue to support EBMUD's tiered rate structures, which encourage efficient water use.				High	Town/EBMUD
WW-6	In collaboration with EBMUD, promote water audit programs that offer free water audits to single-family, multi-family, large landscape accounts, and commercial customers. Collaborate with purveyors to enact conservation programs for commercial, industrial, and institutional (CII) accounts, as well as programs to install ultra-low-flush toilets in public facilities.				Unknown	Town/EBMUD
WW-7	Promote the use of reclaimed water (i.e., treated wastewater) and gray water (i.e. shower water) for irrigation purposes consistent with the appropriate provisions of Title 22 and approval of the State Health Department. As part of this measure, support EBMUD efforts to inventory potential non-potable uses of water for potential substitution by recycled and/or gray water.				Unknown	Town/EBMUD
WW-8	Support EBMUD efforts to develop cost-effective strategies for increasing the supply of reclaimed water available to Danville for non-potable use. This should include the extension of reclaimed water infrastructure to Danville neighborhoods, and the development of new laterals and localized infrastructure which deliver this water supply to existing customers.				Unknown	Town/EBMUD
WW-9	Continue public information and school education programs to promote the benefits of water conservation, particularly those programs being implemented by EBMUD.				Unknown	Town/EBMUD
OL-1	In conjunction with the Bay Area Air Quality Management District, encourage yard equipment exchange programs which allow residents to trade in gas-powered machines for electric models.	--			--	Town/BAAQMD
OL-2	Require new developments to have outdoor electrical outlets to support use of electrical yard equipment, consistent with the current California Building and Energy Efficiency standards.	--			--	Town/Development

TABLE 1 **GREENHOUSE GAS REDUCTION MEASURES FOR DANVILLE SUSTAINABILITY ACTION PLAN** (CONTINUED)

Measure Number	Measure Text	GHG (MTCO2e) and VMT Reduction (Per Year)	% of Total Reduction for this Sector	% of Total Reduction	Cost Effectiveness	Responsible Party
OL-3	Develop incentives that encourage the public and private purchase and use of durable and nondurable items, including building materials, made from recycled materials or renewable resources.	--			--	Town
OL-4	Strongly support locally initiated efforts to develop community gardens on public easements, PG&E easements, rights of way, schoolyards, and other sites where gardens would be compatible with existing and planned land uses.	--			--	Town/Residents
OL-5	Continue to allow small scale urban agriculture through the Zoning Ordinance. Encourage pesticide free growing.	--			--	Town/Residents
OL-6	Continue to support the Danville Farmers' Market as a source for locally grown food.	--			--	Town
CO-1	Continue and expand Danville's Green Business Certification program and support the efforts of the Sustainable Business Program and other efforts which encourage local businesses to incorporate green and sustainable business practices.	--			--	Town/Businesses
CO-2	Provide information on green building, low impact development, and energy efficiency, recycling, and other sustainability initiatives on the Town's website.	--			--	Town
CO-3	Use the Danville Today electronic newsletter as a means of disseminating information on energy efficiency and conservation programs to Danville residents and businesses.	--			--	Town
CO-4	Work with the BAAQMD, MTC, and other agencies to develop youth-oriented education and awareness programs relating to air quality and the imperative of greenhouse gas reduction. This should include a youth-oriented spare the air program.	--			--	Town/Other Agencies

APPENDIX B

GREENHOUSE GAS MODELING TECHNICAL DOCUMENTATION

Local Waste Reduction Measures

Waste	Existing			
	Tons/Day	GHG MTons	Diverted Tons/Day	Total
Solid Waste	37,208	NA	NA	
ADC	12,452	NA	NA	
Total	49,660	7,383	47,080	96,740

Waste	2020			
	Tons/Day	GHG MTons	Diverted Tons/Day	Total
Solid Waste	39,563	NA	NA	
ADC	13,240	NA	NA	
Total	52,803	7,851	50,060	102,863
Increase	3,143	468		

Waste	2035			
	Tons/Day	GHG MTons	Diverted Tons/Day	Total
Solid Waste	42,506	NA	NA	
ADC	14,225	NA	NA	
Total	56,731	8,435	53,784	110,515
Increase	3,928	584		

	Average Diversion Rate
CalRecycle average diversion rate for Danville (2004 to 2006; not reported after 2007)	51%
2000	51%
2001	53%
2002	55%
2003	62%
2004	56%
2005	51%
2006	47%

Source: CalRecycle. Countywide, Regionwide, and Statewide Jurisdiction Diversion/Disposal Progress Report
http://www.calrecycle.ca.gov/LGCentral/Reports/jurisdiction/diversiondisposal.aspx

Local Measures that Support Waste Reduction and the Statewide Goal of 75% Waste Diversion

Assembly Bill 939 (AB 939), the California Integrated Waste Management Act of 1989, requires jurisdictions to divert 50 percent of waste from landfills. In 2011, the Governor signed Assembly Bill 341 (AB 341) expanding the waste reduction goals by ensuring the state is diverting 75 percent of municipal solid waste. AB 341 identifies a goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020.

SW-1	Revise the existing construction and demolition ordinance to require at least 50 percent diversion (i.e. reuse or recycling) of non-hazardous construction waste from disposal.
SW-2	within existing trash areas. Significant redevelopments and remodels include those that add or change 50 percent or more of the square footage or wall area.
SW-3	Partner with Pacific Gas and Electric to establish an end-of-life requirement for appliance disposal. Establish a protocol per US EPA's Responsible Appliance Disposal Program.
SW-4	Require the use of salvaged and recycled-content materials and other materials that have low production energy costs for building materials, hard surfaces, and non-plant landscaping. Require sourcing of construction materials locally, as feasible.
SW-5	Work with public and private waste disposal entities to keep food and green waste out of landfills.
SW-6	Expand educational programs to inform residents about reuse, recycling, composting, waste to energy, and zero waste programs.
SW-7	Work with public and private waste disposal entities to reduce methane emissions released from waste disposal and promote methane recovery at the landfill to use for energy production.
SW-8	Fund methane recovery programs through a waste disposal fee or through participation in a cap and trade market.
SW-9	Provide recycling containers in the Downtown area.
SW-10	Provide for the curbside pickup of holiday trees.
SW-11	Implement universal color coding for waste receptacles.

Based on historical trends in waste disposal reduction, as reported by CalRecycle, for the Town of Danville. Not corrected for SOI or Planning Area population and employment. Although population and employment increased, generally waste disposal has decreased.

Disposal Year	Solid Waste Disposal Tons	Alternative Daily Cover Tons	Total Tons
2005	33,537	11,804	45,341
2006	37,059	13,303	50,362
2007	36,782	11,426	48,207
2008	29,547	9,869	39,416
2009	NA	NA	NA
2010	NA	NA	NA

Source: California Department of Resources Recycling and Recovery (CalRecycle). Disposal Reporting System. Jurisdiction Disposal by Facility, Danville, 2005-2008. http://www.calrecycle.ca.gov/lgcentral/Reports/DRS/Default.aspx

1 Includes materials used for Alternative Intermediate Cover (AIC) in ADC. However, AIC materials are stipulated under the Public Resources Code Section 41781.3 as recycling and not disposal and are calculated separately in disposal years 2006 and after.

	Percent Reduction MSW	Percent Reduction ADC
2005-2006	10.5%	12.7%
2006-2007	-0.7%	-14.1%
2007-2008	-19.7%	-13.6%
2008-2009	NA	NA
Average % Reduction Per Year	-3.3%	-5.0%

Exponential Equation

Reduction = Beginning Amount (1 + r)^t

r = rate

t = time (8 years from 2012 to 2020)

The modeling conservatively assumes a 62% waste diversion rate (approximately 11 percent increase) based on historic trends in waste disposal in the Town for 2020 and 75% goal for 2035.

Waste	2020 MSW Adjusted Tons/Day	2020 ADC Adjusted Tons/Day	GHG MTons	Diversion Rate
Total	30,234	8,776	5,917	62%
Reduction	9,329	4,464	1,934	

Waste	2035 MSW Adjusted Tons/Day	2035 ADC Adjusted Tons/Day	GHG MTons	Diversion Rate
Total	22,442	5,356	4,321	75%
Reduction	20,064	8,869	4,114	

1 2008 units, residential units and employment have been interpolated from 2000 and 2010 estimates. While 2008 estimates are availbe from ABAG, the are apples-and-oranges with the numbers that were used for the actual projections.

2 The projections offered by the client for units are actually households living in various types of units. Client has recommended that we adjust households by Danville's 2006-2010 vacancy rate to estimate 2008 and 2035 units.

3 Per client direction, estimates of the presence of second units have been excluded from housing totals because these numbers are too uncertain and would represent <2% of the housing stock

4 Resident population estimates are based of existing/projeted number of households multiplied by census gauged persons per household

5 Total gas and electricity use figures include residential, commercial/industrial, and city use only. (County and district are excluded)

6 Water use by use category is available if need be

7 Wate disposal represents average of years 2006, 2007, and 2008. In 2009 Danville joined a regional waste district, so data for the Town alone are no longer available starting in that year.

8 Waste disposal data is for all sectors. Limited additional by-sector information is available in the solid waste summary spreadsheet

9 Water use is EMBUD data for Town of Danville averaged over years 2006, 2007, 2008

10 EMBUD and CalRecycle did not provide precise boundaries for the area considered to be the Town of Danville, so it is uncertain whether these areas are only those within the Town Limit or also include areas in the SOI or planning area.

11

DATA NEEDS		CITY				SPHERE OF INFLUENCE outside Town Limit				Planning Area outside SOI				TOTAL			
		Existing	Existing	GP Horizon	SAP	Existing	Existing	GP Horizon	SAP	Existing	Existing	GP Horizon	SAP	Existing	Existing	GP Horizon	SAP
	Source	2008	2010	2035	2020	2008	2010	2035	2020	2008	2010	2035	2020	2008	2010	2035	2020
Residents	General Plan	42,287	42,641	47,198	44,467	1,720	2,150	2,321	2,100	2,529	2,582	4,266	3,279	46,536	47,373	53,785	49,846
Residential Units (not households!!!)	General Plan	15,593	15,724	17,404	16,397	634	793	856	775	933	952	1,573	1,209	17,160	17,469	19,833	18,381
Employment	General Plan	14,858	14,914	16,302	15,485	64	76	97	81	240	266	298	272	15,162	15,256	16,697	15,838
Non-Residential SQFt by type*	General Plan													0		0	0
Industrial*	General Plan																
Commercial/Retail*	General Plan																
Office*	General Plan																
VMT	Fehr & Peers													0		0	0
Trips start/end within City	Fehr & Peers																
Trips start in the City but external trip end	Fehr & Peers																
Trips end in the City but external trip start	Fehr & Peers																
Purchased Electricity (Kwh)	PG&E	209,344,014		232,626,185	219,626,335	6,538,110		8,861,563	7,996,136	10,147,070		16,725,535	13,012,680	226,029,193		258,213,283	240,635,151
Residential	PG&E	152,635,678		170,362,020	160,503,683	6,208,371		8,377,691	7,581,327	9,128,470		15,398,203	11,834,772	167,972,519		194,137,914	179,919,781
Commercial/Industrial	PG&E	53,532,306		58,734,935	55,790,637	230,587		349,484	293,546	864,703		1,073,673	980,554	54,627,596		60,158,091	57,064,736
Municipal	PG&E	3,176,029		3,529,230	3,332,015	99,152		134,389	121,264	153,897		253,660	197,355	3,429,078		3,917,278	3,650,633
Natural Gas (Therms or Btu)	PG&E	11,456,703		12,763,688	12,035,640	420,817		568,748	514,157	630,946		1,055,368	814,741	12,508,467		14,387,805	13,364,538
Residential	PG&E	10,205,292		11,390,483	10,731,350	415,095		560,136	506,891	610,334		1,029,531	791,278	11,230,720		12,980,150	12,029,519
Commercial/Industrial	PG&E	1,239,066		1,359,486	1,291,337	5,337		8,089	6,794	20,015		24,851	22,696	1,264,417		1,392,427	1,320,828
Municipal	PG&E	12,346		13,719	12,952	385		522	471	598		986	767	13,330		15,227	14,191
Water/Wastewater (million gallons)	General Plan?	6,540,798		7,268,189	6,862,040	204,196		276,763	249,733	316,939		522,394	406,437	7,061,933		8,067,346	7,518,211
Waste Disposal (tons)	CalRecycle	34,463		38,295	36,155	1,076		1,458	1,316	1,670		2,752	2,141	37,208		42,506	39,613
	ADC	11,533		12,816	12,099	360		488	440	559		921	717	12,452		14,225	13,256

Notes:

Year 2010 used for data. However, target needs to be calibrated since BAAQMD defines existing as 2005-2008 yea

Data aggregated for City + Planning Area. For the SAP this will be footnoted since although the City doesn't currently have jurisdictional authority over these planning areas, if incorporated they would. Therefore, they are included in both the existing and future model year scenario

* Ideally we would want sqft. Other metrics (such as acreage) could be used but this is far less reliable and we'd have additional assumptions for reductions in the absense of this data

2008 units, residential units and employment have been interpolated from 2000 and 2010 estimates. While 2008 estimates are availbe from ABAG, the are apples-and-oranges with the numbers that were used for the actual projections.

Residential electricity demand extrapolated based on projections of number of residents

Commercial/Industrial electricity demand extrapolated based on number of people employed

Total City electricity use also includes electricity use for city governement. City government electricity use was scaled/extrapoloated by combined employment and residential totals.

Summary of State and Federal GHG Reductions

		$MTCO_2e$ 2020	$MTCO_2e$ 2035
Federal State Reductions			
Energy	2020 PG&E CO2 Intensity - Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. The California Air Resources Board (CARB) has now approved an even higher goal of 33 percent by 2020. Investor-owned utilities, such as PG&E are also required to participate in CARB's Cap-and-Trade program and reduce High Global Warming Potential (HGWP) gases, such as reductions of SF6.	30,894	33,192
Energy	Title 24 Cycle updates to the California Building Code - The 2008 Building and Energy Efficiency standards (Title 24, Part 6) are approximately 15 percent more energy efficient than the 2005 Building and Energy Efficiency standards, which were in place at the time of CARB's Scoping Plan. The California Energy Commission anticipates that future code cycles (2014 and beyond) may require a 30 percent increase in energy efficiency compared to the 2008 Building and Energy Efficiency Standards. However, these future cycles are not included in the Adjusted Forecast.	858	1,930
Energy	SMART Grid - The California Public Utilities Commission (CPUC) has initiated a rulemaking R.08-12-009 to for California investor-owned electric utilities to develop a smarter electric grid in the state. Pursuant to Senate Bill 17, the CPUC developed requirements for a Smart Grid deployment plan. In July 2011, California Utilities filed with the CPUC 10-year Smart Grid Deployment Plans. New Smart Meters provide real-time electricity use information to consumers.	900	900
Transportation	The Federal Government has adopted and has implemented improved Federal Corporate Economy Fuel Efficiency (CAFE) Standards for vehicles that correspond with the California Assembly Bill 1493 (AB 1493) Pavley I Fuel Efficiency Standards. In addition, the State of California has adopted the Low Carbon Fuel Standard (LCFS). In January 2012, the California Air Resources Board (CARB) adopted the Advanced Clean Car Program which implements the Pavley II Fuel Efficiency Standards and projects that by 2025, one in every seven new cars sold will be electric vehicles (PHEV or PEV). However, the Pavley II Advanced Clean Car Program is not included in the transportation emissions reductions and therefore reductions are conservative.	39,361	60,881
Water	Water-Related Energy Use, 2020 PG&E CO2 Intensity - Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. The California Air Resources Board (CARB) has now approved an even higher goal of 33 percent by 2020. Investor-owned utilities, such as PG&E are also required to participate in CARB's Cap-and-Trade program and reduce High Global Warming Potential (HGWP) gases, such as reductions of SF6.	11,531	12,389
Other	Other Sources, Low Carbon Fuel Standard (LCFS) - Requires the carbon content of fuel to be reduced by 10 percent.	1,849	1,858
		85,393	111,150
	Percent Reduction from BAU	23%	26%

		$MTCO_2e$ 2020	% of Local	$MTCO_2e$ 2035	% of Local	Cost Effectivness
Land Use and Transportation Reductions						
LT-1	Update the Land Use and Development Code to promote telecommuting and allow home-based businesses in existing and future residential neighborhoods, subject to appropriate parking or traffic restrictions to protect neighborhood character.					High
LT-2	Encourage Employer Commute Trip Reduction Programs, which would be multi-strategy programs that encompass a combination of individual measures, such as ride-share programs, discounted transit program, end-of-trip facilities (showers, lockers), promotion of telecommuting, and preferential parking permit programs.					High
LT-3	Implement a School Pool Program that helps match parents to carpool students to school.	2,209	21%	2,396	17%	High
LT-4	Seek grant funding to establish Safe Routes to School (SR2S) Program to increase student walking and biking. The program may include: conducting school walking audits, improving nearby pedestrian and bicycle facilities, implementing nearby traffic calming measures, implementing school bus, vanpool, and carpools to school, implement walking buses to schools, and conducting traffic studies for specific schools for more efficient drop-off and pick-up activity at schools (staggered schedules, changing on-street parking to loading zones, etc.).					High
LT-5	Require a variety of local-serving commercial uses and encourage mixed-use development in the Downtown and at Housing Opportunity sites, reducing vehicle miles traveled (VMT).					High
LT-6	Incentivize land use intensity near and connectivity to retail and employment centers, services, and transit to reduce vehicle miles traveled (VMT) and increase the efficiency of delivery of services.	1,169	11%	1,269	9%	High
LT-7	Foster land use intensity near, along with connectivity to, the Downtown area.					High
LT-8	Require affordable housing to be located in transit-oriented development whenever feasible.					Moderate
LT-9	Reduce or eliminate parking requirements and establish parking maximums for non-residential and residential developments where alternative transportation facilities exist or are planned. Single-family homes would be excluded from this measure.	715	7%	775	5%	High
LT-10	Require that the cost of parking be unbundled from residential and commercial rents.					High
LT-11	Provide a fixed route shuttle system from key residential areas to Downtown, major employment centers, and major retail centers.	585	6%	634	4%	Low
LT-12	Work with regional transit agencies to increase the frequency and coverage of inter-town buses connecting Danville to other cities, such as Walnut Creek and San Ramon, as well as BART.					Low
LT-13	Design and implement traffic calming measures to dissuade cut-through traffic, reduce vehicle speeds and volumes, and attract pedestrian and bicycle traffic. Traffic calming measures may include the following: speed humps, curb bulb-outs, texture pavement, bike lanes, and medians.	130	1%	141	1%	Low
LT-14	Create a local car-sharing program or seek the expansion of an existing non-profit or for-profit car-share program into the Danville area.					Low
Energy and Green Building Reductions						
EG-1	Require that residential projects of six units or more participate in the California Energy Commission's New Solar Homes Partnership, which provides rebates to developers of six units or more who offer solar power in 50 percent of new units and is a component of the California Solar Initiative, or a similar program with solar power requirements equal to or greater than those of the California Energy Commission's New Solar Homes Partnership.	658	6%	1,481	10%	High
EG-1 Support measures						
EG-1a	Utilize all available rebates and incentives for energy efficiency and distributed generation installations, such as State public good programs (funding for energy efficiency from a "public good" fee on utility bills) and solar programs.					High
EG-1b	Require all new buildings to be constructed to allow for the easy, cost-effective installation of future solar energy systems. "Solar ready" features should include: proper solar orientation (i.e. south facing roof area sloped at 20° to 55° from the horizontal); clear access on the south sloped roof (i.e. no chimneys, heating vents, plumbing vents, etc.); electrical conduit installed for solar electric system wiring; plumbing installed for solar hot water system; and space provided for a solar hot water storage tank.					High
EG-1c	In partnership with Pacific Gas and Electric and local alternative energy companies, develop an Alternative Energy Development Plan that includes townwide measurable goals and identifies the allowable and appropriate alternative energy facility types within the town, such as solar photovoltaic (PV) on urban residential and commercial roofs. Propose phasing and timing of alternative energy facility and infrastructure development. Provide the development review process list/worksheet to new alternative energy projects and conduct a review of Town policies and ordinances to address alternative energy production. Identify optimal locations and best means to avoid noise, aesthetic, and other potential land use compatibility conflicts (e.g., install tracking solar PV or angle fixed solar PV in a manner that reduces glare to surrounding land uses).	--	--	--	--	Low
EG-1d	Waive fees for permitting for solar array installation.					High
EG-1e	Where feasible, increase solar access by requiring that new streets be designed so that the blocks have one axis within plus or minus 15 degrees of geographical east/west, and the east/west length of those blocks are at least as long, or longer, as the north/south length of the block. Areas with topological constraints, among others, may be excluded from this requirement					Low

		$MTCO_2e$ 2020	% of Local	$MTCO_2e$ 2035	% of Local	Cost Effectivness
EG-2	Develop a Green Building Ordinance that requires energy efficient design, in excess of Title 24 standards, for all new residential and non-residential buildings. (15 to 40 percent above Title	90	1%	113	1%	High
EG-2 Support Measures						
EG-2a	Allow greater development flexibility, and provide permitting-related and other incentives for LEED-Silver certification or equivalent GreenPoint rating, e.g. give green projects priority in plan review, processing, and in field inspection services.		0%		0%	High
EG-2b	Identify and remove regulatory or procedural barriers to implementing green building practices in the town by updating codes, guidelines, and zoning.		0%		0%	High
EG-2c	Train all plan review and building inspection staff in green building materials, techniques, and practices.		0%		0%	Low
EG-2d	Provide green building information, marketing, training, and technical assistance to property owners, development professionals, schools, and special districts.		0%		0%	Moderate
EG-2e	Coordinate with other local governments, special districts, nonprofits, and other public organizations to share resources, achieve economies of scale, and develop green building policies and programs that are optimized on a regional scale.		0%		0%	High
EG-2f	Develop a "heat island" mitigation plan that includes guidelines for cool roofs, cool pavements, and strategically placed shade trees. Amend the applicable Design Guidelines to integrate the guidelines. Evaluate and balance tradeoffs between solar access and landscape tree shading in Design Guidelines.		0%		0%	High
EG-3	Require outdoor lighting fixtures to be energy-efficient. Require parking lot light fixtures and light fixtures on buildings to be on full cut-off fixtures, except emergency exit or safety lighting, and all permanently installed exterior lighting shall be controlled by either a photocell or an astronomical time switch. Prohibit continuous all night outdoor lighting in construction sites unless required for security reasons. Revise the Town Code to include these requirements.	48	0%	48	0%	High
EG-4	Partner with Pacific Gas & Electric and other appropriate energy providers to promote energy conservation, including the following: 1) Promote the purchase of ENERGY STAR appliances. Distribute free compact fluorescent light (CFL) bulbs and/or fixtures to community members. 2) Offer a halogen torchiere lamp exchange to community members. 3) Promote energy efficiency audits of existing buildings to check, repair, and readjust heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization. 4) Encourage energy audits to be performed when residential and commercial buildings are sold. Energy audits will include information regarding the opportunities for energy efficiency improvements, and will be presented to the buyer. 5) Commercial buildings to be "benchmarked" using EPA's ENERGY STAR Portfolio Manager Tool, consistent with AB 1103, which requires disclosure of commercial buildings' energy efficiency rating. 6) Promote individualized energy management planning and related services for large energy users. 7) Fund and schedule energy efficiency retrofits or "tune-ups" of existing	47	0%	67	0%	Unknown
EG-5	Adopt GreenPoint Rated Building Guidelines and require all new and significantly remodeled homes to follow the Guidelines. Significantly remodeled homes includes remodels of 50 percent or more of the square footage or wall area of the home.	31	0%	58	0%	High
EG-6	In partnership with Pacific Gas and Electric and other appropriate energy providers, develop a program that provides incentives that meet or exceed those of AB 1470 (Section 902 and Sections 2860-2867.3 of the California Public Utilities Code). AB 1470, the Solar Hot Water Energy Efficiency Act of 2007, directs the California Energy Commission to establish a ten-year, statewide incentive program to encourage the installation of 200,000 solar water heating systems to offset natural gas usage for water and space heating. The incentives would be funded by the energy providers (e.g. Pacific Gas and Electric) and typically include rebates to the customer; funds for this program would be provided by a surcharge on certain natural gas customers up to $250 million over ten years.	18	0%	23	0%	Unknown
EG-7	Require that new or major rehabilitations of commercial, office, or industrial development greater than or equal to 20,000 square feet in size incorporate solar or other renewable energy generation to provide 15 percent or more of the project's energy needs. Major rehabilitations are defined as remodeling/ additions of 20,000 square ft of office/retail commercial or 100,000 square feet of industrial floor area. Remove regulatory barriers to incorporating renewable energy generation.	9	0%	30	0%	High
EG-7 Support measures						
EG-7a	Utilize all available rebates and incentives for energy efficiency and distributed generation installations, such as State public good programs (funding for energy efficiency from a "public good" fee on utility bills) and solar programs.		0%		0%	High
EG-7b	Require all new buildings to be constructed to allow for the easy, cost-effective installation of future solar energy systems. "Solar ready" features should include: proper solar orientation (i.e. south facing roof area sloped at 20° to 55° from the horizontal); clear access on the south sloped roof (i.e. no chimneys, heating vents, plumbing vents, etc.); electrical conduit installed for solar electric system wiring; plumbing installed for solar hot water system; and space provided for a solar hot water storage tank.		0%		0%	High
EG-7c	In partnership with Pacific Gas and Electric and local alternative energy companies, develop an Alternative Energy Development Plan that includes townwide measurable goals and identifies the allowable and appropriate alternative energy facility types within the town, such as solar photovoltaic (PV) on urban residential and commercial roofs. Propose phasing and timing of alternative energy facility and infrastructure development. Provide the development review process list/worksheet to new alternative energy projects and conduct a review of Town policies and ordinances to address alternative energy production. Identify optimal locations and best means to avoid noise, aesthetic, and other potential land use compatibility conflicts (e.g., install tracking solar PV or angle fixed solar PV in a manner that reduces glare to surrounding land uses).		0%		0%	Low
EG-7d	Waive fees for permitting for solar array installation.		0%		0%	High

		$MTCO_2e$ 2020	% of Local	$MTCO_2e$ 2035	% of Local	Cost Effectivness
EG-7e	Work with the local school districts to encourage the use of solar energy systems at school facilities.		0%		0%	High
EG-7f	Incentivize installation of parking lot solar arrays		0%		0%	Unknown
EG-8	Require new development to use energy-efficient appliances that meet Energy Star standards and energy efficient lighting technologies that meet or exceed Title 24 standards.	4	0%	5	0%	High
EG-9	Require all new development and major rehabilitation (i.e., additions or remodels of 20,000 square feet of office/retail commercial or 100,000 square feet of industrial floor area) projects to incorporate any combination of the following strategies to reduce heat gain for 50 percent of the non-roof impervious site landscape, which includes roads, sidewalks, courtyards, parking lots, and driveways: shaded within five years of occupancy; paving materials with a Solar Reflectance Index (SRI) of at least 29; open grid pavement system; and parking spaces underground, under deck, under roof, or under a building. Any roof used to shade or cover parking must have an SRI of at	1	0%	1	0%	Unknown
EG-9 Support Measures						
EG-9a	Participate in the CaliforniaFIRST program, which provides innovative, low-interest financing for energy efficiency projects for existing and new development.		0%		0%	Unknown
EG-9b	Compile a list of funding sources that local residents, businesses, or the Town could potentially access to fund energy audits to inform homeowners and businesses of opportunities to improve the energy-efficiency of their homes and buildings.		0%		0%	Unknown
EG-9c	Seek funding to implement a low-income weatherization program.		0%		0%	High
EG-9d	Form a volunteer committee of local design professionals to create a brochure to educate citizens on how to save energy through design.		0%		0%	Unknown
Recycling and Waste Reductions						
RW-1	Revise the existing construction and demolition ordinance to require at least 50 percent diversion (i.e. reuse or recycling) of non-hazardous construction waste from disposal.					High
RW-2	Require all new and significant redevelopments/remodels of existing multi-family developments to provide recycling areas for their residents within existing trash areas. Significant redevelopments and remodels include those that add or change 50 percent or more of the square footage or wall area.					High
RW-3	Partner with Pacific Gas and Electric to establish an end-of-life requirement for appliance disposal. Establish a protocol per US EPA's Responsible Appliance Disposal Program.					Unknown
RW-4	Require the use of salvaged and recycled-content materials and other materials that have low production energy costs for building materials, hard surfaces, and non-plant landscaping. Require sourcing of construction materials locally, as feasible.					Unknown
RW-5	Work with public and private waste disposal entities to keep food and green waste out of landfills.	1,934	18%	4,114	29%	Unknown
RW-6	Expand educational programs to inform residents about reuse, recycling, composting, waste to energy, and zero waste programs.					Unknown
RW-7	Work with public and private waste disposal entities to reduce methane emissions released from waste disposal and promote methane recovery at the landfill to use for energy production.					Unknown
RW-8	Fund methane recovery programs through a waste disposal fee or through participation in a cap and trade market.					Unknown
RW-9	Provide recycling containers in the Downtown area.					Unknown
RW-10	Provide for the curbside pickup of holiday trees.					Unknown
RW-11	Implement universal color coding for waste receptacles.					Unknown
Water and Wastewater Reductions						
WW-1	For new development, require all water use and efficiency measures identified as voluntary in the California Green Building Standards Code, and consider more stringent targets. California Green Building Standards Code requirements include: 1) reduce indoor potable water use by 20 percent after meeting the Energy Policy Act of 1992 fixture performance requirements, and 2) reduce outdoor potable water use by 50 percent from a calibrated mid-summer baseline case, for example through irrigation efficiency, plant species, recycled wastewater, and captured rainwater. Establish Town requirements for discretionary projects regarding watering timing, water-efficient irrigation equipment, water-efficient fixtures, and offsetting demand so that there is no net increase in imported water use. Include clear parameters for integrating water conservation infrastructure and technologies, including low-flush toilets and low-flow showerheads. As appropriate, partner					Unknown
WW-2	Require new development to use native plants or other appropriate non-invasive plants that are drought-tolerant.					High
WW-3	Implement a Water Efficient Landscape Ordinance with improved conservation programs and incentives for non-residential customers.					High
WW-4	Adopt a water efficiency retrofit ordinance that requires upgrades as a condition of issuing permits for renovations or additions. Work with local water purveyors to achieve consistent standards and review and approval procedures for implementation.					High

		$MTCO_2e$ 2020	% of Local	$MTCO_2e$ 2035	% of Local	Cost Effectivness
WW-5	Work with EBMUD to adopt water conservation pricing, such as tiered rate structures, to encourage efficient water use. As part of this measure, the water districts would conduct the following: 1) Provide notices in each billing to accounts with water use budgets showing the relationship between the budget and actual consumption. 2) Encourage wholesale water suppliers to provide financial incentives to their retail water agency customers that encourage water conservation efforts. 2) Work with EBMUD to meter with commodity rates for all new connections, and retrofit existing connections. 3) To help monitor landscaping water use, create accounts with dedicated irrigation meters, or develop and implement a strategy targeting and marketing large landscape water use surveys to commercial/industrial/ institutional accounts with mixed-use	2,843	27%	3,055	21%	High
WW-6	In collaboration with EBMUD, promote water audit programs that offer free water audits to single-family, multi-family, large landscape accounts, and commercial customers. Collaborate with purveyors to enact conservation programs for commercial, industrial, and institutional (CII) accounts and create programs to install ultra-low-flush toilets in facilities.					Unknown
WW-7	Promote the use of reclaimed water (i.e., treated wastewater) and gray water for irrigation purposes consistent with the appropriate provisions of Title 22 and approval of the State Health Department. As part of this measure, conduct the following: • Inventory potential non-potable uses of water for potential substitution by recycled and/or gray water. • Collaborate with responsible agencies to encourage the use of recycled water where cost and energy efficiencies for its production, distribution and use are favorable.					Unknown
WW-8	Develop a Non-Potable Water Master Plan, which covers the use of recycled water for non-potable uses. 1) Inventory potential non-potable uses of water for potential substitution by recycled water. 2) Assess associated energy/GHG tradeoffs versus non-recycled water supply. 3) Collaborate with responsible agencies to encourage the use of recycled water where cost and energy efficiencies for its production, distribution and use are favorable.					Low
WW-9	Implement a public information and school education program to promote water conservation and its benefits in coordination with efforts of local water purveyors. Conduct public education and outreach to reduce watering of non-vegetated surfaces and promote the use of pervious paving materials.					Unknown
Other and Life-Cylce Emissions Sources Reductions						
OL-1	Initiate yard equipment exchange program to allow residents to trade in gas-powered machines for electric models.	0.1	0%	0.1	0%	Unknown
OL-2	Adopt an ordinance to ban the use of two-stroke engine leaf blowers. As part of this ordinance, establish planting and maintenance guidelines to reduce maintenance needs.	--	--	--	--	Unknown
OL-3	Require new developments to have outdoor electrical outlets to support use of electrical yard equipment.	--	--	--	--	Unknown
OL-4	Require the use of cement substitutes and recycled building materials for new construction.	--	--	--	--	Low
OL-5	Develop policies, incentives, and design guidelines that encourage the public and private purchase and use of durable and nondurable items, including building materials, made from recycled materials or renewable resources.	--	--	--	--	Unknown
OL-6	Identify and inventory potential community garden and urban farm sites on public easements, PG&E easements, right-of-ways, and schoolyards, and develop a program to establish community gardens in appropriate locations.	--	--	--	--	Unknown
OL-7	Allow small-scale and pesticide-free food production through the Zoning Ordinance, with an emphasis on local food production.	--	--	--	--	Unknown
OL-8	Encourage significant new residential developments over 50 units to include space that can be used to grow food.	--	--	--	--	Unknown
OL-9	Establish a process through which a neighborhood can propose and adopt a site as a community garden.	--	--	--	--	Unknown
OL-10	Continue to support the Danville Farmers' Market as a source for locally-grown food.	--	--	--	--	Unknown
OL-11	Require the Danville farmers' market to accept food stamps and other public food benefits.	--	--	--	--	Unknown
OL-12	Continue economic vitality programs aimed at supporting local business by encouraging residents to shop locally.	--	--	--	--	Unknown
Community Outreach Measures						
CO-1	Develop and implement an outreach plan to engage local businesses in climate change reduction programs.					Unknown
CO-2	Establish and maintain a "sustainability information center" at Town Hall or Library to inform the public and distribute available brochures, and provide information on sustainability on the Town's website.	--	--	--	--	Unknown
CO-3	Create Growing Greener Together Campaign, which provides Town employees and community members with a newsletter featuring green tips and best practices for home and at work.					Unknown
		10,491		14,211		

Summary of Danville's GHG Emissions

	2008		2020		2035		2020 Adjusted		2035 Adjusted	
	MTons	**Percent**	**MTons**	**Percent**	**MTons**	**Percent**	**MTons**	**Percent**	**MTons**	**Percent**
Transportation	158,620	45%	169,290	45%	201,830	48%	129,920	45%	140,950	46%
Residential	119,120	34%	127,360	34%	137,670	33%	102,840	36%	110,340	36%
Purchased Electricity	44,240		47,300		51,130		23,300		24,970	
Natural Gas	74,880		80,060		86,540		79,540		85,370	
Commercial/Industrial	23,810	7%	24,890	7%	26,260	6%	16,760	6%	17,570	6%
Purchased Electricity	15,290		15,990		16,880		7,910		8,300	
Natural Gas	8,520		8,900		9,380		8,850		9,270	
Water/Wastewater	24,220	7%	25,750	7%	27,670	7%	14,220	5%	15,280	5%
Electricity	22,180		23,580		25,340		12,050		12,950	
Fugitive	2,040		2,170		2,330		2,170		2,330	
Waste	7,380	2%	7,850	2%	8,430	2%	7,850	3%	8,430	3%
Other	18,440	5%	18,490	5%	18,580	4%	16,640	6%	16,720	5%
Industrial (Permitted)	100		100		100		100		100	
Total (with Permitted)	351,690		373,730		420,540		288,330		309,390	
Total (without Permitted)	**351,590**	**100%**	**373,630**	**100%**	**420,440**	**100%**	**288,230**	**100%**	**309,290**	**100%**
15% Below "CAP Baseline"	298,852		298,852				298,852			
GHG Reductions Needed	52,739		74,779				-10,622			
Local Reductions							-10,490		-14,210	
TOTAL with Reductions	**351,590**		**373,630**		**420,440**		**277,740**		**295,080**	
Population	46,536		49,846		53,785		49,846		53,785	
Employment	15,162		15,838		16,697		15,838		16,697	
Service Population	61,698		65,684		70,482		65,684		70,482	
MTons/SP	5.70		5.69		5.97		4.39		4.39	
MTons/SP with Reductions							4.23		4.19	

*Inventory is rounded to the tens place.

** Not included in Target setting since permitted (industrial) sources of GHG emissions are under the jurisdiction of BAAQMD and not the Town of Danville.

Index	EMFAC2011 Veh & Tech	EMFAC2011 Vehicle	Description	Source	EMFAC2007 Vehicle	CTEMFAC Vehicle
1	LDA - DSL	LDA	Passenger Cars	EMFAC2011-LDV	LDA	Non-Trucks
2	LDA - GAS			EMFAC2011-LDV	LDA	Non-Trucks
3	LDT1 - DSL	LDT1	Light-Duty Trucks (0-3750 lbs)	EMFAC2011-LDV	LDT1	Non-Trucks
4	LDT1 - GAS			EMFAC2011-LDV	LDT1	Non-Trucks
5	LDT2 - DSL	LDT2	Light-Duty Trucks (3751-5750 lbs)	EMFAC2011-LDV	LDT2	Non-Trucks
6	LDT2 - GAS			EMFAC2011-LDV	LDT2	Non-Trucks
7	LHD1 - DSL	LHD1	Light-Heavy-Duty Trucks (8501-10000 lbs)	EMFAC2011-LDV	LHDT1	Trucks
8	LHD1 - GAS			EMFAC2011-LDV	LHDT1	Trucks
9	LHD2 - DSL	LHD2	Light-Heavy-Duty Trucks (10001-14000 lbs)	EMFAC2011-LDV	LHDT2	Trucks
10	LHD2 - GAS			EMFAC2011-LDV	LHDT2	Trucks
11	MCY - GAS	MCY	Motorcycles	EMFAC2011-LDV	MCY	Non-Trucks
12	MDV - DSL	MDV	Medium-Duty Trucks (5751-8500 lbs)	EMFAC2011-LDV	MDV	Trucks
13	MDV - GAS			EMFAC2011-LDV	MDV	Trucks
14	MH - DSL	MH	Motor Homes	EMFAC2011-LDV	MH	Non-Trucks
15	MH - GAS			EMFAC2011-LDV	MH	Non-Trucks
16	T6 Ag - DSL	T6 Ag	Medium-Heavy Duty Diesel Agriculture Truck	EMFAC2011-HD	MHDT	Trucks
17	T6 CAIRP heavy - DSL	T6 CAIRP heavy	Medium-Heavy Duty Diesel CA International Registration Plan Truck with GVWR>26000 lbs	EMFAC2011-HD	MHDT	Trucks
18	T6 CAIRP small - DSL	T6 CAIRP small	Medium-Heavy Duty Diesel CA International Registration Plan Truck with GVWR<=26000 lbs	EMFAC2011-HD	MHDT	Trucks
19	T6 instate construction heavy - DSL	T6 instate construction heavy	Medium-Heavy Duty Diesel instate construction Truck with GVWR>26000 lbs	EMFAC2011-HD	MHDT	Trucks
20	T6 instate construction small - DSL	T6 instate construction small	Medium-Heavy Duty Diesel instate construction Truck with GVWR<=26000 lbs	EMFAC2011-HD	MHDT	Trucks
21	T6 instate heavy - DSL	T6 instate heavy	Medium-Heavy Duty Diesel instate Truck with GVWR>26000 lbs	EMFAC2011-HD	MHDT	Trucks
22	T6 instate small - DSL	T6 instate small	Medium-Heavy Duty Diesel instate Truck with GVWR<=26000 lbs	EMFAC2011-HD	MHDT	Trucks
23	T6 OOS heavy - DSL	T6 OOS heavy	Medium-Heavy Duty Diesel Out-of-state Truck with GVWR>26000 lbs	EMFAC2011-HD	MHDT	Trucks
24	T6 OOS small - DSL	T6 OOS small	Medium-Heavy Duty Diesel Out-of-state Truck with GVWR<=26000 lbs	EMFAC2011-HD	MHDT	Trucks
25	T6 Public - DSL	T6 Public	Medium-Heavy Duty Diesel Public Fleet Truck	EMFAC2011-HD	MHDT	Trucks
26	T6 utility - DSL	T6 utility	Medium-Heavy Duty Diesel Utility Fleet Truck	EMFAC2011-HD	MHDT	Trucks
27	T6TS - GAS	T6TS		EMFAC2011-LDV	MHDT	Trucks
28	T7 Ag - DSL	T7 Ag	Heavy-Heavy Duty Diesel Agriculture Truck	EMFAC2011-HD	HHDT	Trucks
29	T7 CAIRP - DSL	T7 CAIRP	Heavy-Heavy Duty Diesel CA International Registration Plan Truck	EMFAC2011-HD	HHDT	Trucks
30	T7 CAIRP construction - DSL	T7 CAIRP construction	Heavy-Heavy Duty Diesel CA International Registration Plan Construction Truck	EMFAC2011-HD	HHDT	Trucks
31	T7 NNOOS - DSL	T7 NNOOS	Heavy-Heavy Duty Diesel Non-Neighboring Out-of-state Truck	EMFAC2011-HD	HHDT	Trucks
32	T7 NOOS - DSL	T7 NOOS	Heavy-Heavy Duty Diesel Neighboring Out-of-state Truck	EMFAC2011-HD	HHDT	Trucks
33	T7 other port - DSL	T7 other port	Heavy-Heavy Duty Diesel Drayage Truck at Other Facilities	EMFAC2011-HD	HHDT	Trucks
34	T7 POAK - DSL	T7 POAK	Heavy-Heavy Duty Diesel Drayage Truck in Bay Area	EMFAC2011-HD	HHDT	Trucks
35	T7 POLA - DSL	T7 POLA	Heavy-Heavy Duty Diesel Drayage Truck near South Coast	EMFAC2011-HD	HHDT	Trucks
36	T7 Public - DSL	T7 Public	Heavy-Heavy Duty Diesel Public Fleet Truck	EMFAC2011-HD	HHDT	Trucks
37	T7 Single - DSL	T7 Single	Heavy-Heavy Duty Diesel Single Unit Truck	EMFAC2011-HD	HHDT	Trucks
38	T7 single construction - DSL	T7 single construction	Heavy-Heavy Duty Diesel Single Unit Construction Truck	EMFAC2011-HD	HHDT	Trucks
39	T7 SWCV - DSL	T7 SWCV	Heavy-Heavy Duty Diesel Solid Waste Collection Truck	EMFAC2011-HD	HHDT	Trucks
40	T7 tractor - DSL	T7 tractor	Heavy-Heavy Duty Diesel Tractor Truck	EMFAC2011-HD	HHDT	Trucks
41	T7 tractor construction - DSL	T7 tractor construction	Heavy-Heavy Duty Diesel Tractor Construction Truck	EMFAC2011-HD	HHDT	Trucks
42	T7 utility - DSL	T7 utility	Heavy-Heavy Duty Diesel Utility Fleet Truck	EMFAC2011-HD	HHDT	Trucks
43	T7IS - GAS	T7IS	Medium-Heavy Duty Gasoline Instate Truck with GVWR>26000 lbs	EMFAC2011-LDV	HHDT	Trucks
44	PTO - DSL	PTO	Power Take Off	EMFAC2011-HD	HHDT	Trucks
45	SBUS - DSL	SBUS	School Buses	EMFAC2011-HD	SBUS	Non-Trucks
46	SBUS - GAS		School Buses	EMFAC2011-LDV	SBUS	Non-Trucks
47	UBUS - DSL	UBUS	Urban Buses	EMFAC2011-LDV	UBUS	Non-Trucks
48	UBUS - GAS			EMFAC2011-LDV	UBUS	Non-Trucks
49	Motor Coach - DSL	Motor Coach	Motor Coach	EMFAC2011-HD	OBUS	Non-Trucks
50	OBUS - GAS	OBUS	Other Buses	EMFAC2011-LDV	OBUS	Non-Trucks
51	All Other Buses - DSL	All Other Buses	All Other Buses	EMFAC2011-HD	OBUS	Non-Trucks

2008

												Tons/Day										
RecType	Sub-Area	CalYr	Season	Veh	Tech	Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	Trips	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)	Fuel_Gas	Fuel_Dsl
Vh	Contra Cost	2008	Annual	All Other Buses	TOT	All Other Buses - TOT	AllMYr	108	6,355	0.02%		5.514E-03	7.968E-02	1.611E-02	8.081E-05	4.689E-03	3.809E-03	8.470E+00	8.470E+00		7.623E-01
Vh	Contra Cost	2008	Annual	LDA	TOT	LDA - TOT	AllMYr	388,679	13,986,436	50.62%	2,437,178	6.794E+00	5.984E+00	6.603E+01	5.507E-02	7.836E-01	3.583E-01	5.402E+03	5.402E+03	5.856E+02	1.555E+00
Vh	Contra Cost	2008	Annual	LDT1	TOT	LDT1 - TOT	AllMYr	48,209	1,757,848	6.36%	294,471	1.660E+00	1.565E+00	1.743E+01	8.072E-03	1.068E-01	5.235E-02	7.782E+02	7.782E+02	8.601E+01	7.591E-02
Vh	Contra Cost	2008	Annual	LDT2	TOT	LDT2 - TOT	AllMYr	122,708	4,977,309	18.02%	779,032	1.963E+00	3.087E+00	2.351E+01	2.658E-02	2.693E-01	1.189E-01	2.622E+03	2.622E+03	2.834E+02	7.451E-02
Vh	Contra Cost	2008	Annual	LHD1	TOT	LHD1 - TOT	AllMYr	24,891	1,133,548	4.10%	351,876	8.135E-01	3.511E+00	7.281E+00	1.051E-02	1.058E-01	5.895E-02	1.050E+03	1.050E+03	8.974E+01	1.977E+01
Vh	Contra Cost	2008	Annual	LHD2	TOT	LHD2 - TOT	AllMYr	3,278	150,601	0.55%	44,029	9.359E-02	6.535E-01	8.053E-01	1.130E-03	2.076E-02	1.208E-02	1.145E+02	1.145E+02	6.138E+00	5.227E+00
Vh	Contra Cost	2008	Annual	MCY	TOT	MCY - TOT	AllMYr	19,491	159,608	0.58%	38,979	1.026E+00	2.653E-01	8.975E+00	3.965E-04	8.675E-03	3.745E-03	2.319E+01	2.319E+01	4.229E+00	0.000E+00
Vh	Contra Cost	2008	Annual	MDV	TOT	MDV - TOT	AllMYr	104,974	4,512,117	16.33%	670,496	1.584E+00	3.202E+00	2.228E+01	3.023E-02	2.406E-01	1.048E-01	2.989E+03	2.989E+03	3.223E+02	8.039E-02
Vh	Contra Cost	2008	Annual	MH	TOT	MH - TOT	AllMYr	4,411	56,158	0.20%	441	4.198E-02	1.898E-01	1.045E+00	4.861E-04	6.735E-03	4.201E-03	4.750E+01	4.750E+01	3.878E+00	1.155E+00
Vh	Contra Cost	2008	Annual	Motor Coach	TOT	Motor Coach - TOT	AllMYr	43	6,376	0.02%		6.279E-03	1.233E-01	2.691E-02	1.223E-04	4.435E-03	3.574E-03	1.282E+01	1.282E+01		1.154E+00
Vh	Contra Cost	2008	Annual	OBUS	TOT	OBUS - TOT	AllMYr	398	24,128	0.09%	18,187	3.745E-02	1.038E-01	5.284E-01	1.990E-04	1.279E-03	5.501E-04	1.900E+01	1.900E+01	2.123E+00	0.000E+00
Vh	Contra Cost	2008	Annual	PTO	TOT	PTO - TOT	AllMYr	0	10,639	0.04%		1.179E-02	2.011E-01	6.097E-02	2.416E-04	8.270E-03	7.608E-03	2.532E+01	2.532E+01		2.279E+00
Vh	Contra Cost	2008	Annual	SBUS	TOT	SBUS - TOT	AllMYr	1,697	65,900	0.24%	392	8.345E-02	9.349E-01	5.002E-01	9.393E-04	9.345E-02	6.050E-02	9.777E+01	9.777E+01	4.429E-01	8.469E+00
Vh	Contra Cost	2008	Annual	T6 Ag	TOT	T6 Ag - TOT	AllMYr	53	1,936	0.01%		1.730E-03	2.402E-02	5.023E-03	2.488E-05	1.446E-03	1.177E-03	2.608E+00	2.608E+00		2.347E-01
Vh	Contra Cost	2008	Annual	T6 CAIRP heavy	TOT	T6 CAIRP heavy - TOT	AllMYr	2	114	0.00%		5.632E-05	1.122E-03	1.767E-04	1.439E-06	5.904E-05	4.527E-05	1.508E-01	1.508E-01		1.358E-02
Vh	Contra Cost	2008	Annual	T6 CAIRP small	TOT	T6 CAIRP small - TOT	AllMYr	5	396	0.00%		1.523E-04	3.560E-03	4.976E-04	4.998E-06	1.810E-04	1.350E-04	5.239E-01	5.239E-01		4.715E-02
Vh	Contra Cost	2008	Annual	T6 instate construction heavy	TOT	T6 instate construction heavy - TOT	AllMYr	138	8,029	0.03%		5.695E-03	9.193E-02	1.703E-02	1.019E-04	5.117E-03	4.069E-03	1.068E+01	1.068E+01		9.615E-01
Vh	Contra Cost	2008	Annual	T6 instate construction small	TOT	T6 instate construction small - TOT	AllMYr	350	23,974	0.09%		1.149E-02	2.385E-01	3.649E-02	3.025E-04	1.204E-02	9.168E-03	3.171E+01	3.171E+01		2.854E+00
Vh	Contra Cost	2008	Annual	T6 instate heavy	TOT	T6 instate heavy - TOT	AllMYr	787	45,838	0.17%		3.251E-02	5.248E-01	9.722E-02	5.819E-04	2.921E-02	2.323E-02	6.099E+01	6.099E+01		5.489E+00
Vh	Contra Cost	2008	Annual	T6 instate small	TOT	T6 instate small - TOT	AllMYr	1,998	136,863	0.50%		6.558E-02	1.362E+00	2.083E-01	1.727E-03	6.871E-02	5.234E-02	1.810E+02	1.810E+02		1.629E+01
Vh	Contra Cost	2008	Annual	T6 OOS heavy	TOT	T6 OOS heavy - TOT	AllMYr	1	65	0.00%		3.229E-05	6.434E-04	1.013E-04	8.251E-07	3.385E-05	2.595E-05	8.648E-02	8.648E-02		7.783E-03
Vh	Contra Cost	2008	Annual	T6 OOS small	TOT	T6 OOS small - TOT	AllMYr	3	227	0.00%		8.732E-05	2.041E-03	2.853E-04	2.866E-06	1.037E-04	7.739E-05	3.004E-01	3.004E-01		2.703E-02
Vh	Contra Cost	2008	Annual	T6 public	DSL	T6 public - DSL	AllMYr	278	5,295	0.02%		2.184E-03	6.038E-02	7.088E-03	6.851E-05	2.639E-03	2.007E-03	7.181E+00	7.181E+00		6.463E-01
Vh	Contra Cost	2008	Annual	T6 public	TOT	T6 public - TOT	AllMYr	278	5,295	0.02%		2.184E-03	6.038E-02	7.088E-03	6.851E-05	2.639E-03	2.007E-03	7.181E+00	7.181E+00		6.463E-01
Vh	Contra Cost	2008	Annual	T6 utility	TOT	T6 utility - TOT	AllMYr	45	914	0.00%		2.331E-04	9.493E-03	8.243E-04	1.178E-05	3.531E-04	2.522E-04	1.234E+00	1.234E+00		1.111E-01
Vh	Contra Cost	2008	Annual	T6TS	TOT	T6TS - TOT	AllMYr	881	34,289	0.12%	17,626	1.508E-01	2.040E-01	1.534E+00	3.019E-04	2.167E-03	1.073E-03	2.748E+01	2.748E+01	3.220E+00	0.000E+00
Vh	Contra Cost	2008	Annual	T7 Ag	TOT	T7 Ag - TOT	AllMYr	93	6,845	0.02%		7.751E-03	1.370E-01	3.578E-02	1.288E-04	6.226E-03	5.317E-03	1.350E+01	1.350E+01		1.215E+00
Vh	Contra Cost	2008	Annual	T7 CAIRP	TOT	T7 CAIRP - TOT	AllMYr	300	72,937	0.26%		6.899E-02	1.245E+00	2.784E-01	1.374E-03	4.995E-02	4.157E-02	1.440E+02	1.440E+02		1.296E+01
Vh	Contra Cost	2008	Annual	T7 CAIRP construction	TOT	T7 CAIRP construction - TOT	AllMYr	36	8,802	0.03%		8.326E-03	1.503E-01	3.360E-02	1.658E-04	6.028E-03	5.017E-03	1.738E+01	1.738E+01		1.564E+00
Vh	Contra Cost	2008	Annual	T7 NNOOS	TOT	T7 NNOOS - TOT	AllMYr	295	82,052	0.30%		5.722E-02	1.069E+00	2.338E-01	1.566E-03	4.366E-02	3.524E-02	1.641E+02	1.641E+02		1.477E+01
Vh	Contra Cost	2008	Annual	T7 NOOS	TOT	T7 NOOS - TOT	AllMYr	109	26,562	0.10%		2.570E-02	4.553E-01	1.024E-01	5.034E-04	1.831E-02	1.525E-02	5.277E+01	5.277E+01		4.749E+00
Vh	Contra Cost	2008	Annual	T7 other port	TOT	T7 other port - TOT	AllMYr	52	8,202	0.03%		1.100E-02	2.007E-01	4.630E-02	1.526E-04	6.088E-03	5.109E-03	1.599E+01	1.599E+01		1.439E+00
Vh	Contra Cost	2008	Annual	T7 POAK	TOT	T7 POAK - TOT	AllMYr	220	28,465	0.10%		4.045E-02	7.123E-01	1.729E-01	5.378E-04	2.216E-02	1.867E-02	5.637E+01	5.637E+01		5.073E+00
Vh	Contra Cost	2008	Annual	T7 public	TOT	T7 public - TOT	AllMYr	180	4,490	0.02%		5.975E-03	1.066E-01	2.494E-02	9.894E-05	3.629E-03	3.069E-03	1.037E+01	1.037E+01		9.333E-01
Vh	Contra Cost	2008	Annual	T7 Single	TOT	T7 Single - TOT	AllMYr	558	44,236	0.16%		3.283E-02	7.690E-01	1.498E-01	8.271E-04	2.955E-02	2.453E-02	8.669E+01	8.669E+01		7.802E+00
Vh	Contra Cost	2008	Annual	T7 single construction	TOT	T7 single construction - TOT	AllMYr	287	22,770	0.08%		1.690E-02	3.958E-01	7.710E-02	4.257E-04	1.521E-02	1.263E-02	4.462E+01	4.462E+01		4.016E+00
Vh	Contra Cost	2008	Annual	T7 SWCV	TOT	T7 SWCV - TOT	AllMYr	244	12,220	0.04%		1.075E-02	2.450E-01	4.862E-02	2.466E-04	8.112E-03	6.729E-03	2.585E+01	2.585E+01		2.326E+00
Vh	Contra Cost	2008	Annual	T7 tractor	TOT	T7 tractor - TOT	AllMYr	802	133,249	0.48%		1.393E-01	2.487E+00	6.185E-01	2.472E-03	1.032E-01	8.698E-02	2.591E+02	2.591E+02		2.332E+01
Vh	Contra Cost	2008	Annual	T7 tractor construction	TOT	T7 tractor construction - TOT	AllMYr	211	16,977	0.06%		1.840E-02	3.204E-01	8.188E-02	3.174E-04	1.338E-02	1.129E-02	3.327E+01	3.327E+01		2.995E+00
Vh	Contra Cost	2008	Annual	T7 utility	TOT	T7 utility - TOT	AllMYr	31	762	0.00%		6.137E-04	1.669E-02	2.805E-03	1.667E-05	3.853E-04	3.087E-04	1.747E+00	1.747E+00		1.573E-01
Vh	Contra Cost	2008	Annual	T7IS	TOT	T7IS - TOT	AllMYr	79	6,805	0.02%	1,573	4.010E-02	8.485E-02	6.339E-01	5.673E-05	3.958E-04	1.817E-04	4.579E+00	4.579E+00	6.051E-01	0.000E+00
Vh	Contra Cost	2008	Annual	UBUS	TOT	UBUS - TOT	AllMYr	317	42,236	0.15%	1,267	4.348E-02	6.907E-01	2.733E-01	9.466E-04	4.244E-02	2.389E-02	9.843E+01	9.843E+01	9.139E-01	8.117E+00
									27,627,869												

2008 9.072E-01 **MTons/Mile** 2.000E+03 **lbs/Mile**

RecType	Sub-Area	CalYr	Season	Veh	Tech	Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	Trips	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
Vh	Contra Cost	2008	Annual	All Other Buses	TOT	All Other Buses - TOT	AllMYr	108	6,355	0.02%		7.8726E-07	1.13758E-05	2.29973E-06	1.15361E-08	6.69366E-07	5.43724E-07	0.001209171	0.001209171	1.736E-03	2.508E-02	5.070E-03	2.543E-05	1.476E-03	1.199E-03	2.666E+00	2.666E+00
Vh	Contra Cost	2008	Annual	LDA	TOT	LDA - TOT	AllMYr	388,679	13,986,436	50.62%	2,437,178	4.40659E-07	3.88133E-07	4.28299E-06	3.57187E-09	5.08272E-08	2.32405E-08	0.000350355	0.000350355	9.715E-04	8.557E-04	9.442E-03	7.875E-06	1.121E-04	5.124E-05	7.724E-01	7.724E-01
Vh	Contra Cost	2008	Annual	LDT1	TOT	LDT1 - TOT	AllMYr	48,209	1,757,848	6.36%	294,471	8.56551E-07	8.07708E-07	8.99589E-06	4.16556E-09	5.51177E-08	2.70189E-08	0.000401629	0.000401629	1.888E-03	1.781E-03	1.983E-02	9.183E-06	1.215E-04	5.957E-05	8.854E-01	8.854E-01
Vh	Contra Cost	2008	Annual	LDT2	TOT	LDT2 - TOT	AllMYr	122,708	4,977,309	18.02%	779,032	3.57859E-07	5.62708E-07	4.28535E-06	4.84388E-09	4.90814E-08	2.16752E-08	0.000477849	0.000477849	7.889E-04	1.241E-03	9.448E-03	1.068E-05	1.082E-04	4.779E-05	1.053E+00	1.053E+00
Vh	Contra Cost	2008	Annual	LHD1	TOT	LHD1 - TOT	AllMYr	24,891	1,133,548	4.10%	351,876	6.5103E-07	2.81E-06	5.82717E-06	8.4115E-09	8.47096E-08	4.71802E-08	0.000840474	0.000840474	1.435E-03	6.195E-03	1.285E-02	1.854E-05	1.868E-04	1.040E-04	1.853E+00	1.853E+00
Vh	Contra Cost	2008	Annual	LHD2	TOT	LHD2 - TOT	AllMYr	3,278	150,601	0.55%	44,029	5.63759E-07	3.93647E-06	4.85092E-06	6.80569E-09	1.25032E-07	7.27392E-08	0.000689605	0.000689605	1.243E-03	8.678E-03	1.069E-02	1.500E-05	2.756E-04	1.604E-04	1.520E+00	1.520E+00
Vh	Contra Cost	2008	Annual	MCY	TOT	MCY - TOT	AllMYr	19,491	159,608	0.58%	38,979	5.8329E-06	1.50774E-06	5.10118E-05	2.25368E-09	4.93069E-08	2.12841E-08	0.000131797	0.000131797	1.286E-02	3.324E-03	1.125E-01	4.969E-06	1.087E-04	4.692E-05	2.906E-01	2.906E-01
Vh	Contra Cost	2008	Annual	MDV	TOT	MDV - TOT	AllMYr	104,974	4,512,117	16.33%	670,496	3.18562E-07	6.4379E-07	4.4789E-06	6.07722E-09	4.83787E-08	2.10764E-08	0.000601042	0.000601042	7.023E-04	1.419E-03	9.874E-03	1.340E-05	1.067E-04	4.647E-05	1.325E+00	1.325E+00
Vh	Contra Cost	2008	Annual	MH	TOT	MH - TOT	AllMYr	4,411	56,158	0.20%	441	6.78224E-07	3.0665E-06	1.68762E-05	7.85225E-09	1.08801E-07	6.78625E-08	0.000767338	0.000767338	1.495E-03	6.760E-03	3.721E-02	1.731E-05	2.399E-04	1.496E-04	1.692E+00	1.692E+00
Vh	Contra Cost	2008	Annual	Motor Coach	TOT	Motor Coach - TOT	AllMYr	43	6,376	0.02%		8.9333E-07	1.75398E-05	3.82883E-06	1.73967E-08	6.30974E-07	5.08403E-07	0.001823469	0.001823469	1.969E-03	3.867E-02	8.441E-03	3.835E-05	1.391E-03	1.121E-03	4.020E+00	4.020E+00
Vh	Contra Cost	2008	Annual	OBUS	TOT	OBUS - TOT	AllMYr	398	24,128	0.09%	18,187	1.40799E-06	3.90256E-06	1.98657E-05	7.48296E-09	4.80878E-08	2.06825E-08	0.00071438	0.00071438	3.104E-03	8.604E-03	4.380E-02	1.650E-05	1.060E-04	4.560E-05	1.575E+00	1.575E+00
Vh	Contra Cost	2008	Annual	PTO	TOT	PTO - TOT	AllMYr	0	10,639	0.04%		1.00516E-06	1.7147E-05	5.19904E-06	2.06005E-08	7.05156E-07	6.48743E-07	0.002159279	0.002159279	2.216E-03	3.780E-02	1.146E-02	4.542E-05	1.555E-03	1.430E-03	4.760E+00	4.760E+00
Vh	Contra Cost	2008	Annual	SBUS	TOT	SBUS - TOT	AllMYr	1,697	65,900	0.24%	392	1.14884E-06	1.287E-05	6.88603E-06	1.293E-08	1.28646E-06	8.32795E-07	0.00134597	0.00134597	2.533E-03	2.837E-02	1.518E-02	2.851E-05	2.836E-03	1.836E-03	2.967E+00	2.967E+00
Vh	Contra Cost	2008	Annual	T6 Ag	TOT	T6 Ag - TOT	AllMYr	53	1,936	0.01%		8.10819E-07	1.12556E-05	2.3543E-06	1.16607E-08	6.77863E-07	5.51541E-07	0.001222238	0.001222238	1.788E-03	2.481E-02	5.190E-03	2.571E-05	1.494E-03	1.216E-03	2.695E+00	2.695E+00
Vh	Contra Cost	2008	Annual	T6 CAIRP heavy	TOT	T6 CAIRP heavy - TOT	AllMYr	2	114	0.00%		4.48662E-07	8.939E-06	1.40783E-06	1.14639E-08	4.70318E-07	3.606E-07	0.001201606	0.001201606	9.891E-04	1.971E-02	3.104E-03	2.527E-05	1.037E-03	7.950E-04	2.649E+00	2.649E+00
Vh	Contra Cost	2008	Annual	T6 CAIRP small	TOT	T6 CAIRP small - TOT	AllMYr	5	396	0.00%		3.48647E-07	8.14932E-06	1.13898E-06	1.14418E-08	4.1425E-07	3.09017E-07	0.001199288	0.001199288	7.686E-04	1.797E-02	2.511E-03	2.522E-05	9.133E-04	6.813E-04	2.644E+00	2.644E+00
Vh	Contra Cost	2008	Annual	T6 instate construction heavy	TOT	T6 instate construction heavy - TOT	AllMYr	138	8,029	0.03%		6.43391E-07	1.03862E-05	1.9241E-06	1.15159E-08	5.78104E-07	4.59763E-07	0.001207063	0.001207063	1.418E-03	2.290E-02	4.242E-03	2.539E-05	1.275E-03	1.014E-03	2.661E+00	2.661E+00
Vh	Contra Cost	2008	Annual	T6 instate construction small	TOT	T6 instate construction small - TOT	AllMYr	350	23,974	0.09%		4.34679E-07	9.02552E-06	1.38089E-06	1.14476E-08	4.55431E-07	3.46904E-07	0.001199902	0.001199902	9.583E-04	1.990E-02	3.044E-03	2.524E-05	1.004E-03	7.648E-04	2.645E+00	2.645E+00
Vh	Contra Cost	2008	Annual	T6 instate heavy	TOT	T6 instate heavy - TOT	AllMYr	787	45,838	0.17%		6.43391E-07	1.03862E-05	1.9241E-06	1.15159E-08	5.78104E-07	4.59763E-07	0.001207063	0.001207063	1.418E-03	2.290E-02	4.242E-03	2.539E-05	1.275E-03	1.014E-03	2.661E+00	2.661E+00
Vh	Contra Cost	2008	Annual	T6 instate small	TOT	T6 instate small - TOT	AllMYr	1,998	136,863	0.50%		4.34679E-07	9.02552E-06	1.38089E-06	1.14476E-08	4.55431E-07	3.46904E-07	0.001199902	0.001199902	9.583E-04	1.990E-02	3.044E-03	2.524E-05	1.004E-03	7.648E-04	2.645E+00	2.645E+00
Vh	Contra Cost	2008	Annual	T6 OOS heavy	TOT	T6 OOS heavy - TOT	AllMYr	1	65	0.00%		4.48662E-07	8.939E-06	1.40783E-06	1.14639E-08	4.70318E-07	3.606E-07	0.001201606	0.001201606	9.891E-04	1.971E-02	3.104E-03	2.527E-05	1.037E-03	7.950E-04	2.649E+00	2.649E+00
Vh	Contra Cost	2008	Annual	T6 OOS small	TOT	T6 OOS small - TOT	AllMYr	3	227	0.00%		3.48647E-07	8.14932E-06	1.13898E-06	1.14418E-08	4.1425E-07	3.09017E-07	0.001199288	0.001199288	7.686E-04	1.797E-02	2.511E-03	2.522E-05	9.133E-04	6.813E-04	2.644E+00	2.644E+00
Vh	Contra Cost	2008	Annual	T6 public	DSL	T6 public - DSL	AllMYr	278	5,295	0.02%		3.74288E-07	1.03452E-05	1.21442E-06	1.17391E-08	4.52187E-07	3.43919E-07	0.001230458	0.001230458	8.252E-04	2.281E-02	2.677E-03	2.588E-05	9.969E-04	7.582E-04	2.713E+00	2.713E+00
Vh	Contra Cost	2008	Annual	T6 public	TOT	T6 public - TOT	AllMYr	278	5,295	0.02%		3.74288E-07	1.03452E-05	1.21442E-06	1.17391E-08	4.52187E-07	3.43919E-07	0.001230458	0.001230458	8.252E-04	2.281E-02	2.677E-03	2.588E-05	9.969E-04	7.582E-04	2.713E+00	2.713E+00
Vh	Contra Cost	2008	Annual	T6 utility	TOT	T6 utility - TOT	AllMYr	45	914	0.00%		2.31356E-07	9.42236E-06	8.18216E-07	1.16898E-08	3.50475E-07	2.50344E-07	0.001225285	0.001225285	5.101E-04	2.077E-02	1.804E-03	2.577E-05	7.727E-04	5.519E-04	2.701E+00	2.701E+00
Vh	Contra Cost	2008	Annual	T6TS	TOT	T6TS - TOT	AllMYr	881	34,289	0.12%	17,626	3.98924E-06	5.39638E-06	4.05811E-05	7.98647E-09	5.73372E-08	2.83993E-08	0.000727042	0.000727042	8.795E-03	1.190E-02	8.947E-02	1.761E-05	1.264E-04	6.261E-05	1.603E+00	1.603E+00
Vh	Contra Cost	2008	Annual	T7 Ag	TOT	T7 Ag - TOT	AllMYr	93	6,845	0.02%		1.02725E-06	1.81583E-05	4.74276E-06	1.70655E-08	8.25163E-07	7.04689E-07	0.00178875	0.00178875	2.265E-03	4.003E-02	1.046E-02	3.762E-05	1.819E-03	1.554E-03	3.944E+00	3.944E+00
Vh	Contra Cost	2008	Annual	T7 CAIRP	TOT	T7 CAIRP - TOT	AllMYr	300	72,937	0.26%		8.58079E-07	1.54911E-05	3.46244E-06	1.70848E-08	6.21215E-07	5.17057E-07	0.001790773	0.001790773	1.892E-03	3.415E-02	7.633E-03	3.767E-05	1.370E-03	1.140E-03	3.948E+00	3.948E+00
Vh	Contra Cost	2008	Annual	T7 CAIRP construction	TOT	T7 CAIRP construction - TOT	AllMYr	36	8,802	0.03%		8.58079E-07	1.54911E-05	3.46244E-06	1.70848E-08	6.21215E-07	5.17057E-07	0.001790773	0.001790773	1.892E-03	3.415E-02	7.633E-03	3.767E-05	1.370E-03	1.140E-03	3.948E+00	3.948E+00
Vh	Contra Cost	2008	Annual	T7 NNOOS	TOT	T7 NNOOS - TOT	AllMYr	295	82,052	0.30%		6.3265E-07	1.18205E-05	2.58482E-06	1.73125E-08	4.82716E-07	3.89638E-07	0.001814642	0.001814642	1.395E-03	2.606E-02	5.699E-03	3.817E-05	1.064E-03	8.590E-04	4.001E+00	4.001E+00
Vh	Contra Cost	2008	Annual	T7 NOOS	TOT	T7 NOOS - TOT	AllMYr	109	26,562	0.10%		8.77915E-07	1.55503E-05	3.49786E-06	1.71939E-08	6.25196E-07	5.2072E-07	0.001802211	0.001802211	1.935E-03	3.428E-02	7.711E-03	3.791E-05	1.378E-03	1.148E-03	3.973E+00	3.973E+00
Vh	Contra Cost	2008	Annual	T7 other port	TOT	T7 other port - TOT	AllMYr	52	8,202	0.03%		1.21676E-06	2.22033E-05	5.1213E-06	1.68769E-08	6.73366E-07	5.65035E-07	0.001768985	0.001768985	2.682E-03	4.895E-02	1.129E-02	3.721E-05	1.485E-03	1.246E-03	3.900E+00	3.900E+00
Vh	Contra Cost	2008	Annual	T7 POAK	TOT	T7 POAK - TOT	AllMYr	220	28,465	0.10%		1.28918E-06	2.27022E-05	5.51197E-06	1.71394E-08	7.06098E-07	5.9515E-07	0.00179649	0.00179649	2.842E-03	5.005E-02	1.215E-02	3.779E-05	1.557E-03	1.312E-03	3.961E+00	3.961E+00
Vh	Contra Cost	2008	Annual	T7 public	TOT	T7 public - TOT	AllMYr	180	4,490	0.02%		1.20733E-06	2.15414E-05	5.03968E-06	1.99906E-08	7.33228E-07	6.20109E-07	0.002095349	0.002095349	2.662E-03	4.749E-02	1.111E-02	4.407E-05	1.616E-03	1.367E-03	4.619E+00	4.619E+00
Vh	Contra Cost	2008	Annual	T7 Single	TOT	T7 Single - TOT	AllMYr	558	44,236	0.16%		6.73243E-07	1.577E-05	3.07184E-06	1.69616E-08	6.0602E-07	5.03077E-07	0.001777854	0.001777854	1.484E-03	3.477E-02	6.772E-03	3.739E-05	1.336E-03	1.109E-03	3.919E+00	3.919E+00
Vh	Contra Cost	2008	Annual	T7 single construction	TOT	T7 single construction - TOT	AllMYr	287	22,770	0.08%		6.73243E-07	1.577E-05	3.07184E-06	1.69616E-08	6.0602E-07	5.03077E-07	0.001777854	0.001777854	1.484E-03	3.477E-02	6.772E-03	3.739E-05	1.336E-03	1.109E-03	3.919E+00	3.919E+00
Vh	Contra Cost	2008	Annual	T7 SWCV	TOT	T7 SWCV - TOT	AllMYr	244	12,220	0.04%		7.98393E-07	1.81878E-05	3.60977E-06	1.83089E-08	6.02222E-07	4.99583E-07	0.001919077	0.001919077	1.760E-03	4.010E-02	7.958E-03	4.036E-05	1.328E-03	1.101E-03	4.231E+00	4.231E+00
Vh	Contra Cost	2008	Annual	T7 tractor	TOT	T7 tractor - TOT	AllMYr	802	133,249	0.48%		9.48633E-07	1.69337E-05	4.21107E-06	1.68284E-08	7.02899E-07	5.92206E-07	0.001763896	0.001763896	2.091E-03	3.733E-02	9.284E-03	3.710E-05	1.550E-03	1.306E-03	3.889E+00	3.889E+00
Vh	Contra Cost	2008	Annual	T7 tractor construction	TOT	T7 tractor construction - TOT	AllMYr	211	16,977	0.06%		9.83176E-07	1.71194E-05	4.3755E-06	1.69629E-08	7.14993E-07	6.03333E-07	0.00177799	0.00177799	2.168E-03	3.774E-02	9.646E-03	3.740E-05	1.576E-03	1.330E-03	3.920E+00	3.920E+00
Vh	Contra Cost	2008	Annual	T7 utility	TOT	T7 utility - TOT	AllMYr	31	762	0.00%		7.30975E-07	1.98809E-05	3.34086E-06	1.98563E-08	4.58896E-07	3.67724E-07	0.00208127	0.00208127	1.612E-03	4.383E-02	7.365E-03	4.378E-05	1.012E-03	8.107E-04	4.588E+00	4.588E+00
Vh	Contra Cost	2008	Annual	T7IS	TOT	T7IS - TOT	AllMYr	79	6,805	0.02%	1,573	5.34559E-06	1.13103E-05	8.45005E-05	7.56239E-09	5.27564E-08	2.4221E-08	0.000610451	0.000610451	1.179E-02	2.493E-02	1.863E-01	1.667E-05	1.163E-04	5.340E-05	1.346E+00	1.346E+00
Vh	Contra Cost	2008	Annual	UBUS	TOT	UBUS - TOT	AllMYr	317	42,236	0.15%	1,267	9.33805E-07	1.48352E-05	5.87103E-06	2.03327E-08	9.1163E-07	5.13197E-07	0.002114109	0.002114109	2.059E-03	3.271E-02	1.294E-02	4.483E-05	2.010E-03	1.131E-03	4.661E+00	4.661E+00
									27,627,869																		

												Tons/Day											
RecType	Sub-Area	CalYr	Season	Veh	Tech	Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	Trips	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)	Fuel_Gas	Fuel_Dsl
Vh	Contra Cost	2020	Annual	All Other Buses	TOT	All Other Buses - TOT	AllMYr	144	7,975	0.03%		1.196E-03	2.862E-02	4.390E-03	1.001E-04	1.694E-03	9.244E-04	1.049E+01	9.440E+00		9.440E-01
Vh	Contra Cost	2020	Annual	LDA	TOT	LDA - TOT	AllMYr	426,855	15,805,671	52.71%	2,695,455	1.701E+00	1.625E+00	1.770E+01	6.148E-02	8.203E-01	3.469E-01	6.130E+03	4.235E+03	6.531E+02	2.335E+00
Vh	Contra Cost	2020	Annual	LDT1	TOT	LDT1 - TOT	AllMYr	52,676	1,968,560	6.57%	319,312	6.619E-01	5.464E-01	5.643E+00	8.881E-03	1.058E-01	4.655E-02	8.802E+02	6.477E+02	9.462E+01	9.674E-02
Vh	Contra Cost	2020	Annual	LDT2	TOT	LDT2 - TOT	AllMYr	133,879	5,296,149	17.66%	842,112	8.642E-01	9.087E-01	8.182E+00	2.797E-02	2.742E-01	1.156E-01	2.788E+03	2.120E+03	2.983E+02	8.869E-02
Vh	Contra Cost	2020	Annual	LHD1	TOT	LHD1 - TOT	AllMYr	26,836	1,082,656	3.61%	379,483	5.556E-01	2.003E+00	3.648E+00	1.001E-02	8.947E-02	4.571E-02	1.005E+03	9.048E+02	8.583E+01	1.847E+01
Vh	Contra Cost	2020	Annual	LHD2	TOT	LHD2 - TOT	AllMYr	3,621	144,539	0.48%	48,619	4.569E-02	3.340E-01	2.777E-01	1.092E-03	1.707E-02	9.110E-03	1.113E+02	1.002E+02	6.263E+00	4.754E+00
Vh	Contra Cost	2020	Annual	MCY	TOT	MCY - TOT	AllMYr	21,945	194,114	0.65%	43,885	8.228E-01	2.799E-01	6.087E+00	4.901E-04	9.705E-03	3.906E-03	3.729E+01	3.356E+01	5.228E+00	0.000E+00
Vh	Contra Cost	2020	Annual	MDV	TOT	MDV - TOT	AllMYr	115,183	4,333,770	14.45%	709,758	1.300E+00	1.529E+00	1.232E+01	2.926E-02	2.262E-01	9.626E-02	2.910E+03	2.308E+03	3.119E+02	1.557E-01
Vh	Contra Cost	2020	Annual	MH	TOT	MH - TOT	AllMYr	4,765	61,514	0.21%	477	8.131E-03	1.056E-01	1.248E-01	5.116E-04	6.041E-03	3.441E-03	5.162E+01	4.646E+01	4.130E+00	1.173E+00
Vh	Contra Cost	2020	Annual	Motor Coach	TOT	Motor Coach - TOT	AllMYr	57	8,163	0.03%		2.500E-03	3.718E-02	1.206E-02	1.555E-04	1.921E-03	1.118E-03	1.630E+01	1.467E+01		1.467E+00
Vh	Contra Cost	2020	Annual	OBUS	TOT	OBUS - TOT	AllMYr	438	20,858	0.07%	20,022	2.586E-02	5.620E-02	3.276E-01	1.712E-04	1.055E-03	4.323E-04	1.658E+01	1.492E+01	1.827E+00	0.000E+00
Vh	Contra Cost	2020	Annual	PTO	TOT	PTO - TOT	AllMYr	0	15,087	0.05%		4.109E-03	9.767E-02	1.295E-02	3.394E-04	8.412E-04	7.739E-04	3.557E+01	3.202E+01		3.202E+00
Vh	Contra Cost	2020	Annual	SBUS	TOT	SBUS - TOT	AllMYr	1,624	59,643	0.20%	413	1.431E-02	6.286E-01	8.847E-02	8.481E-04	4.990E-02	2.310E-02	8.862E+01	7.976E+01	4.189E-01	7.630E+00
Vh	Contra Cost	2020	Annual	T6 Ag	TOT	T6 Ag - TOT	AllMYr	55	1,855	0.01%		5.512E-04	7.369E-03	1.884E-03	2.344E-05	5.531E-04	3.615E-04	2.456E+00	2.211E+00		2.211E-01
Vh	Contra Cost	2020	Annual	T6 CAIRP heavy	TOT	T6 CAIRP heavy - TOT	AllMYr	2	140	0.00%		1.817E-05	3.306E-04	6.727E-05	1.749E-06	2.822E-05	1.483E-05	1.834E-01	1.650E-01		1.650E-02
Vh	Contra Cost	2020	Annual	T6 CAIRP small	TOT	T6 CAIRP small - TOT	AllMYr	7	479	0.00%		6.397E-05	6.366E-04	2.386E-04	5.954E-06	9.745E-05	5.157E-05	6.241E-01	5.617E-01		5.617E-02
Vh	Contra Cost	2020	Annual	T6 instate construction heavy	TOT	T6 instate construction heavy - TOT	AllMYr	120	6,430	0.02%		8.970E-04	2.623E-02	3.282E-03	8.095E-05	1.352E-03	7.326E-04	8.485E+00	7.637E+00		7.637E-01
Vh	Contra Cost	2020	Annual	T6 instate construction small	TOT	T6 instate construction small - TOT	AllMYr	260	17,335	0.06%		2.723E-03	3.131E-02	1.012E-02	2.160E-04	3.805E-03	2.123E-03	2.264E+01	2.038E+01		2.038E+00
Vh	Contra Cost	2020	Annual	T6 instate heavy	TOT	T6 instate heavy - TOT	AllMYr	990	54,842	0.18%		7.603E-03	2.024E-01	2.792E-02	6.893E-04	1.145E-02	6.174E-03	7.225E+01	6.503E+01		6.503E+00
Vh	Contra Cost	2020	Annual	T6 instate small	TOT	T6 instate small - TOT	AllMYr	2,285	154,803	0.52%		2.356E-02	2.634E-01	8.760E-02	1.928E-03	3.344E-02	1.846E-02	2.021E+02	1.819E+02		1.819E+01
Vh	Contra Cost	2020	Annual	T6 OOS heavy	TOT	T6 OOS heavy - TOT	AllMYr	1	80	0.00%		1.042E-05	1.896E-04	3.857E-05	1.003E-06	1.618E-05	8.501E-06	1.051E-01	9.462E-02		9.462E-03
Vh	Contra Cost	2020	Annual	T6 OOS small	TOT	T6 OOS small - TOT	AllMYr	4	275	0.00%		3.667E-05	3.650E-04	1.368E-04	3.414E-06	5.587E-05	2.957E-05	3.578E-01	3.220E-01		3.220E-02
Vh	Contra Cost	2020	Annual	T6 public	TOT	T6 public - TOT	AllMYr	357	6,680	0.02%		6.920E-04	2.972E-02	2.868E-03	8.613E-05	1.303E-03	6.683E-04	9.028E+00	8.125E+00		8.125E-01
Vh	Contra Cost	2020	Annual	T6 utility	TOT	T6 utility - TOT	AllMYr	54	1,090	0.00%		1.176E-04	2.569E-03	5.046E-04	1.394E-05	2.072E-04	1.040E-04	1.461E+00	1.315E+00		1.315E-01
Vh	Contra Cost	2020	Annual	T6TS	TOT	T6TS - TOT	AllMYr	982	47,516	0.16%	19,651	4.301E-02	7.679E-02	5.281E-01	3.781E-04	2.420E-03	9.998E-04	3.695E+01	3.326E+01	4.033E+00	0.000E+00
Vh	Contra Cost	2020	Annual	T7 Ag	TOT	T7 Ag - TOT	AllMYr	100	6,717	0.02%		2.887E-03	4.570E-02	1.335E-02	1.266E-04	1.914E-03	1.358E-03	1.327E+01	1.194E+01		1.194E+00
Vh	Contra Cost	2020	Annual	T7 CAIRP	TOT	T7 CAIRP - TOT	AllMYr	421	103,857	0.35%		4.003E-02	3.674E-01	1.968E-01	2.010E-03	2.000E-02	1.217E-02	2.107E+02	1.896E+02		1.896E+01
Vh	Contra Cost	2020	Annual	T7 CAIRP construction	TOT	T7 CAIRP construction - TOT	AllMYr	27	6,536	0.02%		2.517E-03	2.343E-02	1.237E-02	1.265E-04	1.259E-03	7.660E-04	1.326E+01	1.194E+01		1.194E+00
Vh	Contra Cost	2020	Annual	T7 NNOOS	TOT	T7 NNOOS - TOT	AllMYr	415	116,836	0.39%		4.313E-02	3.178E-01	2.162E-01	2.279E-03	2.066E-02	1.199E-02	2.388E+02	2.149E+02		2.149E+01
Vh	Contra Cost	2020	Annual	T7 NOOS	TOT	T7 NOOS - TOT	AllMYr	153	37,822	0.13%		1.581E-02	1.405E-01	7.855E-02	7.435E-04	7.306E-03	4.451E-03	7.793E+01	7.014E+01		7.014E+00
Vh	Contra Cost	2020	Annual	T7 other port	TOT	T7 other port - TOT	AllMYr	64	10,077	0.03%		6.133E-03	8.880E-02	2.837E-02	1.923E-04	2.379E-03	1.584E-03	2.016E+01	1.814E+01		1.814E+00
Vh	Contra Cost	2020	Annual	T7 POAK	TOT	T7 POAK - TOT	AllMYr	301	54,852	0.18%		3.473E-02	4.921E-01	1.619E-01	1.058E-03	1.297E-02	8.639E-03	1.109E+02	9.984E+01		9.984E+00
Vh	Contra Cost	2020	Annual	T7 public	TOT	T7 public - TOT	AllMYr	234	5,803	0.02%		2.135E-03	7.907E-02	1.085E-02	1.282E-04	1.064E-03	6.306E-04	1.344E+01	1.210E+01		1.210E+00
Vh	Contra Cost	2020	Annual	T7 Single	TOT	T7 Single - TOT	AllMYr	812	62,989	0.21%		1.503E-02	3.425E-01	7.175E-02	1.187E-03	1.090E-02	6.247E-03	1.244E+02	1.120E+02		1.120E+01
Vh	Contra Cost	2020	Annual	T7 single construction	TOT	T7 single construction - TOT	AllMYr	220	16,908	0.06%		4.024E-03	9.503E-02	1.919E-02	3.188E-04	2.934E-03	1.684E-03	3.341E+01	3.007E+01		3.007E+00
Vh	Contra Cost	2020	Annual	T7 SWCV	TOT	T7 SWCV - TOT	AllMYr	315	15,794	0.05%		4.640E-03	1.379E-01	2.333E-02	3.172E-04	2.664E-03	1.503E-03	3.325E+01	2.992E+01		2.992E+00
Vh	Contra Cost	2020	Annual	T7 tractor	TOT	T7 tractor - TOT	AllMYr	1,164	189,737	0.63%		5.274E-02	9.220E-01	2.452E-01	3.510E-03	3.686E-02	2.253E-02	3.679E+02	3.311E+02		3.311E+01
Vh	Contra Cost	2020	Annual	T7 tractor construction	TOT	T7 tractor construction - TOT	AllMYr	160	12,606	0.04%		3.883E-03	6.966E-02	1.841E-02	2.374E-04	2.467E-03	1.512E-03	2.489E+01	2.240E+01		2.240E+00
Vh	Contra Cost	2020	Annual	T7 utility	TOT	T7 utility - TOT	AllMYr	37	931	0.00%		4.185E-04	7.055E-03	2.216E-03	2.033E-05	1.507E-04	8.279E-05	2.131E+00	1.918E+00		1.918E-01
Vh	Contra Cost	2020	Annual	T7IS	TOT	T7IS - TOT	AllMYr	71	8,511	0.03%	1,411	1.095E-02	5.401E-02	3.712E-01	6.179E-05	4.267E-04	1.727E-04	5.573E+00	5.016E+00	6.590E-01	0.000E+00
Vh	Contra Cost	2020	Annual	UBUS	TOT	UBUS - TOT	AllMYr	333	44,409	0.15%	1,332	4.067E-02	6.444E-01	2.348E-01	9.819E-04	4.348E-02	2.399E-02	1.022E+02	9.196E+01	9.356E-01	8.430E+00
									29,984,609												

											9.072E-01	MTons/Mile								2.000E+03	lbs/Mile							
RecType	Sub-Area	CalYr	Season	Veh	Tech	Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	Trips	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
Vh	Contra Cost	2020	Annual	All Other Buses	TOT	All Other Buses - TOT	AllMYr	144	7,975	0.03%		1.361E-07	3.25585E-06	4.99345E-07	1.13837E-08	1.9266E-07	1.05154E-07	0.001193198	0.001073878	3.000E-04	7.178E-03	1.101E-03	2.510E-05	4.247E-04	2.318E-04	2.631E+00	2.367E+00
Vh	Contra Cost	2020	Annual	LDA	TOT	LDA - TOT	AllMYr	426,855	15,805,671	52.71%	2,695,455	9.76257E-08	9.32611E-08	1.01577E-06	3.52848E-09	4.70802E-08	1.99103E-08	0.000351834	0.000243092	2.152E-04	2.056E-04	2.239E-03	7.779E-06	1.038E-04	4.389E-05	7.757E-01	5.359E-01
Vh	Contra Cost	2020	Annual	LDT1	TOT	LDT1 - TOT	AllMYr	52,676	1,968,560	6.57%	319,312	3.05021E-07	2.51784E-07	2.60045E-06	4.09273E-09	4.87432E-08	2.14526E-08	0.000405616	0.000298482	6.725E-04	5.551E-04	5.733E-03	9.023E-06	1.075E-04	4.729E-05	8.942E-01	6.580E-01
Vh	Contra Cost	2020	Annual	LDT2	TOT	LDT2 - TOT	AllMYr	133,879	5,296,149	17.66%	842,112	1.48027E-07	1.55658E-07	1.40151E-06	4.79133E-09	4.69683E-08	1.98073E-08	0.000477641	0.000363092	3.263E-04	3.432E-04	3.090E-03	1.056E-05	1.035E-04	4.367E-05	1.053E+00	8.005E-01
Vh	Contra Cost	2020	Annual	LHD1	TOT	LHD1 - TOT	AllMYr	26,836	1,082,656	3.61%	379,483	4.65524E-07	1.6784E-06	3.05695E-06	8.38364E-09	7.49654E-08	3.83001E-08	0.000842431	0.000758188	1.026E-03	3.700E-03	6.739E-03	1.848E-05	1.653E-04	8.444E-05	1.857E+00	1.672E+00
Vh	Contra Cost	2020	Annual	LHD2	TOT	LHD2 - TOT	AllMYr	3,621	144,539	0.48%	48,619	2.86767E-07	2.09613E-06	1.74325E-06	6.85077E-09	1.0713E-07	5.71791E-08	0.00069881	0.000628929	6.322E-04	4.621E-03	3.843E-03	1.510E-05	2.362E-04	1.261E-04	1.541E+00	1.387E+00
Vh	Contra Cost	2020	Annual	MCY	TOT	MCY - TOT	AllMYr	21,945	194,114	0.65%	43,885	3.84531E-06	1.30828E-06	2.84458E-05	2.29067E-09	4.53549E-08	1.82538E-08	0.000174281	0.000156853	8.477E-03	2.884E-03	6.271E-02	5.050E-06	9.999E-05	4.024E-05	3.842E-01	3.458E-01
Vh	Contra Cost	2020	Annual	MDV	TOT	MDV - TOT	AllMYr	115,183	4,333,770	14.45%	709,758	2.72029E-07	3.20027E-07	2.57885E-06	6.12432E-09	4.73444E-08	2.01503E-08	0.000609117	0.000483145	5.997E-04	7.055E-04	5.685E-03	1.350E-05	1.044E-04	4.442E-05	1.343E+00	1.065E+00
Vh	Contra Cost	2020	Annual	MH	TOT	MH - TOT	AllMYr	4,765	61,514	0.21%	477	1.19914E-07	1.5577E-06	1.84043E-06	7.54492E-09	8.90883E-08	5.07461E-08	0.000761276	0.000685149	2.644E-04	3.434E-03	4.057E-03	1.663E-05	1.964E-04	1.119E-04	1.678E+00	1.510E+00
Vh	Contra Cost	2020	Annual	Motor Coach	TOT	Motor Coach - TOT	AllMYr	57	8,163	0.03%		2.77882E-07	4.13216E-06	1.34063E-06	1.72851E-08	2.13471E-07	1.243E-07	0.00181177	0.001630593	6.126E-04	9.110E-03	2.956E-03	3.811E-05	4.706E-04	2.740E-04	3.994E+00	3.595E+00
Vh	Contra Cost	2020	Annual	OBUS	TOT	OBUS - TOT	AllMYr	438	20,858	0.07%	20,022	1.12495E-06	2.44433E-06	1.42508E-05	7.44815E-09	4.58945E-08	1.88046E-08	0.00072105	0.000648945	2.480E-03	5.389E-03	3.142E-02	1.642E-05	1.012E-04	4.146E-05	1.590E+00	1.431E+00
Vh	Contra Cost	2020	Annual	PTO	TOT	PTO - TOT	AllMYr	0	15,087	0.05%		2.47094E-07	5.87298E-06	7.78545E-07	2.04076E-08	5.05816E-08	4.65351E-08	0.002139056	0.001925151	5.447E-04	1.295E-02	1.716E-03	4.499E-05	1.115E-04	1.026E-04	4.716E+00	4.244E+00
Vh	Contra Cost	2020	Annual	SBUS	TOT	SBUS - TOT	AllMYr	1,624	59,643	0.20%	413	2.17669E-07	9.56149E-06	1.34561E-06	1.28991E-08	7.58952E-07	3.51415E-07	0.001347995	0.001213196	4.799E-04	2.108E-02	2.967E-03	2.844E-05	1.673E-03	7.747E-04	2.972E+00	2.675E+00
Vh	Contra Cost	2020	Annual	T6 Ag	TOT	T6 Ag - TOT	AllMYr	55	1,855	0.01%		2.69632E-07	3.60494E-06	9.21554E-07	1.1464E-08	2.70554E-07	1.76817E-07	0.00120162	0.001081458	5.944E-04	7.948E-03	2.032E-03	2.527E-05	5.965E-04	3.898E-04	2.649E+00	2.384E+00
Vh	Contra Cost	2020	Annual	T6 CAIRP heavy	TOT	T6 CAIRP heavy - TOT	AllMYr	2	140	0.00%		1.1764E-07	2.14109E-06	4.35655E-07	1.1329E-08	1.82731E-07	9.60196E-08	0.001187468	0.001068721	2.594E-04	4.720E-03	9.605E-04	2.498E-05	4.029E-04	2.117E-04	2.618E+00	2.356E+00
Vh	Contra Cost	2020	Annual	T6 CAIRP small	TOT	T6 CAIRP small - TOT	AllMYr	7	479	0.00%		1.21112E-07	1.2054E-06	4.5181E-07	1.12736E-08	1.84503E-07	9.76504E-08	0.001181664	0.001063498	2.670E-04	2.657E-03	9.961E-04	2.485E-05	4.068E-04	2.153E-04	2.605E+00	2.345E+00
Vh	Contra Cost	2020	Annual	T6 instate construction heavy	TOT	T6 instate construction heavy - TOT	AllMYr	120	6,430	0.02%		1.26554E-07	3.70153E-06	4.63097E-07	1.14219E-08	1.90711E-07	1.03361E-07	0.001197208	0.001077487	2.790E-04	8.160E-03	1.021E-03	2.518E-05	4.204E-04	2.279E-04	2.639E+00	2.375E+00
Vh	Contra Cost	2020	Annual	T6 instate construction small	TOT	T6 instate construction small - TOT	AllMYr	260	17,335	0.06%		1.42504E-07	1.63845E-06	5.29526E-07	1.13048E-08	1.99145E-07	1.11121E-07	0.001184935	0.001066442	3.142E-04	3.612E-03	1.167E-03	2.492E-05	4.390E-04	2.450E-04	2.612E+00	2.351E+00
Vh	Contra Cost	2020	Annual	T6 instate heavy	TOT	T6 instate heavy - TOT	AllMYr	990	54,842	0.18%		1.25768E-07	3.34802E-06	4.61791E-07	1.14027E-08	1.89365E-07	1.02123E-07	0.001195193	0.001075673	2.773E-04	7.381E-03	1.018E-03	2.514E-05	4.175E-04	2.251E-04	2.635E+00	2.371E+00
Vh	Contra Cost	2020	Annual	T6 instate small	TOT	T6 instate small - TOT	AllMYr	2,285	154,803	0.52%		1.38065E-07	1.54333E-06	5.13381E-07	1.12975E-08	1.95973E-07	1.08202E-07	0.001184162	0.001065746	3.044E-04	3.402E-03	1.132E-03	2.491E-05	4.320E-04	2.385E-04	2.611E+00	2.350E+00
Vh	Contra Cost	2020	Annual	T6 OOS heavy	TOT	T6 OOS heavy - TOT	AllMYr	1	80	0.00%		1.1764E-07	2.14109E-06	4.35655E-07	1.1329E-08	1.82731E-07	9.60196E-08	0.001187468	0.001068721	2.594E-04	4.720E-03	9.605E-04	2.498E-05	4.029E-04	2.117E-04	2.618E+00	2.356E+00
Vh	Contra Cost	2020	Annual	T6 OOS small	TOT	T6 OOS small - TOT	AllMYr	4	275	0.00%		1.21112E-07	1.2054E-06	4.5181E-07	1.12736E-08	1.84503E-07	9.76504E-08	0.001181664	0.001063498	2.670E-04	2.657E-03	9.961E-04	2.485E-05	4.068E-04	2.153E-04	2.605E+00	2.345E+00
Vh	Contra Cost	2020	Annual	T6 public	TOT	T6 public - TOT	AllMYr	357	6,680	0.02%		9.39686E-08	4.03555E-06	3.89529E-07	1.16967E-08	1.7701E-07	9.07568E-08	0.001226012	0.00110341	2.072E-04	8.897E-03	8.588E-04	2.579E-05	3.902E-04	2.001E-04	2.703E+00	2.433E+00
Vh	Contra Cost	2020	Annual	T6 utility	TOT	T6 utility - TOT	AllMYr	54	1,090	0.00%		9.78196E-08	2.1377E-06	4.19875E-07	1.16013E-08	1.72405E-07	8.65202E-08	0.001216005	0.001094404	2.157E-04	4.713E-03	9.257E-04	2.558E-05	3.801E-04	1.907E-04	2.681E+00	2.413E+00
Vh	Contra Cost	2020	Annual	T6TS	TOT	T6TS - TOT	AllMYr	982	47,516	0.16%	19,651	8.21182E-07	1.46615E-06	1.00829E-05	7.2186E-09	4.62046E-08	1.90882E-08	0.000705481	0.000634932	1.810E-03	3.232E-03	2.223E-02	1.591E-05	1.019E-04	4.208E-05	1.555E+00	1.400E+00
Vh	Contra Cost	2020	Annual	T7 Ag	TOT	T7 Ag - TOT	AllMYr	100	6,717	0.02%		3.89849E-07	6.17244E-06	1.80304E-06	1.70967E-08	2.58531E-07	1.83388E-07	0.001792021	0.001612819	8.595E-04	1.361E-02	3.975E-03	3.769E-05	5.700E-04	4.043E-04	3.951E+00	3.556E+00
Vh	Contra Cost	2020	Annual	T7 CAIRP	TOT	T7 CAIRP - TOT	AllMYr	421	103,857	0.35%		3.49669E-07	3.20908E-06	1.71899E-06	1.75596E-08	1.7472E-07	1.06282E-07	0.001840542	0.001656488	7.709E-04	7.075E-03	3.790E-03	3.871E-05	3.852E-04	2.343E-04	4.058E+00	3.652E+00
Vh	Contra Cost	2020	Annual	T7 CAIRP construction	TOT	T7 CAIRP construction - TOT	AllMYr	27	6,536	0.02%		3.4935E-07	3.25154E-06	1.71647E-06	1.75607E-08	1.74762E-07	1.06321E-07	0.00184065	0.001656585	7.702E-04	7.168E-03	3.784E-03	3.871E-05	3.853E-04	2.344E-04	4.058E+00	3.652E+00
Vh	Contra Cost	2020	Annual	T7 NNOOS	TOT	T7 NNOOS - TOT	AllMYr	415	116,836	0.39%		3.34916E-07	2.46734E-06	1.67854E-06	1.76919E-08	1.6041E-07	9.31162E-08	0.00185441	0.001668969	7.384E-04	5.440E-03	3.701E-03	3.900E-05	3.536E-04	2.053E-04	4.088E+00	3.679E+00
Vh	Contra Cost	2020	Annual	T7 NOOS	TOT	T7 NOOS - TOT	AllMYr	153	37,822	0.13%		3.79272E-07	3.36933E-06	1.88406E-06	1.78332E-08	1.75229E-07	1.0675E-07	0.001869222	0.001682299	8.362E-04	7.428E-03	4.154E-03	3.932E-05	3.863E-04	2.353E-04	4.121E+00	3.709E+00
Vh	Contra Cost	2020	Annual	T7 other port	TOT	T7 other port - TOT	AllMYr	64	10,077	0.03%		5.52125E-07	7.99398E-06	2.55366E-06	1.73125E-08	2.1417E-07	1.42575E-07	0.001814643	0.001633179	1.217E-03	1.762E-02	5.630E-03	3.817E-05	4.722E-04	3.143E-04	4.001E+00	3.601E+00
Vh	Contra Cost	2020	Annual	T7 POAK	TOT	T7 POAK - TOT	AllMYr	301	54,852	0.18%		5.74318E-07	8.13861E-06	2.67705E-06	1.75035E-08	2.14496E-07	1.42876E-07	0.001834655	0.00165119	1.266E-03	1.794E-02	5.902E-03	3.859E-05	4.729E-04	3.150E-04	4.045E+00	3.640E+00
Vh	Contra Cost	2020	Annual	T7 public	TOT	T7 public - TOT	AllMYr	234	5,803	0.02%		3.33687E-07	1.23604E-05	1.69644E-06	2.00464E-08	1.66341E-07	9.85733E-08	0.002101197	0.001891077	7.357E-04	2.725E-02	3.740E-03	4.419E-05	3.667E-04	2.173E-04	4.632E+00	4.169E+00
Vh	Contra Cost	2020	Annual	T7 Single	TOT	T7 Single - TOT	AllMYr	812	62,989	0.21%		2.16517E-07	4.93257E-06	1.0334E-06	1.70957E-08	1.56999E-07	8.99786E-08	0.001791915	0.001612723	4.773E-04	1.087E-02	2.278E-03	3.769E-05	3.461E-04	1.984E-04	3.950E+00	3.555E+00
Vh	Contra Cost	2020	Annual	T7 single construction	TOT	T7 single construction - TOT	AllMYr	220	16,908	0.06%		2.1591E-07	5.09884E-06	1.02977E-06	1.71034E-08	1.57405E-07	9.03516E-08	0.001792722	0.001613449	4.760E-04	1.124E-02	2.270E-03	3.771E-05	3.470E-04	1.992E-04	3.952E+00	3.557E+00
Vh	Contra Cost	2020	Annual	T7 SWCV	TOT	T7 SWCV - TOT	AllMYr	315	15,794	0.05%		2.66501E-07	7.92265E-06	1.33985E-06	1.82195E-08	1.53043E-07	8.6339E-08	0.001909711	0.00171874	5.875E-04	1.747E-02	2.954E-03	4.017E-05	3.374E-04	1.903E-04	4.210E+00	3.789E+00
Vh	Contra Cost	2020	Annual	T7 tractor	TOT	T7 tractor - TOT	AllMYr	1,164	189,737	0.63%		2.52152E-07	4.40851E-06	1.17226E-06	1.67834E-08	1.76261E-07	1.077E-07	0.001759177	0.00158326	5.559E-04	9.719E-03	2.584E-03	3.700E-05	3.886E-04	2.374E-04	3.878E+00	3.490E+00
Vh	Contra Cost	2020	Annual	T7 tractor construction	TOT	T7 tractor construction - TOT	AllMYr	160	12,606	0.04%		2.79397E-07	5.013E-06	1.32515E-06	1.70872E-08	1.77503E-07	1.08842E-07	0.00179102	0.001611918	6.160E-04	1.105E-02	2.921E-03	3.767E-05	3.913E-04	2.400E-04	3.949E+00	3.554E+00
Vh	Contra Cost	2020	Annual	T7 utility	TOT	T7 utility - TOT	AllMYr	37	931	0.00%		4.07918E-07	6.8765E-06	2.15983E-06	1.98152E-08	1.46914E-07	8.07001E-08	0.002076962	0.001869266	8.993E-04	1.516E-02	4.762E-03	4.369E-05	3.239E-04	1.779E-04	4.579E+00	4.121E+00
Vh	Contra Cost	2020	Annual	T7IS	TOT	T7IS - TOT	AllMYr	71	8,511	0.03%	1,411	1.16726E-06	5.75701E-06	3.95629E-05	6.58619E-09	4.54841E-08	1.84104E-08	0.000594037	0.000534633	2.573E-03	1.269E-02	8.722E-02	1.452E-05	1.003E-04	4.059E-05	1.310E+00	1.179E+00
Vh	Contra Cost	2020	Annual	UBUS	TOT	UBUS - TOT	AllMYr	333	44,409	0.15%	1,332	8.30787E-07	1.31637E-05	4.79604E-06	2.00585E-08	8.88275E-07	4.90029E-07	0.002087251	0.001878526	1.832E-03	2.902E-02	1.057E-02	4.422E-05	1.958E-03	1.080E-03	4.602E+00	4.141E+00
									29,984,609																			

Tons/Day

RecType	Sub-Area	CalYr	Season	Veh	Tech	Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	Trips	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)	Fuel_Gas	Fuel_Dsl
Vh	Contra Cost	2035	Annual	All Other Buses	TOT	All Other Buses - TOT	AllMYr	176	10,345	0.03%		1.569E-03	1.567E-02	5.881E-03	1.286E-04	2.153E-03	1.159E-03	1.348E+01	1.214E+01		1.214E+00
Vh	Contra Cost	2035	Annual	LDA	TOT	LDA - TOT	AllMYr	476,443	17,577,045	52.67%	3,007,053	1.181E+00	1.270E+00	1.355E+01	6.831E-02	9.234E-01	3.962E-01	6.822E+03	4.070E+03	7.257E+02	2.526E+00
Vh	Contra Cost	2035	Annual	LDT1	TOT	LDT1 - TOT	AllMYr	58,270	2,185,173	6.55%	354,243	2.929E-01	2.018E-01	2.233E+00	9.854E-03	1.146E-01	4.907E-02	9.835E+02	6.113E+02	1.050E+02	1.073E-01
Vh	Contra Cost	2035	Annual	LDT2	TOT	LDT2 - TOT	AllMYr	148,354	5,819,975	17.44%	927,179	6.980E-01	5.392E-01	5.460E+00	3.068E-02	3.051E-01	1.306E-01	3.064E+03	2.092E+03	3.271E+02	9.416E-02
Vh	Contra Cost	2035	Annual	LHD1	TOT	LHD1 - TOT	AllMYr	29,844	1,208,283	3.62%	422,007	3.154E-01	1.065E+00	1.965E+00	1.111E-02	9.077E-02	4.261E-02	1.120E+03	1.008E+03	9.522E+01	2.060E+01
Vh	Contra Cost	2035	Annual	LHD2	TOT	LHD2 - TOT	AllMYr	4,019	162,185	0.49%	53,965	2.543E-02	1.526E-01	2.000E-01	1.220E-03	1.717E-02	8.394E-03	1.246E+02	1.122E+02	6.997E+00	5.318E+00
Vh	Contra Cost	2035	Annual	MCY	TOT	MCY - TOT	AllMYr	24,963	219,716	0.66%	49,921	9.007E-01	3.127E-01	6.414E+00	5.556E-04	1.094E-02	4.384E-03	4.311E+01	3.880E+01	5.927E+00	0.000E+00
Vh	Contra Cost	2035	Annual	MDV	TOT	MDV - TOT	AllMYr	126,917	4,706,682	14.10%	758,378	9.182E-01	6.650E-01	6.493E+00	3.180E-02	2.462E-01	1.051E-01	3.175E+03	2.234E+03	3.390E+02	1.695E-01
Vh	Contra Cost	2035	Annual	MH	TOT	MH - TOT	AllMYr	5,108	65,997	0.20%	511	3.219E-03	5.993E-02	2.157E-02	5.490E-04	5.193E-03	2.499E-03	5.559E+01	5.004E+01	4.400E+00	1.287E+00
Vh	Contra Cost	2035	Annual	Motor Coach	TOT	Motor Coach - TOT	AllMYr	71	10,589	0.03%		3.314E-03	2.607E-02	1.615E-02	2.001E-04	2.434E-03	1.398E-03	2.097E+01	1.888E+01		1.888E+00
Vh	Contra Cost	2035	Annual	OBUS	TOT	OBUS - TOT	AllMYr	494	22,947	0.07%	22,537	1.881E-02	2.678E-02	1.818E-01	1.855E-04	1.145E-03	4.608E-04	1.826E+01	1.644E+01	1.979E+00	0.000E+00
Vh	Contra Cost	2035	Annual	PTO	TOT	PTO - TOT	AllMYr	0	19,755	0.06%		5.795E-03	4.551E-02	1.783E-02	4.398E-04	9.696E-04	8.921E-04	4.610E+01	4.149E+01		4.149E+00
Vh	Contra Cost	2035	Annual	SBUS	TOT	SBUS - TOT	AllMYr	1,500	51,975	0.16%	431	1.827E-02	2.737E-01	7.624E-02	7.361E-04	4.231E-02	1.937E-02	7.695E+01	6.925E+01	4.303E-01	6.563E+00
Vh	Contra Cost	2035	Annual	T6 Ag	TOT	T6 Ag - TOT	AllMYr	50	1,769	0.01%		2.663E-04	2.639E-03	1.036E-03	2.216E-05	3.653E-04	1.955E-04	2.322E+00	2.090E+00		2.090E-01
Vh	Contra Cost	2035	Annual	T6 CAIRP heavy	TOT	T6 CAIRP heavy - TOT	AllMYr	3	173	0.00%		2.232E-05	2.056E-04	8.388E-05	2.144E-06	3.426E-05	1.781E-05	2.247E-01	2.022E-01		2.022E-02
Vh	Contra Cost	2035	Annual	T6 CAIRP small	TOT	T6 CAIRP small - TOT	AllMYr	8	598	0.00%		7.335E-05	6.540E-04	2.750E-04	7.415E-06	1.170E-04	6.013E-05	7.772E-01	6.995E-01		6.995E-02
Vh	Contra Cost	2035	Annual	T6 instate construction heavy	TOT	T6 instate construction heavy - TOT	AllMYr	189	10,842	0.03%		1.529E-03	1.476E-02	5.763E-03	1.348E-04	2.205E-03	1.167E-03	1.413E+01	1.272E+01		1.272E+00
Vh	Contra Cost	2035	Annual	T6 instate construction small	TOT	T6 instate construction small - TOT	AllMYr	470	31,962	0.10%		4.111E-03	3.772E-02	1.542E-02	3.968E-04	6.336E-03	3.290E-03	4.160E+01	3.744E+01		3.744E+00
Vh	Contra Cost	2035	Annual	T6 instate heavy	TOT	T6 instate heavy - TOT	AllMYr	1,127	64,532	0.19%		9.107E-03	8.796E-02	3.433E-02	8.027E-04	1.313E-02	6.952E-03	8.413E+01	7.572E+01		7.572E+00
Vh	Contra Cost	2035	Annual	T6 instate small	TOT	T6 instate small - TOT	AllMYr	2,793	189,863	0.57%		2.443E-02	2.242E-01	9.165E-02	2.357E-03	3.764E-02	1.954E-02	2.471E+02	2.224E+02		2.224E+01
Vh	Contra Cost	2035	Annual	T6 OOS heavy	TOT	T6 OOS heavy - TOT	AllMYr	2	99	0.00%		1.280E-05	1.179E-04	4.809E-05	1.229E-06	1.964E-05	1.021E-05	1.288E-01	1.159E-01		1.159E-02
Vh	Contra Cost	2035	Annual	T6 OOS small	TOT	T6 OOS small - TOT	AllMYr	5	343	0.00%		4.205E-05	3.750E-04	1.576E-04	4.251E-06	6.706E-05	3.447E-05	4.456E-01	4.010E-01		4.010E-02
Vh	Contra Cost	2035	Annual	T6 public	TOT	T6 public - TOT	AllMYr	475	8,991	0.03%		1.050E-03	1.053E-02	4.602E-03	1.144E-04	1.707E-03	8.560E-04	1.199E+01	1.079E+01		1.079E+00
Vh	Contra Cost	2035	Annual	T6 utility	TOT	T6 utility - TOT	AllMYr	71	1,432	0.00%		1.607E-04	1.387E-03	7.047E-04	1.817E-05	2.689E-04	1.336E-04	1.905E+00	1.714E+00		1.714E-01
Vh	Contra Cost	2035	Annual	T6TS	TOT	T6TS - TOT	AllMYr	1,073	50,146	0.15%	21,473	2.458E-02	3.278E-02	2.403E-01	3.939E-04	2.496E-03	1.002E-03	3.904E+01	3.514E+01	4.202E+00	0.000E+00
Vh	Contra Cost	2035	Annual	T7 Ag	TOT	T7 Ag - TOT	AllMYr	89	6,408	0.02%		2.075E-03	1.674E-02	1.008E-02	1.210E-04	1.191E-03	7.108E-04	1.268E+01	1.141E+01		1.141E+00
Vh	Contra Cost	2035	Annual	T7 CAIRP	TOT	T7 CAIRP - TOT	AllMYr	559	135,491	0.41%		5.275E-02	4.117E-01	2.622E-01	2.630E-03	2.577E-02	1.558E-02	2.756E+02	2.481E+02		2.481E+01
Vh	Contra Cost	2035	Annual	T7 CAIRP construction	TOT	T7 CAIRP construction - TOT	AllMYr	49	11,773	0.04%		4.584E-03	3.578E-02	2.279E-02	2.285E-04	2.240E-03	1.354E-03	2.395E+01	2.155E+01		2.155E+00
Vh	Contra Cost	2035	Annual	T7 NNOOS	TOT	T7 NNOOS - TOT	AllMYr	552	152,422	0.46%		5.652E-02	4.052E-01	2.842E-01	2.977E-03	2.694E-02	1.563E-02	3.120E+02	2.808E+02		2.808E+01
Vh	Contra Cost	2035	Annual	T7 NOOS	TOT	T7 NOOS - TOT	AllMYr	203	49,342	0.15%		2.097E-02	1.591E-01	1.054E-01	9.736E-04	9.412E-03	5.697E-03	1.021E+02	9.185E+01		9.185E+00
Vh	Contra Cost	2035	Annual	T7 other port	TOT	T7 other port - TOT	AllMYr	82	12,787	0.04%		4.388E-03	4.139E-02	2.076E-02	2.371E-04	2.685E-03	1.703E-03	2.485E+01	2.237E+01		2.237E+00
Vh	Contra Cost	2035	Annual	T7 POAK	TOT	T7 POAK - TOT	AllMYr	554	114,033	0.34%		4.114E-02	3.796E-01	1.965E-01	2.133E-03	2.397E-02	1.521E-02	2.236E+02	2.012E+02		2.012E+01
Vh	Contra Cost	2035	Annual	T7 public	TOT	T7 public - TOT	AllMYr	314	7,810	0.02%		4.088E-03	4.100E-02	2.163E-02	1.695E-04	1.275E-03	7.043E-04	1.777E+01	1.599E+01		1.599E+00
Vh	Contra Cost	2035	Annual	T7 Single	TOT	T7 Single - TOT	AllMYr	1,042	82,174	0.25%		2.287E-02	1.692E-01	1.115E-01	1.546E-03	1.396E-02	7.907E-03	1.620E+02	1.458E+02		1.458E+01
Vh	Contra Cost	2035	Annual	T7 single construction	TOT	T7 single construction - TOT	AllMYr	387	30,454	0.09%		8.484E-03	6.276E-02	4.135E-02	5.729E-04	5.174E-03	2.931E-03	6.004E+01	5.404E+01		5.404E+00
Vh	Contra Cost	2035	Annual	T7 SWCV	TOT	T7 SWCV - TOT	AllMYr	424	21,257	0.06%		7.914E-03	5.343E-02	4.050E-02	4.219E-04	3.472E-03	1.918E-03	4.422E+01	3.980E+01		3.980E+00
Vh	Contra Cost	2035	Annual	T7 tractor	TOT	T7 tractor - TOT	AllMYr	1,488	247,528	0.74%		6.961E-02	6.148E-01	3.278E-01	4.559E-03	4.679E-02	2.819E-02	4.778E+02	4.301E+02		4.301E+01
Vh	Contra Cost	2035	Annual	T7 tractor construction	TOT	T7 tractor construction - TOT	AllMYr	282	22,706	0.07%		7.339E-03	6.145E-02	3.544E-02	4.267E-04	4.311E-03	2.603E-03	4.473E+01	4.026E+01		4.026E+00
Vh	Contra Cost	2035	Annual	T7 utility	TOT	T7 utility - TOT	AllMYr	49	1,222	0.00%		6.739E-04	3.842E-03	3.589E-03	2.643E-05	1.933E-04	1.045E-04	2.771E+00	2.494E+00		2.494E-01
Vh	Contra Cost	2035	Annual	T7IS	TOT	T7IS - TOT	AllMYr	64	7,397	0.02%	1,271	5.469E-03	4.192E-02	2.992E-01	5.322E-05	3.668E-04	1.465E-04	4.844E+00	4.360E+00	5.677E-01	0.000E+00
Vh	Contra Cost	2035	Annual	UBUS	TOT	UBUS - TOT	AllMYr	348	46,396	0.14%	1,392	2.201E-02	4.264E-01	1.178E-01	9.588E-04	4.207E-02	2.197E-02	9.992E+01	8.992E+01	9.582E-01	8.192E+00
									33,370,616												

9.072E-01 **MTons/Mile** | 2.000E+03 **lbs/Mile**

RecType	Sub-Area	CalYr	Season	Veh	Tech	Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	Trips	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
Vh	Contra Cost	2035	Annual	All Other Buses	TOT	All Other Buses - TOT	AllMYr	176	10,345	0.03%		1.37584E-07	1.37401E-06	5.15682E-07	1.12812E-08	1.88802E-07	1.01605E-07	0.001182456	0.001064211	3.033E-04	3.029E-03	1.137E-03	2.487E-05	4.162E-04	2.240E-04	2.607E+00	2.346E+00
Vh	Contra Cost	2035	Annual	LDA	TOT	LDA - TOT	AllMYr	476,443	17,577,045	52.67%	3,007,053	6.09495E-08	6.5562E-08	6.99208E-07	3.52546E-09	4.7661E-08	2.04507E-08	0.000352077	0.000210072	1.344E-04	1.445E-04	1.541E-03	7.772E-06	1.051E-04	4.509E-05	7.762E-01	4.631E-01
Vh	Contra Cost	2035	Annual	LDT1	TOT	LDT1 - TOT	AllMYr	58,270	2,185,173	6.55%	354,243	1.21607E-07	8.37947E-08	9.27062E-07	4.09106E-09	4.75744E-08	2.03705E-08	0.000408312	0.000253787	2.681E-04	1.847E-04	2.044E-03	9.019E-06	1.049E-04	4.491E-05	9.002E-01	5.595E-01
Vh	Contra Cost	2035	Annual	LDT2	TOT	LDT2 - TOT	AllMYr	148,354	5,819,975	17.44%	927,179	1.08794E-07	8.4042E-08	8.51106E-07	4.78174E-09	4.7555E-08	2.03526E-08	0.000477619	0.00032612	2.399E-04	1.853E-04	1.876E-03	1.054E-05	1.048E-04	4.487E-05	1.053E+00	7.190E-01
Vh	Contra Cost	2035	Annual	LHD1	TOT	LHD1 - TOT	AllMYr	29,844	1,208,283	3.62%	422,007	2.36779E-07	7.99261E-07	1.47517E-06	8.34291E-09	6.81529E-08	3.19898E-08	0.000841153	0.000757038	5.220E-04	1.762E-03	3.252E-03	1.839E-05	1.503E-04	7.053E-05	1.854E+00	1.669E+00
Vh	Contra Cost	2035	Annual	LHD2	TOT	LHD2 - TOT	AllMYr	4,019	162,185	0.49%	53,965	1.42243E-07	8.53726E-07	1.11846E-06	6.82471E-09	9.60457E-08	4.69537E-08	0.000697078	0.000627371	3.136E-04	1.882E-03	2.466E-03	1.505E-05	2.117E-04	1.035E-04	1.537E+00	1.383E+00
Vh	Contra Cost	2035	Annual	MCY	TOT	MCY - TOT	AllMYr	24,963	219,716	0.66%	49,921	3.7188E-06	1.29113E-06	2.64826E-05	2.29411E-09	4.51535E-08	1.81011E-08	0.000177994	0.000160194	8.199E-03	2.846E-03	5.838E-02	5.058E-06	9.955E-05	3.991E-05	3.924E-01	3.532E-01
Vh	Contra Cost	2035	Annual	MDV	TOT	MDV - TOT	AllMYr	126,917	4,706,682	14.10%	758,378	1.76974E-07	1.28183E-07	1.25144E-06	6.12895E-09	4.74561E-08	2.02608E-08	0.000611908	0.000430503	3.902E-04	2.826E-04	2.759E-03	1.351E-05	1.046E-04	4.467E-05	1.349E+00	9.491E-01
Vh	Contra Cost	2035	Annual	MH	TOT	MH - TOT	AllMYr	5,108	65,997	0.20%	511	4.42494E-08	8.23847E-07	2.96516E-07	7.54637E-09	7.13814E-08	3.43461E-08	0.000764194	0.000687775	9.755E-05	1.816E-03	6.537E-04	1.664E-05	1.574E-04	7.572E-05	1.685E+00	1.516E+00
Vh	Contra Cost	2035	Annual	Motor Coach	TOT	Motor Coach - TOT	AllMYr	71	10,589	0.03%		2.8389E-07	2.23325E-06	1.38398E-06	1.71431E-08	2.08562E-07	1.19785E-07	0.00179688	0.001617192	6.259E-04	4.923E-03	3.051E-03	3.779E-05	4.598E-04	2.641E-04	3.961E+00	3.565E+00
Vh	Contra Cost	2035	Annual	OBUS	TOT	OBUS - TOT	AllMYr	494	22,947	0.07%	22,537	7.43472E-07	1.05852E-06	7.18904E-06	7.33355E-09	4.52527E-08	1.82164E-08	0.000721933	0.000649739	1.639E-03	2.334E-03	1.585E-02	1.617E-05	9.977E-05	4.016E-05	1.592E+00	1.432E+00
Vh	Contra Cost	2035	Annual	PTO	TOT	PTO - TOT	AllMYr	0	19,755	0.06%		2.66106E-07	2.08965E-06	8.18771E-07	2.01981E-08	4.45273E-08	4.09651E-08	0.002117099	0.001905389	5.867E-04	4.607E-03	1.805E-03	4.453E-05	9.817E-05	9.031E-05	4.667E+00	4.201E+00
Vh	Contra Cost	2035	Annual	SBUS	TOT	SBUS - TOT	AllMYr	1,500	51,975	0.16%	431	3.18814E-07	4.77719E-06	1.3307E-06	1.28474E-08	7.38487E-07	3.38015E-07	0.001343018	0.001208716	7.029E-04	1.053E-02	2.934E-03	2.832E-05	1.628E-03	7.452E-04	2.961E+00	2.665E+00
Vh	Contra Cost	2035	Annual	T6 Ag	TOT	T6 Ag - TOT	AllMYr	50	1,769	0.01%		1.36577E-07	1.35306E-06	5.31322E-07	1.13614E-08	1.8733E-07	1.00251E-07	0.001190862	0.001071776	3.011E-04	2.983E-03	1.171E-03	2.505E-05	4.130E-04	2.210E-04	2.625E+00	2.363E+00
Vh	Contra Cost	2035	Annual	T6 CAIRP heavy	TOT	T6 CAIRP heavy - TOT	AllMYr	3	173	0.00%		1.17315E-07	1.08045E-06	4.4086E-07	1.12674E-08	1.80089E-07	9.35894E-08	0.001181007	0.001062906	2.586E-04	2.382E-03	9.719E-04	2.484E-05	3.970E-04	2.063E-04	2.604E+00	2.343E+00
Vh	Contra Cost	2035	Annual	T6 CAIRP small	TOT	T6 CAIRP small - TOT	AllMYr	8	598	0.00%		1.11364E-07	9.92998E-07	4.17473E-07	1.12576E-08	1.7759E-07	9.12897E-08	0.001179987	0.001061988	2.455E-04	2.189E-03	9.204E-04	2.482E-05	3.915E-04	2.013E-04	2.601E+00	2.341E+00
Vh	Contra Cost	2035	Annual	T6 instate construction heavy	TOT	T6 instate construction heavy - TOT	AllMYr	189	10,842	0.03%		1.27919E-07	1.23507E-06	4.82241E-07	1.12836E-08	1.84548E-07	9.76912E-08	0.001182713	0.001064441	2.820E-04	2.723E-03	1.063E-03	2.488E-05	4.069E-04	2.154E-04	2.607E+00	2.347E+00
Vh	Contra Cost	2035	Annual	T6 instate construction small	TOT	T6 instate construction small - TOT	AllMYr	470	31,962	0.10%		1.16679E-07	1.07074E-06	4.37747E-07	1.12638E-08	1.79851E-07	9.33702E-08	0.001180636	0.001062572	2.572E-04	2.361E-03	9.651E-04	2.483E-05	3.965E-04	2.058E-04	2.603E+00	2.343E+00
Vh	Contra Cost	2035	Annual	T6 instate heavy	TOT	T6 instate heavy - TOT	AllMYr	1,127	64,532	0.19%		1.2803E-07	1.23659E-06	4.82651E-07	1.12837E-08	1.84595E-07	9.77342E-08	0.001182722	0.00106445	2.823E-04	2.726E-03	1.064E-03	2.488E-05	4.070E-04	2.155E-04	2.607E+00	2.347E+00
Vh	Contra Cost	2035	Annual	T6 instate small	TOT	T6 instate small - TOT	AllMYr	2,793	189,863	0.57%		1.1672E-07	1.07131E-06	4.37899E-07	1.12639E-08	1.79868E-07	9.3386E-08	0.001180639	0.001062575	2.573E-04	2.362E-03	9.654E-04	2.483E-05	3.965E-04	2.059E-04	2.603E+00	2.343E+00
Vh	Contra Cost	2035	Annual	T6 OOS heavy	TOT	T6 OOS heavy - TOT	AllMYr	2	99	0.00%		1.17315E-07	1.08045E-06	4.4086E-07	1.12674E-08	1.80089E-07	9.35894E-08	0.001181007	0.001062906	2.586E-04	2.382E-03	9.719E-04	2.484E-05	3.970E-04	2.063E-04	2.604E+00	2.343E+00
Vh	Contra Cost	2035	Annual	T6 OOS small	TOT	T6 OOS small - TOT	AllMYr	5	343	0.00%		1.11364E-07	9.92998E-07	4.17473E-07	1.12576E-08	1.7759E-07	9.12897E-08	0.001179987	0.001061988	2.455E-04	2.189E-03	9.204E-04	2.482E-05	3.915E-04	2.013E-04	2.601E+00	2.341E+00
Vh	Contra Cost	2035	Annual	T6 public	TOT	T6 public - TOT	AllMYr	475	8,991	0.03%		1.05937E-07	1.06268E-06	4.64385E-07	1.15414E-08	1.72242E-07	8.63698E-08	0.001209733	0.001088759	2.336E-04	2.343E-03	1.024E-03	2.544E-05	3.797E-04	1.904E-04	2.667E+00	2.400E+00
Vh	Contra Cost	2035	Annual	T6 utility	TOT	T6 utility - TOT	AllMYr	71	1,432	0.00%		1.01831E-07	8.78783E-07	4.4653E-07	1.15141E-08	1.70386E-07	8.46627E-08	0.001206867	0.00108618	2.245E-04	1.937E-03	9.844E-04	2.538E-05	3.756E-04	1.866E-04	2.661E+00	2.395E+00
Vh	Contra Cost	2035	Annual	T6TS	TOT	T6TS - TOT	AllMYr	1,073	50,146	0.15%	21,473	4.44604E-07	5.93025E-07	4.34685E-06	7.12677E-09	4.51534E-08	1.81243E-08	0.0007063	0.00063567	9.802E-04	1.307E-03	9.583E-03	1.571E-05	9.955E-05	3.996E-05	1.557E+00	1.401E+00
Vh	Contra Cost	2035	Annual	T7 Ag	TOT	T7 Ag - TOT	AllMYr	89	6,408	0.02%		2.93745E-07	2.37013E-06	1.42657E-06	1.71284E-08	1.68577E-07	1.0063E-07	0.001795338	0.001615804	6.476E-04	5.225E-03	3.145E-03	3.776E-05	3.716E-04	2.219E-04	3.958E+00	3.562E+00
Vh	Contra Cost	2035	Annual	T7 CAIRP	TOT	T7 CAIRP - TOT	AllMYr	559	135,491	0.41%		3.53176E-07	2.75637E-06	1.75583E-06	1.76068E-08	1.7257E-07	1.04303E-07	0.001845482	0.001660933	7.786E-04	6.077E-03	3.871E-03	3.882E-05	3.805E-04	2.299E-04	4.069E+00	3.662E+00
Vh	Contra Cost	2035	Annual	T7 CAIRP construction	TOT	T7 CAIRP construction - TOT	AllMYr	49	11,773	0.04%		3.53239E-07	2.75681E-06	1.75618E-06	1.76072E-08	1.72576E-07	1.04309E-07	0.001845529	0.001660976	7.788E-04	6.078E-03	3.872E-03	3.882E-05	3.805E-04	2.300E-04	4.069E+00	3.662E+00
Vh	Contra Cost	2035	Annual	T7 NNOOS	TOT	T7 NNOOS - TOT	AllMYr	552	152,422	0.46%		3.36372E-07	2.4115E-06	1.69129E-06	1.7716E-08	1.60315E-07	9.30293E-08	0.001856927	0.001671234	7.416E-04	5.316E-03	3.729E-03	3.906E-05	3.534E-04	2.051E-04	4.094E+00	3.684E+00
Vh	Contra Cost	2035	Annual	T7 NOOS	TOT	T7 NOOS - TOT	AllMYr	203	49,342	0.15%		3.8557E-07	2.9246E-06	1.93859E-06	1.79007E-08	1.73042E-07	1.04738E-07	0.001876296	0.001688667	8.500E-04	6.448E-03	4.274E-03	3.946E-05	3.815E-04	2.309E-04	4.137E+00	3.723E+00
Vh	Contra Cost	2035	Annual	T7 other port	TOT	T7 other port - TOT	AllMYr	82	12,787	0.04%		3.11327E-07	2.93663E-06	1.47307E-06	1.68232E-08	1.90495E-07	1.20795E-07	0.001763353	0.001587018	6.864E-04	6.474E-03	3.248E-03	3.709E-05	4.200E-04	2.663E-04	3.888E+00	3.499E+00
Vh	Contra Cost	2035	Annual	T7 POAK	TOT	T7 POAK - TOT	AllMYr	554	114,033	0.34%		3.27309E-07	3.01963E-06	1.56324E-06	1.69683E-08	1.90728E-07	1.21009E-07	0.001778556	0.001600701	7.216E-04	6.657E-03	3.446E-03	3.741E-05	4.205E-04	2.668E-04	3.921E+00	3.529E+00
Vh	Contra Cost	2035	Annual	T7 public	TOT	T7 public - TOT	AllMYr	314	7,810	0.02%		4.74766E-07	4.76185E-06	2.51184E-06	1.96907E-08	1.4812E-07	8.18094E-08	0.002063914	0.001857523	1.047E-03	1.050E-02	5.538E-03	4.341E-05	3.265E-04	1.804E-04	4.550E+00	4.095E+00
Vh	Contra Cost	2035	Annual	T7 Single	TOT	T7 Single - TOT	AllMYr	1,042	82,174	0.25%		2.5251E-07	1.86772E-06	1.23056E-06	1.70634E-08	1.54073E-07	8.72862E-08	0.001788524	0.001609672	5.567E-04	4.118E-03	2.713E-03	3.762E-05	3.397E-04	1.924E-04	3.943E+00	3.549E+00
Vh	Contra Cost	2035	Annual	T7 single construction	TOT	T7 single construction - TOT	AllMYr	387	30,454	0.09%		2.52726E-07	1.86961E-06	1.23169E-06	1.70645E-08	1.54112E-07	8.73226E-08	0.001788648	0.001609784	5.572E-04	4.122E-03	2.715E-03	3.762E-05	3.398E-04	1.925E-04	3.943E+00	3.549E+00
Vh	Contra Cost	2035	Annual	T7 SWCV	TOT	T7 SWCV - TOT	AllMYr	424	21,257	0.06%		3.37756E-07	2.28046E-06	1.72865E-06	1.80048E-08	1.4817E-07	8.18558E-08	0.001887207	0.001698487	7.446E-04	5.028E-03	3.811E-03	3.969E-05	3.267E-04	1.805E-04	4.161E+00	3.745E+00
Vh	Contra Cost	2035	Annual	T7 tractor	TOT	T7 tractor - TOT	AllMYr	1,488	247,528	0.74%		2.5512E-07	2.25319E-06	1.20147E-06	1.67082E-08	1.71479E-07	1.033E-07	0.001751301	0.001576171	5.624E-04	4.967E-03	2.649E-03	3.684E-05	3.780E-04	2.277E-04	3.861E+00	3.475E+00
Vh	Contra Cost	2035	Annual	T7 tractor construction	TOT	T7 tractor construction - TOT	AllMYr	282	22,706	0.07%		2.9321E-07	2.45504E-06	1.41586E-06	1.70497E-08	1.72227E-07	1.03988E-07	0.001787088	0.001608379	6.464E-04	5.412E-03	3.121E-03	3.759E-05	3.797E-04	2.293E-04	3.940E+00	3.546E+00
Vh	Contra Cost	2035	Annual	T7 utility	TOT	T7 utility - TOT	AllMYr	49	1,222	0.00%		5.00203E-07	2.85203E-06	2.66387E-06	1.9621E-08	1.43508E-07	7.75662E-08	0.002056608	0.001850947	1.103E-03	6.288E-03	5.873E-03	4.326E-05	3.164E-04	1.710E-04	4.534E+00	4.081E+00
Vh	Contra Cost	2035	Annual	T7IS	TOT	T7IS - TOT	AllMYr	64	7,397	0.02%	1,271	6.70698E-07	5.14039E-06	3.66908E-05	6.52654E-09	4.49891E-08	1.79718E-08	0.000594087	0.000534678	1.479E-03	1.133E-02	8.089E-02	1.439E-05	9.918E-05	3.962E-05	1.310E+00	1.179E+00
Vh	Contra Cost	2035	Annual	UBUS	TOT	UBUS - TOT	AllMYr	348	46,396	0.14%	1,392	4.30275E-07	8.3374E-06	2.30268E-06	1.87478E-08	8.22512E-07	4.29523E-07	0.001953661	0.001758294	9.486E-04	1.838E-02	5.077E-03	4.133E-05	1.813E-03	9.469E-04	4.307E+00	3.876E+00
									33,370,616																		

Year 2008 (MTons/Year)

Based on EMFAC2011

	Emission year	Annual VMT		GWP	GWP			
	2008	**325,063,750**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.02%		1	0	90	99	90	99
LDA	50.62%		64	2	57,655	58,285	57,655	58,285
LDT1	6.36%		17	1	8,307	8,471	8,307	8,471
LDT2	18.02%		33	1	27,984	28,309	27,984	28,309
LHD1	4.10%		37	1	11,209	11,579	11,209	11,579
LHD2	0.55%		7	0	1,222	1,291	1,222	1,291
MCY	0.58%		3	0	248	275	248	275
MDV	16.33%		34	1	31,908	32,245	31,908	32,245
MH	0.20%		2	0	507	527	507	527
Motor Coach	0.02%		1	0	137	150	137	150
OBUS	0.09%		1	0	203	214	203	214
PTO	0.04%		2	0	270	291	270	291
SBUS	0.24%		10	0	1,044	1,142	1,044	1,142
T6 Ag	0.01%		0	0	28	30	28	30
T6 CAIRP heavy	0.00%		0	0	2	2	2	2
T6 CAIRP small	0.00%		0	0	6	6	6	6
T6 instate construction heavy	0.03%		1	0	114	124	114	124
T6 instate construction small	0.09%		3	0	338	364	338	364
T6 instate heavy	0.17%		6	0	651	706	651	706
T6 instate small	0.50%		15	0	1,932	2,075	1,932	2,075
T6 OOS heavy	0.00%		0	0	1	1	1	1
T6 OOS small	0.00%		0	0	3	3	3	3
T6 public	0.02%		1	0	77	83	77	83
T6 public	0.02%		1	0	77	83	77	83
T6 utility	0.00%		0	0	13	14	13	14
T6TS	0.12%		2	0	293	315	293	315
T7 Ag	0.02%		1	0	144	158	144	158
T7 CAIRP	0.26%		13	0	1,537	1,668	1,537	1,668
T7 CAIRP construction	0.03%		2	0	185	201	185	201
T7 NNOOS	0.30%		11	0	1,752	1,864	1,752	1,864
T7 NOOS	0.10%		5	0	563	611	563	611
T7 other port	0.03%		2	0	171	192	171	192
T7 POAK	0.10%		8	0	602	677	602	677
T7 public	0.02%		1	0	111	122	111	122
T7 Single	0.16%		8	0	925	1,006	925	1,006
T7 single construction	0.08%		4	0	476	518	476	518
T7 SWCV	0.04%		3	0	276	302	276	302
T7 tractor	0.48%		27	1	2,765	3,027	2,765	3,027
T7 tractor construction	0.06%		3	0	355	389	355	389
T7 utility	0.00%		0	0	19	20	19	20
T7IS	0.02%		1	0	49	58	49	58
UBUS	0.15%		7	0	1,051	1,123	1,051	1,123
TOTAL			**337**	**11**	**155,299**	**158,621**	**155,299**	**158,621**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Year 2020 (MTons/Year)

Based on EMFAC2011

Greenhouse Gas Reductions TOTAL

	Emission year	Annual VMT		GWP	GWP			
TOTAL	**2020**	**12,975,371**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	4	4	4	4
LDA	52.71%		1	0	2,406	2,413	1,663	1,669
LDT1	6.57%		0	0	346	348	254	256
LDT2	17.66%		0	0	1,095	1,098	832	836
LHD1	3.61%		1	0	395	402	355	363
LHD2	0.48%		0	0	44	45	39	41
MCY	0.65%		0	0	15	16	13	14
MDV	14.45%		1	0	1,142	1,148	906	912
MH	0.21%		0	0	20	21	18	19
Motor Coach	0.03%		0	0	6	7	6	6
OBUS	0.07%		0	0	7	7	6	6
PTO	0.05%		0	0	14	14	13	13
SBUS	0.20%		0	0	35	37	31	34
T6 Ag	0.01%		0	0	1	1	1	1
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.02%		0	0	3	3	3	3
T6 instate construction small	0.06%		0	0	9	9	8	8
T6 instate heavy	0.18%		0	0	28	29	26	26
T6 instate small	0.52%		0	0	79	80	71	72
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.02%		0	0	4	4	3	3
T6 utility	0.00%		0	0	1	1	1	1
T6TS	0.16%		0	0	15	15	13	13
T7 Ag	0.02%		0	0	5	5	5	5
T7 CAIRP	0.35%		0	0	83	84	74	76
T7 CAIRP construction	0.02%		0	0	5	5	5	5
T7 NNOOS	0.39%		0	0	94	95	84	86
T7 NOOS	0.13%		0	0	31	31	28	28
T7 other port	0.03%		0	0	8	8	7	7
T7 POAK	0.18%		0	0	44	45	39	41
T7 public	0.02%		0	0	5	6	5	5
T7 Single	0.21%		0	0	49	50	44	45
T7 single construction	0.06%		0	0	13	13	12	12
T7 SWCV	0.05%		0	0	13	14	12	12
T7 tractor	0.63%		0	0	144	148	130	134
T7 tractor construction	0.04%		0	0	10	10	9	9
T7 utility	0.00%		0	0	1	1	1	1
T7IS	0.03%		0	0	2	2	2	2
UBUS	0.15%		0	0	40	43	36	39
TOTAL			**5**	**0**	**6,215**	**6,264**	**4,758**	**4,807**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Land Use/Location Strategies (Measures LU-3, LU-5, LU-6, and LU-7)

	Emission year	Annual VMT		GWP	GWP			
	2020	**3,156,312**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	1	1	1	1
LDA	52.71%		0	0	585	587	404	406
LDT1	6.57%		0	0	84	85	62	62
LDT2	17.66%		0	0	266	267	202	203
LHD1	3.61%		0	0	96	98	86	88
LHD2	0.48%		0	0	11	11	10	10
MCY	0.65%		0	0	4	4	3	3
MDV	14.45%		0	0	278	279	220	222
MH	0.21%		0	0	5	5	4	5
Motor Coach	0.03%		0	0	2	2	1	1
OBUS	0.07%		0	0	2	2	1	1
PTO	0.05%		0	0	3	3	3	3
SBUS	0.20%		0	0	8	9	8	8
T6 Ag	0.01%		0	0	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.02%		0	0	1	1	1	1
T6 instate construction small	0.06%		0	0	2	2	2	2
T6 instate heavy	0.18%		0	0	7	7	6	6
T6 instate small	0.52%		0	0	19	20	17	18
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.02%		0	0	1	1	1	1
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.16%		0	0	4	4	3	3
T7 Ag	0.02%		0	0	1	1	1	1
T7 CAIRP	0.35%		0	0	20	20	18	18
T7 CAIRP construction	0.02%		0	0	1	1	1	1
T7 NNOOS	0.39%		0	0	23	23	21	21
T7 NOOS	0.13%		0	0	7	8	7	7
T7 other port	0.03%		0	0	2	2	2	2
T7 POAK	0.18%		0	0	11	11	10	10
T7 public	0.02%		0	0	1	1	1	1
T7 Single	0.21%		0	0	12	12	11	11
T7 single construction	0.06%		0	0	3	3	3	3
T7 SWCV	0.05%		0	0	3	3	3	3
T7 tractor	0.63%		0	0	35	36	32	32
T7 tractor construction	0.04%		0	0	2	2	2	2
T7 utility	0.00%		0	0	0	0	0	0
T7IS	0.03%		0	0	1	1	0	1
UBUS	0.15%		0	0	10	10	9	9
TOTAL			**1**	**0**	**1,512**	**1,524**	**1,157**	**1,169**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Transit System Improvement Strategies (TR-1, TR-15)

	Emission year	Annual VMT		GWP	GWP			
	2020	**1,578,156**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	1	1	0	0
LDA	52.71%		0	0	293	293	202	203
LDT1	6.57%		0	0	42	42	31	31
LDT2	17.66%		0	0	133	134	101	102
LHD1	3.61%		0	0	48	49	43	44
LHD2	0.48%		0	0	5	5	5	5
MCY	0.65%		0	0	2	2	2	2
MDV	14.45%		0	0	139	140	110	111
MH	0.21%		0	0	2	3	2	2
Motor Coach	0.03%		0	0	1	1	1	1
OBUS	0.07%		0	0	1	1	1	1
PTO	0.05%		0	0	2	2	2	2
SBUS	0.20%		0	0	4	5	4	4
T6 Ag	0.01%		0	0	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.02%		0	0	0	0	0	0
T6 instate construction small	0.06%		0	0	1	1	1	1
T6 instate heavy	0.18%		0	0	3	4	3	3
T6 instate small	0.52%		0	0	10	10	9	9
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.02%		0	0	0	0	0	0
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.16%		0	0	2	2	2	2
T7 Ag	0.02%		0	0	1	1	1	1
T7 CAIRP	0.35%		0	0	10	10	9	9
T7 CAIRP construction	0.02%		0	0	1	1	1	1
T7 NNOOS	0.39%		0	0	11	12	10	10
T7 NOOS	0.13%		0	0	4	4	3	3
T7 other port	0.03%		0	0	1	1	1	1
T7 POAK	0.18%		0	0	5	6	5	5
T7 public	0.02%		0	0	1	1	1	1
T7 Single	0.21%		0	0	6	6	5	6
T7 single construction	0.06%		0	0	2	2	1	1
T7 SWCV	0.05%		0	0	2	2	1	1
T7 tractor	0.63%		0	0	18	18	16	16
T7 tractor construction	0.04%		0	0	1	1	1	1
T7 utility	0.00%		0	0	0	0	0	0
T7IS	0.03%		0	0	0	0	0	0
UBUS	0.15%		0	0	5	5	4	5
TOTAL			**1**	**0**	**756**	**762**	**579**	**585**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Commute Trip Reduction Strategies (LU-4, TR-2, TR-9, TR-10)

	Emission year	Annual VMT		GWP	GWP			
	2020	**5,961,460**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	2	2	2	2
LDA	52.71%		0	0	1,106	1,109	764	767
LDT1	6.57%		0	0	159	160	117	118
LDT2	17.66%		0	0	503	505	382	384
LHD1	3.61%		0	0	181	185	163	167
LHD2	0.48%		0	0	20	21	18	19
MCY	0.65%		0	0	7	7	6	7
MDV	14.45%		0	0	525	528	416	419
MH	0.21%		0	0	9	9	8	9
Motor Coach	0.03%		0	0	3	3	3	3
OBUS	0.07%		0	0	3	3	3	3
PTO	0.05%		0	0	6	7	6	6
SBUS	0.20%		0	0	16	17	14	16
T6 Ag	0.01%		0	0	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.02%		0	0	2	2	1	1
T6 instate construction small	0.06%		0	0	4	4	4	4
T6 instate heavy	0.18%		0	0	13	13	12	12
T6 instate small	0.52%		0	0	36	37	33	33
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.02%		0	0	2	2	1	2
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.16%		0	0	7	7	6	6
T7 Ag	0.02%		0	0	2	2	2	2
T7 CAIRP	0.35%		0	0	38	39	34	35
T7 CAIRP construction	0.02%		0	0	2	2	2	2
T7 NNOOS	0.39%		0	0	43	44	39	39
T7 NOOS	0.13%		0	0	14	14	13	13
T7 other port	0.03%		0	0	4	4	3	3
T7 POAK	0.18%		0	0	20	21	18	19
T7 public	0.02%		0	0	2	3	2	2
T7 Single	0.21%		0	0	22	23	20	21
T7 single construction	0.06%		0	0	6	6	5	6
T7 SWCV	0.05%		0	0	6	6	5	6
T7 tractor	0.63%		0	0	66	68	60	61
T7 tractor construction	0.04%		0	0	4	5	4	4
T7 utility	0.00%		0	0	0	0	0	0
T7IS	0.03%		0	0	1	1	1	1
UBUS	0.15%		0	0	18	20	17	18
TOTAL			**2**	**0**	**2,855**	**2,878**	**2,186**	**2,209**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Parking Policy/Pricing Strategies (TR-6, TR-17)

	Emission year	Annual VMT		GWP	GWP			
	2020	**1,928,626**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
LDA	0.03%		0	0	1	1	1	1
LDT1	52.71%		0	0	358	359	247	248
LDT2	6.57%		0	0	51	52	38	38
LHD1	17.66%		0	0	163	163	124	124
LHD2	3.61%		0	0	59	60	53	54
MCY	0.48%		0	0	6	7	6	6
MDV	0.65%		0	0	2	2	2	2
MH	14.45%		0	0	170	171	135	136
Motor Coach	0.21%		0	0	3	3	3	3
OBUS	0.03%		0	0	1	1	1	1
PTO	0.07%		0	0	1	1	1	1
SBUS	0.05%		0	0	2	2	2	2
T6 Ag	0.20%		0	0	5	6	5	5
T6 CAIRP heavy	0.01%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.00%		0	0	0	0	0	0
T6 instate construction small	0.02%		0	0	0	1	0	0
T6 instate heavy	0.06%		0	0	1	1	1	1
T6 instate small	0.18%		0	0	4	4	4	4
T6 OOS heavy	0.52%		0	0	12	12	11	11
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.00%		0	0	0	0	0	0
T6 utility	0.02%		0	0	1	1	0	0
T6TS	0.00%		0	0	0	0	0	0
T7 Ag	0.16%		0	0	2	2	2	2
T7 CAIRP	0.02%		0	0	1	1	1	1
T7 CAIRP construction	0.35%		0	0	12	13	11	11
T7 NNOOS	0.02%		0	0	1	1	1	1
T7 NOOS	0.39%		0	0	14	14	13	13
T7 other port	0.13%		0	0	5	5	4	4
T7 POAK	0.03%		0	0	1	1	1	1
T7 public	0.18%		0	0	6	7	6	6
T7 Single	0.02%		0	0	1	1	1	1
T7 single construction	0.21%		0	0	7	7	7	7
T7 SWCV	0.06%		0	0	2	2	2	2
T7 tractor	0.05%		0	0	2	2	2	2
T7 tractor construction	0.63%		0	0	21	22	19	20
T7 utility	0.04%		0	0	1	1	1	1
T7IS	0.00%		0	0	0	0	0	0
UBUS	0.03%		0	0	0	0	0	0
TOTAL	0.15%		0	0	6	6	5	6
TOTAL			**1**	**0**	**924**	**931**	**707**	**715**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Neighborhood/Site Enhancements Strategies (RE-12, TR-13)

	Emission year	Annual VMT		GWP	GWP			
	2020	**350,817**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
LDT1	0.03%		0	0	0	0	0	0
LDT2	52.71%		0	0	65	65	45	45
LHD1	6.57%		0	0	9	9	7	7
LHD2	17.66%		0	0	30	30	22	23
MCY	3.61%		0	0	11	11	10	10
MDV	0.48%		0	0	1	1	1	1
MH	0.65%		0	0	0	0	0	0
Motor Coach	14.45%		0	0	31	31	24	25
OBUS	0.21%		0	0	1	1	0	1
PTO	0.03%		0	0	0	0	0	0
SBUS	0.07%		0	0	0	0	0	0
T6 Ag	0.05%		0	0	0	0	0	0
T6 CAIRP heavy	0.20%		0	0	1	1	1	1
T6 CAIRP small	0.01%		0	0	0	0	0	0
T6 instate construction heavy	0.00%		0	0	0	0	0	0
T6 instate construction small	0.00%		0	0	0	0	0	0
T6 instate heavy	0.02%		0	0	0	0	0	0
T6 instate small	0.06%		0	0	0	0	0	0
T6 OOS heavy	0.18%		0	0	1	1	1	1
T6 OOS small	0.52%		0	0	2	2	2	2
T6 public	0.00%		0	0	0	0	0	0
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.02%		0	0	0	0	0	0
T7 Ag	0.00%		0	0	0	0	0	0
T7 CAIRP	0.16%		0	0	0	0	0	0
T7 CAIRP construction	0.02%		0	0	0	0	0	0
T7 NNOOS	0.35%		0	0	2	2	2	2
T7 NOOS	0.02%		0	0	0	0	0	0
T7 other port	0.39%		0	0	3	3	2	2
T7 POAK	0.13%		0	0	1	1	1	1
T7 public	0.03%		0	0	0	0	0	0
T7 Single	0.18%		0	0	1	1	1	1
T7 single construction	0.02%		0	0	0	0	0	0
T7 SWCV	0.21%		0	0	1	1	1	1
T7 tractor	0.06%		0	0	0	0	0	0
T7 tractor construction	0.05%		0	0	0	0	0	0
T7 utility	0.63%		0	0	4	4	4	4
T7IS	0.04%		0	0	0	0	0	0
UBUS	0.00%		0	0	0	0	0	0
TOTAL	0.03%		0	0	0	0	0	0
TOTAL	0.15%		0	0	1	1	1	1
TOTAL			**0**	**0**	**168**	**169**	**129**	**130**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Year 2035 (MTons/Year)

Based on EMFAC2011

GHG Reductions TOTAL

	Emission year	Annual VMT		GWP	GWP			
TOTAL	**2035**	**15,282,574**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	6	6	5	5
LDA	52.67%		1	0	2,834	2,839	1,691	1,696
LDT1	6.55%		0	0	409	409	254	255
LDT2	17.44%		0	0	1,273	1,275	869	871
LHD1	3.62%		0	0	465	470	419	423
LHD2	0.49%		0	0	52	52	47	47
MCY	0.66%		0	0	18	19	16	17
MDV	14.10%		0	0	1,319	1,322	928	931
MH	0.20%		0	0	23	23	21	21
Motor Coach	0.03%		0	0	9	9	8	8
OBUS	0.07%		0	0	8	8	7	7
PTO	0.06%		0	0	19	19	17	17
SBUS	0.16%		0	0	32	33	29	30
T6 Ag	0.01%		0	0	1	1	1	1
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.03%		0	0	6	6	5	5
T6 instate construction small	0.10%		0	0	17	17	16	16
T6 instate heavy	0.19%		0	0	35	35	31	32
T6 instate small	0.57%		0	0	103	104	92	93
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.03%		0	0	5	5	4	5
T6 utility	0.00%		0	0	1	1	1	1
T6TS	0.15%		0	0	16	16	15	15
T7 Ag	0.02%		0	0	5	5	5	5
T7 CAIRP	0.41%		0	0	115	116	103	105
T7 CAIRP construction	0.04%		0	0	10	10	9	9
T7 NNOOS	0.46%		0	0	130	131	117	118
T7 NOOS	0.15%		0	0	42	43	38	39
T7 other port	0.04%		0	0	10	10	9	9
T7 POAK	0.34%		0	0	93	94	84	85
T7 public	0.02%		0	0	7	8	7	7
T7 Single	0.25%		0	0	67	68	61	61
T7 single construction	0.09%		0	0	25	25	22	23
T7 SWCV	0.06%		0	0	18	19	17	17
T7 tractor	0.74%		0	0	199	201	179	181
T7 tractor construction	0.07%		0	0	19	19	17	17
T7 utility	0.00%		0	0	1	1	1	1
T7IS	0.02%		0	0	2	2	2	2
UBUS	0.14%		0	0	42	43	37	39
TOTAL			**3**	**0**	**7,435**	**7,468**	**5,183**	**5,215**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Land Use/Location Strategies (LU-3, LU-5, LU-6, LU-7)

	Emission year	Annual VMT		GWP	GWP			
	2035	**3,717,411**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	1	1	1	1
LDA	52.67%		0	0	689	691	411	413
LDT1	6.55%		0	0	99	100	62	62
LDT2	17.44%		0	0	310	310	211	212
LHD1	3.62%		0	0	113	114	102	103
LHD2	0.49%		0	0	13	13	11	11
MCY	0.66%		0	0	4	5	4	4
MDV	14.10%		0	0	321	321	226	226
MH	0.20%		0	0	6	6	5	5
Motor Coach	0.03%		0	0	2	2	2	2
OBUS	0.07%		0	0	2	2	2	2
PTO	0.06%		0	0	5	5	4	4
SBUS	0.16%		0	0	8	8	7	7
T6 Ag	0.01%		0	0	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.03%		0	0	1	1	1	1
T6 instate construction small	0.10%		0	0	4	4	4	4
T6 instate heavy	0.19%		0	0	9	9	8	8
T6 instate small	0.57%		0	0	25	25	22	23
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.03%		0	0	1	1	1	1
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.15%		0	0	4	4	4	4
T7 Ag	0.02%		0	0	1	1	1	1
T7 CAIRP	0.41%		0	0	28	28	25	25
T7 CAIRP construction	0.04%		0	0	2	2	2	2
T7 NNOOS	0.46%		0	0	32	32	28	29
T7 NOOS	0.15%		0	0	10	10	9	9
T7 other port	0.04%		0	0	3	3	2	2
T7 POAK	0.34%		0	0	23	23	20	21
T7 public	0.02%		0	0	2	2	2	2
T7 Single	0.25%		0	0	16	17	15	15
T7 single construction	0.09%		0	0	6	6	5	6
T7 SWCV	0.06%		0	0	4	5	4	4
T7 tractor	0.74%		0	0	48	49	43	44
T7 tractor construction	0.07%		0	0	5	5	4	4
T7 utility	0.00%		0	0	0	0	0	0
T7IS	0.02%		0	0	0	1	0	0
UBUS	0.14%		0	0	10	11	9	10
TOTAL			**1**	**0**	**1,809**	**1,817**	**1,261**	**1,269**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Transit System Improvements Strategies (TR-1, TR-15)

	Emission year	Annual VMT		GWP	GWP			
	2035	**1,858,532**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	1	1	1	1
LDA	52.67%		0	0	345	345	206	206
LDT1	6.55%		0	0	50	50	31	31
LDT2	17.44%		0	0	155	155	106	106
LHD1	3.62%		0	0	57	57	51	51
LHD2	0.49%		0	0	6	6	6	6
MCY	0.66%		0	0	2	2	2	2
MDV	14.10%		0	0	160	161	113	113
MH	0.20%		0	0	3	3	3	3
Motor Coach	0.03%		0	0	1	1	1	1
OBUS	0.07%		0	0	1	1	1	1
PTO	0.06%		0	0	2	2	2	2
SBUS	0.16%		0	0	4	4	3	4
T6 Ag	0.01%		0	0	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.03%		0	0	1	1	1	1
T6 instate construction small	0.10%		0	0	2	2	2	2
T6 instate heavy	0.19%		0	0	4	4	4	4
T6 instate small	0.57%		0	0	12	13	11	11
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.03%		0	0	1	1	1	1
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.15%		0	0	2	2	2	2
T7 Ag	0.02%		0	0	1	1	1	1
T7 CAIRP	0.41%		0	0	14	14	13	13
T7 CAIRP construction	0.04%		0	0	1	1	1	1
T7 NNOOS	0.46%		0	0	16	16	14	14
T7 NOOS	0.15%		0	0	5	5	5	5
T7 other port	0.04%		0	0	1	1	1	1
T7 POAK	0.34%		0	0	11	11	10	10
T7 public	0.02%		0	0	1	1	1	1
T7 Single	0.25%		0	0	8	8	7	7
T7 single construction	0.09%		0	0	3	3	3	3
T7 SWCV	0.06%		0	0	2	2	2	2
T7 tractor	0.74%		0	0	24	24	22	22
T7 tractor construction	0.07%		0	0	2	2	2	2
T7 utility	0.00%		0	0	0	0	0	0
T7IS	0.02%		0	0	0	0	0	0
UBUS	0.14%		0	0	5	5	5	5
TOTAL			**0**	**0**	**904**	**908**	**630**	**634**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Commute Trip Reduction Strategies (LU-4, TR-2, TR-9, TR-10)

	Emission year	Annual VMT		GWP	GWP			
	2035	**7,021,892**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	3	3	2	2
LDA	52.67%		0	0	1,302	1,305	777	779
LDT1	6.55%		0	0	188	188	117	117
LDT2	17.44%		0	0	585	586	399	400
LHD1	3.62%		0	0	214	216	192	194
LHD2	0.49%		0	0	24	24	21	22
MCY	0.66%		0	0	8	9	7	8
MDV	14.10%		0	0	606	607	426	428
MH	0.20%		0	0	11	11	10	10
Motor Coach	0.03%		0	0	4	4	4	4
OBUS	0.07%		0	0	3	4	3	3
PTO	0.06%		0	0	9	9	8	8
SBUS	0.16%		0	0	15	15	13	14
T6 Ag	0.01%		0	0	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.03%		0	0	3	3	2	2
T6 instate construction small	0.10%		0	0	8	8	7	7
T6 instate heavy	0.19%		0	0	16	16	14	15
T6 instate small	0.57%		0	0	47	48	42	43
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.03%		0	0	2	2	2	2
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.15%		0	0	7	8	7	7
T7 Ag	0.02%		0	0	2	2	2	2
T7 CAIRP	0.41%		0	0	53	53	47	48
T7 CAIRP construction	0.04%		0	0	5	5	4	4
T7 NNOOS	0.46%		0	0	60	60	54	54
T7 NOOS	0.15%		0	0	19	20	18	18
T7 other port	0.04%		0	0	5	5	4	4
T7 POAK	0.34%		0	0	43	43	38	39
T7 public	0.02%		0	0	3	3	3	3
T7 Single	0.25%		0	0	31	31	28	28
T7 single construction	0.09%		0	0	11	12	10	10
T7 SWCV	0.06%		0	0	8	9	8	8
T7 tractor	0.74%		0	0	91	92	82	83
T7 tractor construction	0.07%		0	0	9	9	8	8
T7 utility	0.00%		0	0	1	1	0	0
T7IS	0.02%		0	0	1	1	1	1
UBUS	0.14%		0	0	19	20	17	18
TOTAL			**2**	**0**	**3,416**	**3,431**	**2,381**	**2,396**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Parking Policy/ Pricing Strategies (TR-6, TR-17)

	Emission year	Annual VMT		GWP	GWP			
	2035	**2,271,809**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
LDA	0.03%		0	0	1	1	1	1
LDT1	52.67%		0	0	421	422	251	252
LDT2	6.55%		0	0	61	61	38	38
LHD1	17.44%		0	0	189	190	129	130
LHD2	3.62%		0	0	69	70	62	63
MCY	0.49%		0	0	8	8	7	7
MDV	0.66%		0	0	3	3	2	3
MH	14.10%		0	0	196	196	138	138
Motor Coach	0.20%		0	0	3	3	3	3
OBUS	0.03%		0	0	1	1	1	1
PTO	0.07%		0	0	1	1	1	1
SBUS	0.06%		0	0	3	3	3	3
T6 Ag	0.16%		0	0	5	5	4	4
T6 CAIRP heavy	0.01%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.00%		0	0	0	0	0	0
T6 instate construction small	0.03%		0	0	1	1	1	1
T6 instate heavy	0.10%		0	0	3	3	2	2
T6 instate small	0.19%		0	0	5	5	5	5
T6 OOS heavy	0.57%		0	0	15	15	14	14
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.00%		0	0	0	0	0	0
T6 utility	0.03%		0	0	1	1	1	1
T6TS	0.00%		0	0	0	0	0	0
T7 Ag	0.15%		0	0	2	2	2	2
T7 CAIRP	0.02%		0	0	1	1	1	1
T7 CAIRP construction	0.41%		0	0	17	17	15	16
T7 NNOOS	0.04%		0	0	1	2	1	1
T7 NOOS	0.46%		0	0	19	20	17	18
T7 other port	0.15%		0	0	6	6	6	6
T7 POAK	0.04%		0	0	2	2	1	1
T7 public	0.34%		0	0	14	14	12	13
T7 Single	0.02%		0	0	1	1	1	1
T7 single construction	0.25%		0	0	10	10	9	9
T7 SWCV	0.09%		0	0	4	4	3	3
T7 tractor	0.06%		0	0	3	3	2	2
T7 tractor construction	0.74%		0	0	30	30	27	27
T7 utility	0.07%		0	0	3	3	2	3
T7IS	0.00%		0	0	0	0	0	0
UBUS	0.02%		0	0	0	0	0	0
TOTAL	0.14%		0	0	6	6	6	6
TOTAL			**0**	**0**	**1,105**	**1,110**	**770**	**775**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Neighborhood/ Site Enhancements Strategies (Tr-12,TR-13)

	Emission year	Annual VMT		GWP	GWP			
	2035	**412,930**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
LDT1	0.03%		0	0	0	0	0	0
LDT2	52.67%		0	0	77	77	46	46
LHD1	6.55%		0	0	11	11	7	7
LHD2	17.44%		0	0	34	34	23	24
MCY	3.62%		0	0	13	13	11	11
MDV	0.49%		0	0	1	1	1	1
MH	0.66%		0	0	0	1	0	0
Motor Coach	14.10%		0	0	36	36	25	25
OBUS	0.20%		0	0	1	1	1	1
PTO	0.03%		0	0	0	0	0	0
SBUS	0.07%		0	0	0	0	0	0
T6 Ag	0.06%		0	0	1	1	0	0
T6 CAIRP heavy	0.16%		0	0	1	1	1	1
T6 CAIRP small	0.01%		0	0	0	0	0	0
T6 instate construction heavy	0.00%		0	0	0	0	0	0
T6 instate construction small	0.00%		0	0	0	0	0	0
T6 instate heavy	0.03%		0	0	0	0	0	0
T6 instate small	0.10%		0	0	0	0	0	0
T6 OOS heavy	0.19%		0	0	1	1	1	1
T6 OOS small	0.57%		0	0	3	3	2	3
T6 public	0.00%		0	0	0	0	0	0
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.03%		0	0	0	0	0	0
T7 Ag	0.00%		0	0	0	0	0	0
T7 CAIRP	0.15%		0	0	0	0	0	0
T7 CAIRP construction	0.02%		0	0	0	0	0	0
T7 NNOOS	0.41%		0	0	3	3	3	3
T7 NOOS	0.04%		0	0	0	0	0	0
T7 other port	0.46%		0	0	4	4	3	3
T7 POAK	0.15%		0	0	1	1	1	1
T7 public	0.04%		0	0	0	0	0	0
T7 Single	0.34%		0	0	3	3	2	2
T7 single construction	0.02%		0	0	0	0	0	0
T7 SWCV	0.25%		0	0	2	2	2	2
T7 tractor	0.09%		0	0	1	1	1	1
T7 tractor construction	0.06%		0	0	0	1	0	0
T7 utility	0.74%		0	0	5	5	5	5
T7IS	0.07%		0	0	1	1	0	0
UBUS	0.00%		0	0	0	0	0	0
TOTAL	0.02%		0	0	0	0	0	0
TOTAL	0.14%		0	0	1	1	1	1
TOTAL			**0**	**0**	**201**	**202**	**140**	**141**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Year 2035 (MTons/Year)

Based on EMFAC2011

	Emission year	Annual VMT		GWP	GWP			
	2035	**413,044,163**		**310**	**1**	**MTons**		**MTons**
	Percent of VMT		**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.03%		0	0	151	153	136	138
LDA	52.67%		14	0	76,598	76,738	45,703	45,844
LDT1	6.55%		2	0	11,044	11,066	6,864	6,887
LDT2	17.44%		6	0	34,406	34,466	23,493	23,552
LHD1	3.62%		12	0	12,580	12,698	11,322	11,440
LHD2	0.49%		2	0	1,399	1,416	1,259	1,276
MCY	0.66%		4	0	484	519	436	470
MDV	14.10%		7	0	35,648	35,721	25,080	25,153
MH	0.20%		1	0	624	631	562	568
Motor Coach	0.03%		0	0	236	238	212	215
OBUS	0.07%		0	0	205	208	185	188
PTO	0.06%		1	0	518	523	466	471
SBUS	0.16%		3	0	864	894	778	808
T6 Ag	0.01%		0	0	26	26	23	24
T6 CAIRP heavy	0.00%		0	0	3	3	2	2
T6 CAIRP small	0.00%		0	0	9	9	8	8
T6 instate construction heavy	0.03%		0	0	159	160	143	144
T6 instate construction small	0.10%		0	0	467	471	420	425
T6 instate heavy	0.19%		1	0	945	954	850	860
T6 instate small	0.57%		3	0	2,775	2,799	2,497	2,522
T6 OOS heavy	0.00%		0	0	1	1	1	1
T6 OOS small	0.00%		0	0	5	5	5	5
T6 public	0.03%		0	0	135	136	121	122
T6 utility	0.00%		0	0	21	22	19	19
T6TS	0.15%		0	0	438	442	395	398
T7 Ag	0.02%		0	0	142	144	128	130
T7 CAIRP	0.41%		5	0	3,095	3,141	2,785	2,831
T7 CAIRP construction	0.04%		0	0	269	273	242	246
T7 NNOOS	0.46%		5	0	3,503	3,548	3,153	3,198
T7 NOOS	0.15%		2	0	1,146	1,164	1,031	1,049
T7 other port	0.04%		0	0	279	284	251	256
T7 POAK	0.34%		4	0	2,510	2,552	2,259	2,301
T7 public	0.02%		0	0	200	204	180	184
T7 Single	0.25%		2	0	1,819	1,838	1,637	1,656
T7 single construction	0.09%		1	0	674	681	607	614
T7 SWCV	0.06%		1	0	497	502	447	453
T7 tractor	0.74%		7	0	5,366	5,434	4,829	4,897
T7 tractor construction	0.07%		1	0	502	509	452	459
T7 utility	0.00%		0	0	31	32	28	28
T7IS	0.02%		0	0	54	59	49	54
UBUS	0.14%		5	0	1,122	1,169	1,010	1,057
TOTAL			**90**	**3**	**200,949**	**201,834**	**140,068**	**140,953**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Year 2008

Based on EMFAC2011

	Emission year	Daily						
	2008	**936,783**			**lbs/day**			
	Percent of VMT		**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.02%		0	5	1	0	0	0
LDA	50.62%		461	406	4,478	4	53	24
LDT1	6.36%		113	106	1,182	1	7	4
LDT2	18.02%		133	209	1,594	2	18	8
LHD1	4.10%		55	238	494	1	7	4
LHD2	0.55%		6	44	55	0	1	1
MCY	0.58%		70	18	609	0	1	0
MDV	16.33%		107	217	1,511	2	16	7
MH	0.20%		3	13	71	0	0	0
Motor Coach	0.02%		0	8	2	0	0	0
OBUS	0.09%		3	7	36	0	0	0
PTO	0.04%		1	14	4	0	1	1
SBUS	0.24%		6	63	34	0	6	4
T6 Ag	0.01%		0	2	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.03%		0	6	1	0	0	0
T6 instate construction small	0.09%		1	16	2	0	1	1
T6 instate heavy	0.17%		2	36	7	0	2	2
T6 instate small	0.50%		4	92	14	0	5	4
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.02%		0	4	0	0	0	0
T6 public	0.02%		0	4	0	0	0	0
T6 utility	0.00%		0	1	0	0	0	0
T6TS	0.12%		10	14	104	0	0	0
T7 Ag	0.02%		1	9	2	0	0	0
T7 CAIRP	0.26%		5	84	19	0	3	3
T7 CAIRP construction	0.03%		1	10	2	0	0	0
T7 NNOOS	0.30%		4	73	16	0	3	2
T7 NOOS	0.10%		2	31	7	0	1	1
T7 other port	0.03%		1	14	3	0	0	0
T7 POAK	0.10%		3	48	12	0	2	1
T7 public	0.02%		0	7	2	0	0	0
T7 Single	0.16%		2	52	10	0	2	2
T7 single construction	0.08%		1	27	5	0	1	1
T7 SWCV	0.04%		1	17	3	0	1	0
T7 tractor	0.48%		9	169	42	0	7	6
T7 tractor construction	0.06%		1	22	6	0	1	1
T7 utility	0.00%		0	1	0	0	0	0
T7IS	0.02%		3	6	43	0	0	0
TOTAL	100%		**1,009**	**2,094**	**10,372**	**10**	**143**	**78**

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Year 2008

Based on EMFAC2011

	Emission year	Daily						
	2008	**936,783**			**lbs/day**			
	Percent of VMT		**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.02%		0	5	1	0	0	0
LDA	50.62%		461	406	4,478	4	53	24
LDT1	6.36%		113	106	1,182	1	7	4
LDT2	18.02%		133	209	1,594	2	18	8
LHD1	4.10%		55	238	494	1	7	4
LHD2	0.55%		6	44	55	0	1	1
MCY	0.58%		70	18	609	0	1	0
MDV	16.33%		107	217	1,511	2	16	7
MH	0.20%		3	13	71	0	0	0
Motor Coach	0.02%		0	8	2	0	0	0
OBUS	0.09%		3	7	36	0	0	0
PTO	0.04%		1	14	4	0	1	1
SBUS	0.24%		6	63	34	0	6	4
T6 Ag	0.01%		0	2	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.03%		0	6	1	0	0	0
T6 instate construction small	0.09%		1	16	2	0	1	1
T6 instate heavy	0.17%		2	36	7	0	2	2
T6 instate small	0.50%		4	92	14	0	5	4
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.02%		0	4	0	0	0	0
T6 public	0.02%		0	4	0	0	0	0
T6 utility	0.00%		0	1	0	0	0	0
T6TS	0.12%		10	14	104	0	0	0
T7 Ag	0.02%		1	9	2	0	0	0
T7 CAIRP	0.26%		5	84	19	0	3	3
T7 CAIRP construction	0.03%		1	10	2	0	0	0
T7 NNOOS	0.30%		4	73	16	0	3	2
T7 NOOS	0.10%		2	31	7	0	1	1
T7 other port	0.03%		1	14	3	0	0	0
T7 POAK	0.10%		3	48	12	0	2	1
T7 public	0.02%		0	7	2	0	0	0
T7 Single	0.16%		2	52	10	0	2	2
T7 single construction	0.08%		1	27	5	0	1	1
T7 SWCV	0.04%		1	17	3	0	1	0
T7 tractor	0.48%		9	169	42	0	7	6
T7 tractor construction	0.06%		1	22	6	0	1	1
T7 utility	0.00%		0	1	0	0	0	0
T7IS	0.02%		3	6	43	0	0	0
TOTAL	100%		**1,009**	**2,094**	**10,372**	**10**	**143**	**78**

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Year 2020

Based on EMFAC2011

	Emission year	Daily						
	2020	**1,010,628**			**lbs/day**			
	Percent of VMT		**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.03%		0	2	0	0	0	0
LDA	52.71%		115	110	1,193	4	55	23
LDT1	6.57%		45	37	380	1	7	3
LDT2	17.66%		58	61	552	2	18	8
LHD1	3.61%		37	135	246	1	6	3
LHD2	0.48%		3	23	19	0	1	1
MCY	0.65%		55	19	410	0	1	0
MDV	14.45%		88	103	830	2	15	6
MH	0.21%		1	7	8	0	0	0
Motor Coach	0.03%		0	3	1	0	0	0
OBUS	0.07%		2	4	22	0	0	0
PTO	0.05%		0	7	1	0	0	0
SBUS	0.20%		1	42	6	0	3	2
T6 Ag	0.01%		0	0	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.02%		0	2	0	0	0	0
T6 instate construction small	0.06%		0	2	1	0	0	0
T6 instate heavy	0.18%		1	14	2	0	1	0
T6 instate small	0.52%		2	18	6	0	2	1
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.02%		0	2	0	0	0	0
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.16%		3	5	36	0	0	0
T7 Ag	0.02%		0	3	1	0	0	0
T7 CAIRP	0.35%		3	25	13	0	1	1
T7 CAIRP construction	0.02%		0	2	1	0	0	0
T7 NNOOS	0.39%		3	21	15	0	1	1
T7 NOOS	0.13%		1	9	5	0	0	0
T7 other port	0.03%		0	6	2	0	0	0
T7 POAK	0.18%		2	33	11	0	1	1
T7 public	0.02%		0	5	1	0	0	0
T7 Single	0.21%		1	23	5	0	1	0
T7 single construction	0.06%		0	6	1	0	0	0
T7 SWCV	0.05%		0	9	2	0	0	0
T7 tractor	0.63%		4	62	17	0	2	2
T7 tractor construction	0.04%		0	5	1	0	0	0
T7 utility	0.00%		0	0	0	0	0	0
T7IS	0.03%		1	4	25	0	0	0
UBUS	0.15%		3	43	16	0	3	2
TOTAL	100%		**429**	**853**	**3,828**	**11**	**123**	**55**

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

Year 2035

Based on EMFAC2011

	Emission year	Daily						
	2035	**1,190,329**			**lbs/day**			
	Percent of VMT		**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.03%		0	1	0	0	0	0
LDA	52.67%		84	91	966	5	66	28
LDT1	6.55%		21	14	159	1	8	4
LDT2	17.44%		50	38	390	2	22	9
LHD1	3.62%		22	76	140	1	6	3
LHD2	0.49%		2	11	14	0	1	1
MCY	0.66%		64	22	458	0	1	0
MDV	14.10%		66	47	463	2	18	7
MH	0.20%		0	4	2	0	0	0
Motor Coach	0.03%		0	2	1	0	0	0
OBUS	0.07%		1	2	13	0	0	0
PTO	0.06%		0	3	1	0	0	0
SBUS	0.16%		1	20	5	0	3	1
T6 Ag	0.01%		0	0	0	0	0	0
T6 CAIRP heavy	0.00%		0	0	0	0	0	0
T6 CAIRP small	0.00%		0	0	0	0	0	0
T6 instate construction heavy	0.03%		0	1	0	0	0	0
T6 instate construction small	0.10%		0	3	1	0	0	0
T6 instate heavy	0.19%		1	6	2	0	1	0
T6 instate small	0.57%		2	16	7	0	3	1
T6 OOS heavy	0.00%		0	0	0	0	0	0
T6 OOS small	0.00%		0	0	0	0	0	0
T6 public	0.03%		0	1	0	0	0	0
T6 utility	0.00%		0	0	0	0	0	0
T6TS	0.15%		2	2	17	0	0	0
T7 Ag	0.02%		0	1	1	0	0	0
T7 CAIRP	0.41%		4	29	19	0	2	1
T7 CAIRP construction	0.04%		0	3	2	0	0	0
T7 NNOOS	0.46%		4	29	20	0	2	1
T7 NOOS	0.15%		1	11	8	0	1	0
T7 other port	0.04%		0	3	1	0	0	0
T7 POAK	0.34%		3	27	14	0	2	1
T7 public	0.02%		0	3	2	0	0	0
T7 Single	0.25%		2	12	8	0	1	1
T7 single construction	0.09%		1	4	3	0	0	0
T7 SWCV	0.06%		1	4	3	0	0	0
T7 tractor	0.74%		5	44	23	0	3	2
T7 tractor construction	0.07%		1	4	3	0	0	0
T7 utility	0.00%		0	0	0	0	0	0
T7IS	0.02%		0	3	21	0	0	0
UBUS	0.14%		2	30	8	0	3	2
TOTAL	100%		**341**	**570**	**2,777**	**13**	**145**	**65**

Based on the emission factors and Fleet mix for the San Francisco Air Basin, Contra Costa County.

TOWN OF DANVILLE — TRANSPORTATION SECTOR

VMT	Town of Danville + Sphere of Influence (SOI)					
	Population	Employment	Service Population (SP)		VMT	Annual VMT
2008	46,536	15,162	61,698		936,783	325,063,750
2020	49,938	15,832	65,770		1,010,628	350,687,916
2010	47,373	15,256	62,629		963,656	334,388,632
2035	53,785	16,697	70,482		1,190,329	413,044,163

Source: Fehr & Peers 2012, based on the updated Contra CostaTransportation Authority (CCTA) model.

2008 daily VMT is approximated using an interpolation of the change in population and employment between 2008 to 2010. 2020 daily VMT is approximated using an interpolation of the change in population and employment between 2010 to 2035.

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

CRITERIA AIR POLLUTANTS

	lbs/day					
	ROG	NOx	CO	SOx	PM10	PM2.5
2008	1,009	2,094	10,372	10	143	78
2020	429	853	3,828	11	123	55
2035	341	570	2,777	13	145	65
	Tons/year					
	ROG	NOx	CO	SOx	PM10	PM2.5
2008	175	363	1,800	2	25	14
2020	74	148	664	2	21	10
2035	59	99	482	2	25	11

Daily emissions multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Source: EMFAC2011-SG

GHG EMISSIONS

	MTons/year - Business as Usual (BAU)			MTons/year - Adjusted			Percent Reduction from BAU
	N_2O	CO_2	CO_2e	N_2O	CO_2	CO_2e	
2008	11	155,299	158,621	11	155,299	158,621	0%
2020	4	167,963	169,286	4	128,602	129,925	-23%
2035	3	200,949	201,834	3	140,068	140,953	-30%

Source: EMFAC2011-SG

Note: MTons = metric tons; CO_2e = carbon dioxide-equivalent. Adjusted BAU Includes Pavley and the Low Carbon Fuel Standard (LCFS).

State and Federal Fuel Efficiency Improvements + Low Carbon Fuel Standard (LCFS)

Assembly Bill 1493 (AB 1493) Pavley I Fuel Efficiency Standards. In addition, the State of California has adopted the Low Carbon Fuel Standard (LCFS). In January 2012, the California Air Resources Board (CARB) adopted the Advanced Clean Car Program which implements the Pavley II Fuel Efficiency Standards and projects that by 2025, one in every seven new cars sold will be electric vehicles (PHEV or PEV). However, the Pavley II Advanced Clean Car Program is not included in the transportation emissions reductions and therefore reductions are

On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the court's rulings preliminarily enjoins the CARB from enforcing the regulation during the pendency of the litigation. In January 2012, CARB appealed the decision and on April 23, 2012, the Night Circuit Court granted CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision.

WARM OUTPUTs

Existing 2008		TONS MSW		TONS ADC	TOTAL		MTons CO2e
		37,208		12,452	49,660		29,534
	MSW	TONS MSW	ADC	TONS ADC		TOTAL	MTons CO2e With 75% Landfill Recovery
Inputs For WARM	%	37,208	%	12,452	49,660	%	7,383
Aluminum Cans	0.1%	45		0	45	0.1%	
Aluminum Ingot	0.2%	79		0	79	0.2%	
Steel Cans	0.6%	241		0	241	0.5%	
Copper Wire	2.0%	751		0	751	1.5%	
Glass	1.4%	530		0	530	1.1%	
HDPE	0.4%	148		0	148	0.3%	
LDPE	4.3%	1,590		0	1,590	3.2%	
PET	0.5%	187		0	187	0.4%	
LLDPE	1.2%	455		0	455	0.9%	
PP	0.0%	0		0	0	0.0%	
PS	0.0%	0		0	0	0.0%	
PVC	0.0%	0		0	0	0.0%	
PLA	0.0%	0		0	0	0.0%	
Corrugated Containers	0.4%	153		0	153	0.3%	
Magazines/Third-class Mail	0.7%	265		0	265	0.5%	
Newspaper	1.3%	468		0	468	0.9%	
Office Paper	1.8%	685		0	685	1.4%	
Phonebooks	0.1%	23		0	23	0.0%	
Textbooks	0.0%	0		0	0	0.0%	
Dimensional Lumber	14.5%	5,400		0	5,400	10.9%	
Medium-density Fiberboard	0.0%	0		0	0	0.0%	
Food Scraps	15.5%	5,768		0	5,768	11.6%	
Yard Trimmings	2.7%	992	58.1%	7,233	8,225	16.6%	
Grass	3.8%	1,417		0	1,417	2.9%	
Leaves	0.0%	0		0	0	0.0%	
Branches	0.6%	230		0	230	0.5%	
Mixed Paper (general)	13.4%	4,984		0	4,984	10.0%	
Mixed Paper (primarily residential)	0.0%	0		0	0	0.0%	
Mixed Paper (primarily from offices)	0.0%	0		0	0	0.0%	
Mixed Metals	1.6%	580	15.7%	1,957	2,537	5.1%	
Mixed Plastics	2.8%	1,035		0	1,035	2.1%	
Mixed Recyclables	0.0%	0		0	0	0.0%	
Mixed Organics	4.4%	1,630	12.4%	1,539	3,169	6.4%	
Mixed MSW	4.8%	1,777	0.5%	59	1,836	3.7%	
Carpet	3.2%	1,204		0	1,204	2.4%	
Personal Computers	0.5%	203		0	203	0.4%	
Clay Bricks	3.2%	1,180		0	1,180	2.4%	
Concrete	1.2%	453		0	453	0.9%	
Fly Ash	0.1%	38	0.1%	9	47	0.1%	
Tires	0.2%	56	1.3%	159	216	0.4%	
Asphalt Concrete	0.3%	122	12.0%	1,496	1,617	3.3%	
Asphalt Shingles	2.8%	1,051		0	1,051	2.1%	
Drywall	7.1%	2,639		0	2,639	5.3%	
Fiberglass Insulation	2.2%	831		0	831	1.7%	
Vinyl Flooring	0.0%	0		0	0	0.0%	
Wood Flooring	0.0%	0		0	0	0.0%	
	100%	37,208	100.0%	12,452	49,660	100.0%	

Assumes a 75 percent of fugitive GHG emissions are captured within the landfill's Landfill Gas Capture System with a landfill gas capture efficiency of 75%. The Landfill gas capture efficiency is based on the California Air Resources Board's (CARB) Local Government Operations Protocol (LGOP), Version 1.1. Because the landfill gas captured is not under the jurisdiction of Danville, the landfill gas emissions from the capture system are not included in Danville's inventory. Only fugitive sources of GHG emissions from landfill are included.

Does not include tonnage from alternative daily cover (ADC) disposed of in Danville.

Energy - Purchase Electricity and Natural Gas

Pacific Gas & Electric - Emission Factors

	Intensity factor				CO_2e
Electricity	**lbs CO_2/MWH**	**MTons CO_2/MWh**	**CH4 MTons/MWH**	**N2O MTons/MWH**	**MTons/MWh**
3-Year Average (2006-2008) based on PG&E Request	577	0.262	0.000013	0.000005	**0.263**
2020 (CO_2)	290	0.133	0.000013	0.000005	**0.135**
Source: Pacific Gas & Electric (PG&E). 2012, April. Community Wide GHG Inventory Report for Danville 2005 to 2010. The Intensity factor is based on an average of Kwh and CO_2 emissions for non-government and city generated electricity for year 2005.			CH_4 and N_2O intensity based on California E-Grid data (CH_4 = 0.029 lbs/MWH; N_2O = 0.011 lbs/MWH)		

Note: The 2020 emissions rate is estimated by PG&E. It includes reductions from 33% Renewable Portfolio Standard (RPS), Cap-and-Trade, and other regulatory reductions for High Global Warming Potential (HGWP) gases such as reductions of SF_6.

Natural Gas	**Intensity factor**				**CO_2e**
	lbs CO_2/Therm	**MTons CO_2/Therm**	**CH4 MTons/Therm**	**N2O MTons/Therm**	**MTons/Therm**
All Years	11.7	0.00531	0.00005	0.000001	**0.00667**

CO2 intentsiy based on PG&E's third-party-verified GHG inventory submitted to the California Climate Action Registry (CCAR)6 (2003-2008) or The Climate Registry (TCR) (2009).

CH4 and N2O intensity based on Table G.3 of the LGOP for residential and non-residential (CH4: 0.005 kg/MMBtu; N2O: 0.0001 kg/MMBtu)

General Conversion Factors

kg to MTons	0.001
Mmbtu to Therm	0.1
killowatt hrs to megawatt hrs	0.001
lbs to Tons	2000
Tons to Mton	0.9071847

Source: California Air Resources Board (CARB). 2010. Local Government Operations Protocol. Version 1.1. Appendix F, Standard Conversion Factors

	Global Warming Potentials (GWP)
CO2	1
CH4	21
N2O	310

Souce: Intergovernmental Panel on Climate Change (IPCC). 2001. Third Assessment Report: Climate Change 2011.

Danville Electricity & Natural Gas Use (based on a 3-year average, 2006 to 2008)

Electricity	2008 (avg) Kwh/Year	2020 Kwh/Year	2035 Kwh/Year
Residential	167,972,519	179,601,584	194,137,914
Commercial	54,627,596	57,085,594	60,158,091
Municipal	3,429,078	3,646,056	3,917,278
Total	226,029,193	240,333,234	258,213,283

Electricity	2008 (avg) CO_2e MTons/Year	2020 CO_2e MTons/Year	2035 CO_2e MTons/Year
Residential	44,239	47,301	51,130
Commercial	14,387	15,035	15,844
Municipal	903	960	1,032
Total	59,529	63,296	68,005

Natural Gas	2008 (avg) Therms/Year	2020 Therms/Year	2035 Therms/Year
Residential	11,230,720	12,008,244	12,980,150
Commercial	1,264,417	1,321,311	1,392,427
Municipal	13,330	14,173	15,227
Total	12,508,467	13,343,728	14,387,804

Natural Gas	2008 CO_2e MTons/Year	2020 CO_2e MTons/Year	2035 CO_2e MTons/Year
Residential	74,876	80,059	86,539
Commercial/Industrial	8,430	8,809	9,283
Municipal	89	94	102
Total	83,394	88,963	95,924

Summary	CO_2e MTons/Year	CO_2e MTons/Year	CO_2e MTons/Year
Residential	119,114	127,361	137,669
Commercia/Industrial*	23,809	24,899	26,260
Total	142,923	152,259	163,929

*includes Municipal

Adjusted Forecast - 2020 PG&E CO2 Intensity

Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. The California Air Resources Board (CARB) has now approved an even higher goal of 33 percent by 2020. Investor-owned utilities, such as PG&E are also required to participate in CARB's Cap-and-Trade program and reduce High Global Warming Potential (HGWP) gases, such as reductions of SF6.

Source: Pacific Gas & Electric (PG&E). 2011, April 8. Greenhouse Gas Emission Factors Info Sheet.
http://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

Note: Energy and Building reductions in the measures below are based on the PG&E 2020 GHG Intensity. (i.e., applied RPS then accounted for additional reductions)

Electricity	2008 CO_2e MTons/Year	2020 Adjusted CO_2e MTons/Year	2035 Adjusted CO_2e MTons/Year
Residential	44,239	24,214	26,174
Commercial	14,387	7,696	8,111
Municipal	903	492	528
Total	59,529	32,402	34,813
GHG Reductions	0	30,894	33,192

Adjusted Forecast - Title 24 Cycle Updates to the California Building Code

The 2008 Building and Energy Efficiency standards (Title 24, Part 6) are approximately 15 percent more energy efficient than the 2005 Building and Energy Efficiency standards, which were in place at the time of CARB's Scoping Plan. The California Energy Commission anticipates that future code cycles (2014 and beyond) may require a 30 percent increase in energy efficiency compared to the 2008 Building and Energy Efficiency Standards. However, these future cycles are not included in the Adjusted Forecast.

Local Measures that support Statewide Energy Reductions

GB-7 Require any roof to have a Solar Reflectance Index (SRI) of at least 29.

GB-9 Require measures that reduce energy use through solar orientation by taking advantage of shade, prevailing winds, landscaping, and sun screens.

EC-4 Conduct education and outreach to promote quality insulation installation (QII), which eliminates gaps in buildings .

EC-12 Require the installation of programmable thermostats in new and existing residential and commercial buildings.

Reductions

13% Non-Residential Natural Gas Reduction (2008 Building and Energy Efficiency Standards)

10% Residential Natural Gas Reduction (2008 Building and Energy Efficiency Standards)

15% Residential and Non-residential Electricity improvements under the 2008 Building and Energy Efficiency Standards + Title 25 Appliance Energy Efficiency Standards

Source: Bay Area Air Quality Management District (BAAQMD). 2010 (Revised May 2011). CEQA Air Quality Guidelines

Electricity	2008 (avg) **Kwh/Year**	New Buildings 2020 **Kwh/Year**	New Building 2035 **Kwh/Year**	Total 2020 **Kwh/Year**	Total 2035 **Kwh/Year**
Residential	167,972,519	9,884,705	12,355,881	177,857,224	190,213,105
Commercial	54,627,596	2,089,298	2,611,622	56,716,894	59,328,517
Municipal	3,429,078	184,431	230,539	3,613,509	3,844,048
Total	226,029,193	12,158,435	15,198,042	238,187,628	253,385,670

Electricity	2008 w/2020 **CO_2e MTons/Year**	2020 **CO_2e MTons/Year**	2035 **CO_2e MTons/Year**	Total 2020 **CO_2e MTons/Year**	Total 2035 **CO_2e MTons/Year**
Residential	22,647	1,333	1,666	23,979	25,645
Commercial	7,365	282	352	7,647	7,999
Municipal	462	25	31	487	518
Total	30,474	1,639	2,049	32,113	34,162

Natural Gas	2008 (avg) **Therms/Year**	New Buildings 2020 **Therms/Year**	New Building 2035 **Therms/Year**	Total 2020 **Therms/Year**	Total 2035 **Therms/Year**
Residential	11,230,720	699,772	874,715	11,930,492	12,805,207
Commercial	1,264,417	49,498	61,871	1,313,915	1,375,786
Municipal	13,330	733	917	14,063	14,980
Total	12,508,467	750,003	937,503	13,258,470	14,195,973

Natural Gas	2008 w/2020 **CO_2e MTons/Year**	2020 **CO_2e MTons/Year**	2035 **CO_2e MTons/Year**	Total 2020 **CO_2e MTons/Year**	Total 2035 **CO_2e MTons/Year**
Residential	74,876	4,665	5,832	79,541	85,373
Commercial/Industrial	8,430	330	412	8,760	9,172
Municipal	89	5	6	94	100
Total	83,394	5,000	6,250	88,395	94,645

Summary	**2008 CO_2e MTons/Year**	**2020 BAU CO_2e MTons/Year**	**2035 BAU CO_2e MTons/Year**	**Adjusted 2020 CO_2e MTons/Year**	**Adjusted 2035 CO_2e MTons/Year**

Residential	119,114	127,361	137,669	103,520	111,018
Commercia/Industrial*	23,809	24,899	26,260	16,988	17,789
Total	142,923	152,259	163,929	120,508	128,807
Reduction from BAU				-31,752	-35,122
*includes Municipal			Reductions from Title 24	-858	-1,930

Adjusted Forecast - SMART Grid

The California Public Utilities Commission (CPUC) has initiated a rulemaking R.08-12-009 to for California investor-owned electric utilities to develop a smarter electric grid in the state. Pursuant to Senate Bill 17, the CPUC developed requirements for a Smart Grid deployment plan. In July 2011, California Utilities filed with the CPUC 10-year Smart Grid Deployment Plans. New Smart Meters provide real-time electricity use information to consumers.

Local Measures that support Statewide Energy Reductions

EC-2 Launch an "energy efficiency challenge" campaign for community residents.

EC-3 Create the Kill-A-Watt Electritown Usage Monitor program, through which residents can check out a device from the library that can be plugged into household electronics to see how much electricity they require.

Reduction in Energy Consumption

	Low	High	% Reduction
Residential	1%	10%	3%
Commercial/Office	1%	10%	3%

Source: Pacific Northwest National Laboratory. 2010, January. The Smart Grid: An Estimation of the Energy and CO2 Benefits. http://energyenvironment.pnnl.gov/news/pdf/PNNL-19112_Revision_1_Final.pdf. Table 3.3 Estimated Direct Impacts of the Conservation Effect of Consumer Information and Feedback Systems.

Energy Savings Applied to Existing Land Uses Only

Electricity	2008 (avg) Adjusted **Kwh/Year**	New Buildings 2020 **Kwh/Year**	New Building 2035 **Kwh/Year**	Total 2020 **Kwh/Year**	Total 2035 **Kwh/Year**
Residential	162,933,343	9,884,705	12,355,881	172,818,049	185,173,929
Commercial	52,988,768	2,089,298	2,611,622	55,078,066	57,689,689
Municipal	3,429,078	184,431	230,539	3,613,509	3,844,048
Total	219,351,190	12,158,435	15,198,042	231,509,624	246,707,666

Electricity	2008 w/2020 (Adjusted) **CO_2e MTons/Year**	New Buildings 2020 **CO_2e MTons/Year**	New Building 2035 **CO_2e MTons/Year**	Total 2020 **CO_2e MTons/Year**	Total 2035 **CO_2e MTons/Year**
Residential	21,967	1,333	1,666	23,300	24,966
Commercial	7,144	282	352	7,426	7,778
Municipal	462	25	31	487	518
Total	29,574	1,639	2,049	31,213	33,262

For Natural Gas for the Adjusted Forecast - see Title 24 Updates

Summary	**2008 BAU CO_2e MTons/Year**	**2020 BAU CO_2e MTons/Year**	**2035 BAU CO_2e MTons/Year**	**Adjusted 2020 CO_2e MTons/Year**	**Adjusted 2035 CO_2e MTons/Year**
Residential	119,114	127,361	137,669	102,841	110,338
Commercia/Industrial*	23,809	24,899	26,260	16,767	17,568
Total	142,923	152,259	163,929	119,607	127,907
Reduction from BAU				-32,652	-36,022
			Reductions from Smart Grid	-900	-900

*includes Municipal

California Natural Gas Use by End Use

Source: California Energy Commission.Residential End Use Survey. http://energyalmanac.ca.gov/naturalgas/residential_use.html

Residential	Annual Energy % Total	Non-Title 24	Title 24
Water Heating	44%		44%
Space Heating	44%		44%
Pools, Spas, Misc.	2%	2%	
Clothes Dryers	3%	3%	
Cooking	7%	7%	
Total	100%	12%	88%

Source: California Energy Commission. 2006, March. California Commercial End-Use Survey. Prepared by Itron. CEC-400-2006-005. http://www.energy.ca.gov/2006publications/CEC-400-2006-005/CEC-400-2006-005.PDF

Commercial	Annual Energy % Total	Non-Title 24	Title 24
Water Heating	31.8%		32%
Heating	36.4%		36%
Cooling	1.5%	2%	
Process	5.9%	6%	
Miscellaneous	1.8%	2%	
Cooking	22.6%	23%	
Total	100%	32%	68%

California Electricity Consumption by End Use

Source: Brown, Richard E. and Koomey, Jonathan G., 2002, May. E*lectricity Use in California: Past Trends and Present Usage Patterns.* University of California, Berkeley (UCB), Energy analysis Department, Environmental Energy Technologies Division, Ernest Orlando Lawrence Berkeley National Laboratory. lBL-47992. http://enduse.lbl.gov/Projects/CAdata.html

	Annual Energy TWh	Annual Energy % Total	% of Sector	Non-Title 24	Title 24
Commercial					
Air Conditioning	13.8	5%	15%		15%
Interior Lighting	30.3	12%	34%		34%
Other	19.9	8%	22%	22%	
Ventilation	9.1	4%	10%		10%
Refrigeration	6.5	3%	7%	7%	
Office Equipment	1.6	1%	2%	2%	
Domestic Hot Water	0.5	0%	1%		1%
Exterior Lighting	5.0	2%	6%		6%
Cooking	0.6	0%	1%	1%	
Space Heating	2.1	1%	2%		2%
Total Commercial	*89.5*	*36%*	100%	*32%*	*68%*
Residential					
Air Conditioning	4.8	2%	6%		6%
Miscellaneous	24.6	10%	33%	33%	
Refrigerator	13.7	5%	18%	18%	
Cooking	3.6	1%	5%	5%	
Dryer	5.7	2%	8%	8%	
Pools & Spas	4.1	2%	5%	5%	
Domestic Hot Water	4.2	2%	6%		6%
Television	3.4	1%	5%	5%	
Freezer	2.5	1%	3%	3%	
Dishwasher	2.0	1%	3%	3%	
Waterbed Heater	2.1	1%	3%	3%	
Clothes Washer	0.7	0%	1%	1%	
Space Heating	0.4	2%	1%		1%
Total Residential	*75.4*	*30%*	100%	83%	12%
Industrial					
Assembly	33	13%	62%	62%	
Process	14	6%	26%	26%	
Other	6.1	2%	11%	11%	
Total Industrial	*53.5*	*21%*	100%	99%	
Agricultural					
Total Industrial	*17.8*	*7%*	100%	100%	
Transport & Street Lighting					
Total Transport & Lighting	*15.3*	*6%*	100%	100%	
Total Statewide	251.6	100%			

Energy & Green Buildings Measures

Electricity	Residential 2020		Non-Residential 2020		Residential 2035		Non-Residential 2035	
	Existing Kwh	New Kwh	Existing Kwh	New Kwh	Existing Kwh	New Kwh	Existing Kwh	New Kwh
Title 24	20,312,645	1,232,311	38,326,313	1,544,612	20,312,645	1,540,388	38,326,313	1,930,764
Non-Title 24	134,841,388	8,180,446	18,028,496	726,577	134,841,388	10,225,556	18,028,496	908,221
	155,154,033	9,412,756	56,354,809	2,271,189	155,154,033	11,765,945	56,354,809	2,838,986

Natural Gas	Residential 2020		Non-Residential 2020		Residential 2035		Non-Residential 2035	
	Existing Therms	New Therms	Existing Therms	New Therms	Existing Therms	New Therms	Existing Therms	New Therms
Title 24	1,400,116	87,239	868,011	34,124	1,400,116	109,049	868,011	42,654
Non-Title 24	9,294,389	579,121	408,308	16,052	9,294,389	723,902	408,308	20,064
	10,694,505	666,361	1,276,319	50,175	10,694,505	832,952	1,276,319	62,718

Sources: Brown, Richard E. and Koomey, Jonathan G., 2002, May. Electricity Use in California: Past Trends and Present Usage Patterns. University of California, Berkeley (UCB), Energy analysis Department, Environmental Energy Technologies Division, Ernest Orlando Lawrence Berkeley National Laboratory. lBL-47992. http://enduse.lbl.gov/Projects/CAdata.html; California Energy Commission. Residential End Use Survey. http://energyalmanac.ca.gov/naturalgas/residential_use.html; and California Energy Commission. 2006, March. California Commercial End-Use Survey. Prepared by Itron. CEC-400-2006-005.

New Development (Residential and Nonresidential)- Increase in Energy Efficiency Above the California Building Code

GB-1	Develop a Green Building Ordinance that requires energy efficient design, in excess of Title 24 standards, for all new residential and non-residential buildings. (15 to 40 percent above Title 24 Standards).
Support Measures	
GB-3	Allow greater development flexibility, and provide permitting-related and other incentives for LEED-Silver certification or equivalent GreenPoint rating, e.g. give green projects priority in plan review, processing, and in field inspection services.
GB-8	Identify and remove regulatory or procedural barriers to implementing green building practices in the town by updating codes, guidelines, and zoning.
GB-10	Train all plan review and building inspection staff in green building materials, techniques, and practices.
GB-11	Provide green building information, marketing, training, and technical assistance to property owners, development professionals, schools, and special districts.
GB-12	Coordinate with other local governments, special districts, nonprofits, and other public organizations to share resources, achieve economies of scale, and develop green building policies and programs that are optimized on a regional scale.
EC-7	Develop a "heat island" mitigation plan that includes guidelines for cool roofs, cool pavements, and strategically placed shade trees. Amend the applicable Design Guidelines to integrate the guidelines. Evaluate and balance tradeoffs between solar access and landscape tree shading in Design Guidelines.

New Buildings

15% percent increase in energy efficiency

	2020			2035		
Electricity	Kwh from New Building w/2008 Title 24	Kwh Reductions with 15% above Title 24	GHG Reductions (MTons)	Kwh from New Building w/2008 Title 24	Kwh Reductions with 15% above Title 24	GHG Reductions (MTons)
Residential	1,232,311	1,844	0.2	1,540,388	2,304	0.3
Non-Residential	1,544,612	35,676	5	1,930,764	44,595	6
Total	2,776,923	37,520	5	3,471,153	46,900	6

	2020			2035		
Natural Gas	Therms from New Building w/2008 Title 24	Therms Reductions with 30% above Title 24	GHG Reductions (MTons)	Therms from New Building w/2008 Title 24	Therms Reductions with 30% above Title 24	GHG Reductions (MTons)
Residential	87,239	10,306	69	109,049	12,883	86
Non-Residential	34,124	2,478	17	42,654	3,098	21
Total	121,363	12,785	85	151,703	15,981	107

	Electricity Ratio for 1% over Title 24	Natural Gas Ratio for 1% over Title 24
Residential (avg)	0.08	0.90
multi-family	0.12	0.88
single-family	0.04	0.91
Non-Residential	0.23	0.71
Commercial	0.26	0.72
Office	0.36	0.95
Industrial	0.06	0.46

Source: California Air Pollution Control Officer's Association (CAPCOA). 2010, August. Quantifying Greenhouse Gas Mitigation Measures. Table BE-1.1 and BE-1.2, Climate Zone 5.

Existing Residential - Increase Energy Efficiency

GB-4 Adopt GreenPoint Rated Building Guidelines and require all new and significantly remodeled homes to follow the Guidelines. Significantly remodeled homes includes remodels of 50 percent or more of the square footage or wall area of the home.

Danville Permit History: http://www.ci.danville.ca.us/Permits/Building/ (includes residential and non-residential)

	Permits Issued	Significant remodels	PVs or Solar	Furnace/HVAC	Water heater	windows	roof
April 2012	139	10	14	12	17	4	13
March 2012	156	9	11	16	14	10	7
February 2012	184	7	12	22	20	8	12

	Average Monthly Permits	Average number of significant remodels/ Month	Per Year		
	160	9	104	assumes 1/2 are for residential and 1/2 are non-residential	
Significant Remodels (Residential) between 2012 and 2020			416	2%	of total existing housing stock
Significant Remodels (Residential) between 2012 and 2035				5%	of total existing housing stock

GreenPoint Homes:

Assumes:

Use 20 percent less energy per year through lighting, insulation, and heating/cooling

Use 35 percent less water per year through high water efficiency appliances and landscapes

Significant remodels, because of the percentage of square footage remodeled, would improve energy efficiency of older structures that pre-date the 2005 Building and Energy Efficiency standards. For a conservative estimate, building remodels are assumed to improve energy efficiency of building energy use by 15 percent (natural gas and electricity). While significant remodels would likely also improve water efficient, reductions for water use are accounted for in existing Water District programs.

15% percent increase in energy efficiency

		2020			2035		
Electricity	Title 24 Kwh from Existing (pre-2005 Title 24)	Kwh from existing homes that would be Significantly Renovated	Kwh Reductions with 15% improvement	GHG Reductions (MTons)	Kwh from existing homes that would be Significantly Renovated	Kwh Reductions with 15% improvement	GHG Reductions (MTons)
Residential	20,312,645	492,428	5,909	0.8	923,302	11,080	1.5

		2020			2035		
Natural Gas	Title 24 Therms from Existing (pre-2005 Title 24)	Therms from existing homes that would be Significantly Renovated	Therms Reductions with 15% improvement	GHG Reductions (MTons)	Kwh from existing homes that would be Significantly Renovated	Kwh Reductions with 15% improvement	GHG Reductions (MTons)
Residential	1,400,116	33,942	4,557	30	63,642	8,544	57

Renewable Energy Generation - New Residential

RE-2	Require that residential projects of six units or more participate in the California Energy Commission's New Solar Homes Partnership, which provides rebates to developers of six units or more who offer solar power in 50 percent of new units and is a component of the California Solar Initiative, or a similar program with solar power requirements equal to or greater than those of the California Energy Commission's New Solar Homes Partnership.
Support Measures	
GB-2	Utilize all available rebates and incentives for energy efficiency and distributed generation installations, such as State public good programs (funding for energy efficiency from a "public good" fee on utility bills) and solar programs.
GB-6	Require all new buildings to be constructed to allow for the easy, cost-effective installation of future solar energy systems. "Solar ready" features should include: proper solar orientation (i.e. south facing roof area sloped at 20° to 55° from the horizontal); clear access on the south sloped roof (i.e. no chimneys, heating vents, plumbing vents, etc.); electrical conduit installed for solar electric system wiring; plumbing installed for solar hot water system; and space provided for a solar hot water storage tank.
RE-1	In partnership with Pacific Gas and Electric and local alternative energy companies, develop an Alternative Energy Development Plan that includes townwide measurable goals and identifies the allowable and appropriate alternative energy facility types within the town, such as solar photovoltaic (PV) on urban residential and commercial
RE-5	Waive fees for permitting for solar array installation.
EC-13	Where feasible, increase solar access by requiring that new streets be designed so that the blocks have one axis within plus or minus 15 degrees of geographical east/west, and the east/west length of those blocks are at least as long, or longer, as the north/south length of the block. Areas with topological constraints, among others, may be excluded from this requirement

	2020	2035	2020	2035
New Residential:	1188	2673		
Assumes 50% of new residential in subdivisions			594	1,337

			Power Offset			2020
Residential	8,218	kwh/unit/year	4,881,492	kwh	658	GHG MTons
			Power Offset			2035
Residential	8,218	kwh/unit/year	10,983,357	kwh	1,481	GHG MTons

Source: California Energy Commission (CEC). 2012. Clean Power Estimator.
http://www.gosolarcalifornia.org/tools/clean_power_estimator.php. Based on a 5,000 Watt-ac PV system (residential or 5.0 kw system) in zip code 94526 (based on Danville 2012 permit average).

Renewable Energy Generation - New or Existing Non-Residential

RE-3	Require that new or major rehabilitations of commercial, office, or industrial development greater than or equal to 20,000 square feet in size incorporate solar or other renewable energy generation to provide 15 percent or more of the project's energy needs. Major rehabilitations are defined as remodeling/ additions of 20,000 square ft of office/retail commercial or 100,000 square feet of industrial floor area. Remove regulatory barriers to incorporating renewable energy generation.
Support Measures	
GB-2	Utilize all available rebates and incentives for energy efficiency and distributed generation installations, such as State public good programs (funding for energy efficiency from a "public good" fee on utility bills) and solar programs.
GB-6	Require all new buildings to be constructed to allow for the easy, cost-effective installation of future solar energy systems. "Solar ready" features should include: proper solar orientation (i.e. south facing roof area sloped at 20° to 55° from the horizontal); clear access on the south sloped roof (i.e. no chimneys, heating vents, plumbing vents, etc.); electrical conduit installed for solar electric system wiring; plumbing installed for solar hot water system; and space provided for a solar hot water storage tank.
RE-1	In partnership with Pacific Gas and Electric and local alternative energy companies, develop an Alternative Energy Development Plan that includes townwide measurable goals and identifies the allowable and appropriate alternative energy facility types within the town, such as solar photovoltaic (PV) on urban residential and commercial
RE-5	Waive fees for permitting for solar array installation.
RE-6	Work with the local school districts to encourage the use of solar energy systems at school facilities.
RE-7	Incentivize installation of parking lot solar arrays
EC-13	Where feasible, increase solar access by requiring that new streets be designed so that the blocks have one axis within plus or minus 15 degrees of geographical east/west, and the east/west length of those blocks are at least as long, or longer, as the north/south length of the block. Areas with topological constraints, among others, may be

Non-Residential: Assumes 8 non-residential buildings constructed/remodeled over the next 8 years (1 per year) that will include PV (27 by 2035).

			Power Offset			2020
Non-Residential	8,218	kwh/unit/year	65,744	kwh	9	GHG MTons
			Power Offset			2035
Non-Residential	8,218	kwh/unit/year	221,886	kwh	30	GHG MTons

Source: California Energy Commission (CEC). 2012. Clean Power Estimator.
http://www.gosolarcalifornia.org/tools/clean_power_estimator.php. Based on a 5,000 Watt-ac PV system (commercial or 5.0 kw-ac system) in zip code 94526 (based on Danville 2012 permit average).

Residential Solar Hot Water Heating

RE-4 In partnership with Pacific Gas and Electric and other appropriate energy providers, develop a program that provides incentives that meet or exceed those of AB 1470 (Section 902 and Sections 2860-2867.3 of the California Public Utilities Code). AB 1470, the Solar Hot Water Energy Efficiency Act of 2007, directs the California Energy

Assumes 0.1 percent of existing residential customers would participate: 17 1 home per year between 2008 and 2020.

Solar Energy Factors range from 1.0 to 11. Systems with solar energy factors of 2 or 3 are more common. (assume 3)

Solar Fraction varies from 0. to 1.0. Typical solar factors are 0.5 to 0.75. (assume 1.0)

Assumes pumps to circulate water run on electricity

Conventional water heaters use 64.3 gal/day

Gas water heater efficiency: 0.57

	Annual Energy	Units	GHG
Electricity Solar Water Heater=	1,464	kwh	0.2
Gas Water Heater =	263	therms	1.8
%Reduction from Solar		Efficiency:	-89%

Source: US Department of Energy. Solar Water Heater Energy Efficiency.
http://www.energysavers.gov/your_home/water_heating/index.cfm/mytopic=12900

	2020 GHG Reduction from 0.5% Participation (Existing Residential only)		2035 GHG Reduction from 1% Participation (Existing Residential only)	
Water heaters are 44% of total Residential Natural Gas Use	2,733	Therms	3,389	Therms
	18	MTons	23	MTons

Source: California Energy Commission (CEC). Residential End Use Survey. http://energyalmanac.ca.gov/naturalgas/residential_use.html;

Existing Non-Residential Building Retrofits

EC-10	Require all new development and major rehabilitation (i.e., additions or remodels of 20,000 square feet of office/retail commercial or 100,000 square feet of industrial floor area) projects to incorporate any combination of the following strategies to reduce heat gain for 50 percent of the non-roof impervious site landscape, which includes roads, sidewalks, courtyards, parking lots, and driveways: shaded within five years of occupancy; paving materials with a Solar Reflectance Index (SRI) of at least 29; open grid pavement system; and parking spaces underground, under deck, under roof, or under a building. Any roof used to shade or cover parking must have an SRI of at least 29.

Support Measures

EC-8	Participate in the CaliforniaFIRST program, which provides innovative, low-interest financing for energy efficiency projects for existing and new development.
EC-9	Compile a list of funding sources that local residents, businesses, or the Town could potentially access to fund energy audits to inform homeowners and businesses of opportunities to improve the energy-efficiency of their homes and buildings.
EC-5	Seek funding to implement a low-income weatherization program.
EC-15	Form a volunteer committee of local design professionals to create a brochure to educate citizens on how to save energy through design.

Assumes	15%	percent increase in energy efficiency
Assumes	0.1%	of energy use from existing non-residential buildings would be affected by 2020.
Assumes	0.2%	of energy use from existing non-residential buildings would be affected by 2020.

		2020			2035		
Electricity	Title 24 Kwh from Existing (pre-2005 Title 24)	Kwh from existing non-residential that would improve energy efficiency	Kwh Reductions with 15% improvement	GHG Reductions (MTons)	Kwh from existing non-residential that would improve energy efficiency	Kwh Reductions with 15% improvement	GHG Reductions (MTons)
Non-Residential	38,326,313	38,326	1,303	0.2	71,862	2,443	0.3

		2020			2035		
Natural Gas	Title 24 Therms from Existing (pre-2005 Title 24)	Therms from existing non-residential that would improve energy efficiency	Therms Reductions with 15% improvement	GHG Reductions (MTons)	Therms from existing non-residential that would improve energy efficiency	Therms Reductions with 15% improvement	GHG Reductions (MTons)
Non-Residential	868,011	868	92	0.6	1,628	173	1.2

New Residential - Energy Star Appliances

EC-1	Require new development to use energy-efficient appliances that meet Energy Star standards and energy efficient lighting technologies that meet or exceed Title 24 standards.

Assumes developers would provide energy-efficient appliances or residents would purchase new appliances, which meet the Title 25 Energy Code.

Percent of Total Electricity	Residential
Refrigerators	18%
Clothes washer	1%
Dishwasher	3%

Sources: Brown, Richard E. and Koomey, Jonathan G., 2002, May. Electricity Use in California: Past Trends and Present Usage Patterns. University of California, Berkeley (UCB), Energy analysis Department, Environmental Energy

Energy Star appliances Increased Efficiency - CLIMATE ZONE 5

	Single Family	Multi-Family	Townhome	Residential (average)
Refrigerators	1.99%	3.07%	2.78%	2.61%
Clothes washer	0.58%	0.03%	0.35%	0.32%
Dishwasher	0.14%	0.12%	0.14%	0.13%

Source: California Air Pollution Control Officers Association (CAPCOA). 2010, August. Quantifying GHG Mitigation Measures. Average based on percentage multi-family and single-family units anticipated in Climate Zone 5.

Lighting (hard-wired interior [6%] and exterior [33%]) is 39% of total commercial energy use (CEC). Hard-wired lighting is regulated under Title 24 and therefore not included in reductions.

ENERGY STAR Appliances:	2020		2035	
	kwh	MTon	kwh	MTon
Energy Saving from New Residential Units:	30,323	4	37,904	5

Existing Residential - Turnover to Energy Efficient Appliances

EC-6	Partner with Pacific Gas & Electric and other appropriate energy providers to promote energy conservation, including the following: 1) Promote the purchase of ENERGY STAR appliances. Distribute free compact fluorescent light (CFL) bulbs and/or fixtures to community members. 2) Offer a halogen torchiere lamp exchange to community members. 3) Promote energy efficiency audits of existing buildings to check, repair, and readjust heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization. 4) Encourage energy audits to be performed when residential and commercial buildings are sold. Energy audits will include information regarding the opportunities for energy efficiency improvements, and will be presented to the buyer. 5) Commercial buildings to be "benchmarked" using EPA's ENERGY STAR Portfolio Manager Tool, consistent with AB 1103, which requires disclosure of commercial buildings' energy efficiency rating. 6) Promote individualized energy management planning and related services for large energy users. 7) Fund and schedule energy efficiency retrofits or "tune-ups" of existing buildings.

ENERGY STAR APPLIANCES - EXISTING

Assume a portion of the existing residential uses would purchase new energy-efficient appliances which meet the Title 25 Energy Code.

Percent of Total Electricity	Residential
Refrigerators	18%
Clothes washer	1%
Dishwasher	3%

Sources: Brown, Richard E. and Koomey, Jonathan G., 2002, May. Electricity Use in California: Past Trends and Present Usage Patterns. University of California, Berkeley (UCB), Energy analysis Department, Environmental Energy Technologies Division, Ernest Orlando Lawrence Berkeley National Laboratory. lBL-47992. http://enduse.lbl.gov/Projects/CAdata.html.

Energy star appliances Increased Efficiency

	Residential Increase in Efficiency (average multi & single family)	Average Appliance Life Expectancy	Residential Turnover in the next 10 years	Residential Turnover in the next 27 years
Refrigerators	1.99%	14 years	70%	100%
Clothes washer	0.58%	12 years	60%	100%
Dishwasher	0.14%	12 years	60%	100%

Source: California Air Pollution Control Officers Association (CAPCOA). 2010, August. Quantifying GHG Mitigation Measures. Based on single-family units anticipated in Climate Zone 5 for existing single-family residential in the Town.

Source: Appliance Life Expectancy. http://www.mrappliance.com/expert/life-guide/ Based on the life expectancy of appliances as reported in the 23rd annual portrait of the U.S. appliance industry.

ENERGY STAR Appliances:

	2020		2035	
	kwh	MTons	kwh	MTons
Units:	348,651	47	499,825	67

Existing Lighting

EC-11	Require outdoor lighting fixtures to be energy-efficient. Require parking lot light fixtures and light fixtures on buildings to be on full cut-off fixtures, except emergency exit or safety lighting, and all permanently installed exterior lighting shall be controlled by either a photocell or an astronomical time switch. Prohibit continuous all night outdoor lighting in construction sites unless required for security reasons. Revise the Town Code to include these requirements.

Non-Residential Exterior Lighting: 6% of Total Energy Use

Usage Patterns. University of California, Berkeley (UCB), Energy analysis Department, Environmental Energy

Energy-Efficient exterior lighting is assumed to be LED technology

Efficiency of LED vs. High Pressure Sodium Lighting

	Average Power (Watts)	Power Saving (Watts)	Annual Energy Saving (KWh) Per Luminaire	Lifespan (hours)	Annual Hours
High Pressure Sodium Luminaire	121			30,000	4,100
LED Luminaire	77.7	43	178		
	Percent Reduction	36%	Turnover (years)	7.3	100% in 10 years

Source: U.S. Department of Energy (DOE). 2008, January. Final Report Prepared in Support of the U.S. DOE Solid-State Lighting Technology Demonstration Gateway Program and PG&E Emerging Technologies Program. Prepared by Energy Solutions.

NON-RESIDENTIAL EXTERIOR LIGHT REPLACEMENT

	2020		2035	
	kwh	MTon	kwh	MTon
Energy Saving from Non-Residential	357,923	48	357,923	48

Not Used

Danville Permit History: http://www.ci.danville.ca.us/Permits/Building/ (includes residential and non-residential)

	size of PVs	Average Kw size of PV	PVs or Solar/Month		
April 2012	1.5 Kw, 1.75 Kw, 3.15 Kw, 3.6 Kw, 4.5 Kw, 4.6 Kw, 5.0 Kw, 5.06 Kw, 5.1 Kw, 5.6 Kw, 7.5 Kw	4.3	14		
March 2012	2 Kw, 3.2 Kw, 3.3 Kw, 3.8 Kw, 4.5 Kw, 5 Kw, 5.76 Kw, 5.83 Kw, 6.46 kw, 9.6 Kw	5.1	11		
February 2012	2 kw, 3.1 Kw, 3.7 Kw, 3.8 Kw, 5.8 Kw, 6.37 Kw, 6.3 Kw, 7.0 Kw, 7.3 Kw, 9.9 Kw	5.5	12	annual	over 8 years
	Average	5.0	12	148	1,184

NO POLICY RIGHT NOW

			Power Offset			
Residential	8,218	kwh/unit/year	9,730,112	kwh	1,312	GHG MTons
Non-Residential						

Source: California Energy Commission (CEC). 2012. Clean Power Estimator. http://www.gosolarcalifornia.org/tools/clean_power_estimator.php. Based on a 5,000 Watt-ac PV system (residential or 5.0 kw system) in zip code 94526 (based on Danville 2012 permit average).

CalRecycle. Statewide Alternative Daily Cover (ADC) by Material Type

http://www.calrecycle.ca.gov/LGCentral/Reports/ReportViewer.aspx?ReportName=ReportEdrsAnnualQuarterADC

Total of ADC by Material Type

Year	Ash	Auto Shred	C&D	Compost	Contaminated Sediment	Green Material	Mixed	Other	Sludge	Tires	Total
2006	2,255	683,064	383,619	0	77	2,656,850	28,145	126,052	298,998	40,931	4,219,992
2007	1,566	632,495	358,784	3,379	40,960	2,307,255	12,588	172,311	326,680	66,042	3,922,060
2008	5,282	622,055	746,300	679	63,232	2,195,876	17,894	256,033	235,743	49,638	4,192,731

Percent of ADC by Material Type

	Ash	Auto Shred	C&D	Compost	Contaminated Sediment	Green Material	Mixed	Other	Sludge	Tires	Total
2006	0.05%	16.19%	9.09%	0.00%	0.00%	62.96%	0.67%	2.99%	7.09%	0.97%	100.00%
2007	0.04%	16.13%	9.15%	0.09%	1.04%	58.83%	0.32%	4.39%	8.33%	1.68%	100.00%
2008	0.13%	14.84%	17.80%	0.02%	1.51%	52.37%	0.43%	6.11%	5.62%	1.18%	100.00%
Average	0.07%	15.72%	12.01%	0.03%	0.85%	58.05%	0.47%	4.50%	7.01%	1.28%	100.00%

CalRecycle. 2008 Waste Characterization Study

Material Classes in California's Overall Disposed Waste Stream (Detailed)

	Categories in WARM	Tons	Percent	Percent by Category
Paper				17.3%
Uncoated Corrugated Cardboard	Mixed Paper (general)	1,905,897	4.8%	
Paper Bags	Mixed Paper (general)	155,848	0.4%	
Newspaper	Newspaper	499,960	1.3%	
White Ledger Paper	Office Paper	259,151	0.7%	
Other Office Paper	Office Paper	472,147	1.2%	
Maganizes and Catalogs	Magazines/Third-class Mail	283,069	0.7%	
Phone Books and Directories	Phonebooks	24,149	0.1%	
Other Miscellaneous Paper	Mixed Paper (general)	1,202,354	3.0%	
Remainder/Composite Paper	Mixed Paper (general)	2,056,546	5.2%	
Glass				1.4%
Clear Glass Bottles and Containers	Glass	196,093	0.5%	
Green Glass Bottles and Containers	Glass	79,491	0.2%	
Brown Glass Bottles and Containers	Glass	108,953	0.3%	
Other Colored Glass Bottles and Containers	Glass	40,570	0.1%	
Flat Glas	Glass	33,899	0.1%	
Remainder/Composite Glass	Glass	106,838	0.3%	
Metal				4.6%
Tin/Steel Cans	Steel Cans	236,405	0.6%	
Major Appliances	Steel Cans	17,120	0.0%	
Used Oil Filters	Steel Cans	3,610	0.0%	
Other Ferrous	Copper Wire	801,704	2.0%	
Aluminum Cans	Aluminum Cans	47,829	0.1%	
Other Non-Ferrous	Aluminum Ingot	84,268	0.2%	
Remainder/Composite Metal	Mixed Metals	618,747	1.6%	
Electronics				0.5%
Brown Goods	Personal Computers	76,725	0.2%	
Computer-Related Electronnics	Personal Computers	32,932	0.1%	
Other Small Consumer Electronics	Personal Computers	34,588	0.1%	
Video Display Devices	Personal Computers	72,053	0.2%	
Plastic				9.6%
PETE Containers	PET	199,644	0.5%	
HDPE Containers	HDPE	157,779	0.4%	
Miscellaneous Plastic Containers	Corrugated Containers	163,008	0.4%	
Plastic Trash Bags	LLDPE	361,997	0.9%	
Plastic Grocery and Other Merchandise Bags	LLDPE	123,405	0.3%	
Non-Bag Commercial and Industrial Packaging Film	LDPE	194,863	0.5%	
Film Products	LDPE	113,566	0.3%	
Other Film	LDPE	554,002	1.4%	
Durable Plastic Items	LDPE	834,970	2.1%	
Remainder/Composite Plastic	Mixed Plastics	1,104,719	2.8%	
Other Organic				32.4%
Food	Food Scraps	6,158,120	15.5%	
Leaves and Grass	Grass (assume leaves too)	1,512,832	3.8%	
Prunings and Trimmings	Yard Trimmings	1,058,854	2.7%	
Branches and Stumps	Branches	245,830	0.6%	
Manures	Mixed Organics	20,373	0.1%	
Textiles	Fiberglass Insulation	886,814	2.2%	
Carpet	Carpet	1,285,473	3.2%	
Remainder/Composite Organic	Mixed Organics	1,719,743	4.3%	
Inerts and Other				29.1%
Concrete	Concrete	483,367	1.2%	
Asphalt Paving	Asphalt Concrete	129,834	0.3%	
Asphalt Roofing	Asphalt Shingles	1,121,945	2.8%	
Lumber	Dimensional Lumber	5,765,482	14.5%	
Gypsum Board	Drywall	642,511	1.6%	
Rock, Soil and Fines	Clay Bricks	1,259,308	3.2%	
Remainder/Composite Inerts and Other	Drywall	2,175,322	5.5%	
Household Hazardous Wastes				0.3%
Paint	Mixed MSW	48,025	0.1%	
Vehicle and Equipment Fuels	Mixed MSW	6,424	0.0%	
Used Oil	Mixed MSW	3,348	0.0%	
Batteries	Mixed MSW	19,082	0.0%	
Remainder/Composite Household Hazardous Waste	Mixed MSW	43,873	0.1%	
Special Waste				3.9%
Ash	Fly Ash	40,736	0.1%	
Treated Medical Waste	Mixed MSW	0	0.0%	
Bulky Itmes	Mixed MSW	1,393,091	3.5%	
Tires	Tires	60,180	0.2%	
Remainder/Composite Special Waste	Mixed MSW	52,463	0.1%	
Mixed Residue				0.8%
Mixed Residue	Mixed MSW	330,891	0.8%	
TOTAL		**39,722,820**	**100.0%**	

GHG Emissions from Baseline Management of Municipal Solid Wastes

Material	Baseline Generation of Material (Tons)	Estimated Recycling (Tons)	Annual GHG Emissions from Recycling (MTCE)	Estimated Landfilling (Tons)	Annual GHG Emissions from Landfilling (MTCE)	Estimated Combustion (Tons)	Annual GHG Emissions from Combustion (MTCE)	Estimated Composting (Tons)	Annual GHG Emissions from Composting (MTCE)	Total Annual GHG Emissions (MTCE)
Aluminum Cans	44.8	0.0	0.0	44.8	0.5	0.0	0.0	NA	NA	0.5
Aluminum Ingot	78.9	0.0	0.0	78.9	0.8	0.0	0.0	NA	NA	0.8
Steel Cans	240.9	0.0	0.0	240.9	2.5	0.0	0.0	NA	NA	2.5
Copper Wire	750.9	0.0	0.0	750.9	7.9	0.0	0.0	NA	NA	7.9
Glass	530.0	0.0	0.0	530.0	5.6	0.0	0.0	NA	NA	5.6
HDPE	147.8	0.0	0.0	147.8	1.6	0.0	0.0	NA	NA	1.6
LDPE	1,589.9	NA	NA	1,589.9	16.8	0.0	0.0	NA	NA	16.8
PET	187.0	0.0	0.0	187.0	2.0	0.0	0.0	NA	NA	2.0
LLDPE	454.7	NA	NA	454.7	4.8	0.0	0.0	NA	NA	4.8
PP	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	152.7	0.0	0.0	152.7	61.9	0.0	0.0	NA	NA	61.9
Magazines/third-class mail	265.1	0.0	0.0	265.1	10.0	0.0	0.0	NA	NA	10.0
Newspaper	468.3	0.0	0.0	468.3	(61.5)	0.0	0.0	NA	NA	(61.5)
Office Paper	685.0	0.0	0.0	685.0	693.7	0.0	0.0	NA	NA	693.7
Phonebooks	22.6	0.0	0.0	22.6	(3.0)	0.0	0.0	NA	NA	(3.0)
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	5,400.5	0.0	0.0	5,400.5	109.0	0.0	0.0	NA	NA	109.0
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	5,768.3	NA	NA	5,768.3	2,244.0	0.0	0.0	0.0	0.0	2,244.0
Yard Trimmings	8,224.9	NA	NA	8,224.9	452.2	0.0	0.0	0.0	0.0	452.2
Grass	1,417.1	NA	NA	1,417.1	199.0	0.0	0.0	0.0	0.0	199.0
Leaves	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	230.3	NA	NA	230.3	4.6	0.0	0.0	0.0	0.0	4.6
Mixed Paper (general)	4,983.8	0.0	0.0	4,983.8	1,837.2	0.0	0.0	NA	NA	1,837.2
Mixed Paper (primarily residential)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	2,536.6	0.0	0.0	2,536.6	26.9	0.0	0.0	NA	NA	26.9
Mixed Plastics	1,034.8	0.0	0.0	1,034.8	11.0	0.0	0.0	NA	NA	11.0
Mixed Recyclables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	3,169.0	NA	NA	3,169.0	714.1	0.0	0.0	0.0	0.0	714.1
Mixed MSW	1,835.8	NA	NA	1,835.8	1,549.9	0.0	0.0	NA	NA	1,549.9
Carpet	1,204.1	0.0	0.0	1,204.1	12.7	0.0	0.0	NA	NA	12.7
Personal Computers	202.6	0.0	0.0	202.6	2.1	0.0	0.0	NA	NA	2.1
Clay Bricks	1,179.6	NA	NA	1,179.6	12.5	NA	NA	NA	NA	12.5
Concrete	452.8	0.0	0.0	452.8	4.8	NA	NA	NA	NA	4.8
Fly Ash	47.3	0.0	0.0	47.3	0.5	NA	NA	NA	NA	0.5
Tires	215.7	0.0	0.0	215.7	2.3	0.0	0.0	NA	NA	2.3
Asphalt Concrete	1,617.4	0.0	0.0	1,617.4	17.1	NA	NA	NA	NA	17.1
Asphalt Shingles	1,050.9	0.0	0.0	1,050.9	11.1	0.0	0.0	NA	NA	11.1
Drywall	2,639.4	0.0	0.0	2,639.4	91.1	NA	NA	NA	NA	91.1
Fiberglass Insulation	830.7	NA	NA	830.7	8.8	NA	NA	NA	NA	8.8
Vinyl Flooring	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	49,660.0	0.0	0.0	49,660.0	8,054.7	0.0	0.0	0.0	0.0	8,054.7

GHG Emissions from Projected Alternative Management of Municipal Solid Wastes

Material	Baseline Generation of Material (Tons)	Projected Source Reduction (Tons)	Annual GHG Emissions from Source Reduction (MTCE)	Projected Recycling (Tons)	Annual GHG Emissions from Recycling (MTCE)	Projected Landfilling (Tons)	Annual GHG Emissions from Landfilling (MTCE)	Projected Combustion (Tons)	Annual GHG Emissions from Combustion (MTCE)	Projected Composting (Tons)	Annual GHG Emissions from Composting (MTCE)	Total Annual GHG Emissions (MTCE)
Aluminum Cans	44.8	0.0	0.0	0.0	0.0	44.8	0.5	0.0	0.0	NA	NA	0.5
Aluminum Ingot	78.9	0.0	0.0	0.0	0.0	78.9	0.8	0.0	0.0	NA	NA	0.8
Steel Cans	240.9	0.0	0.0	0.0	0.0	240.9	2.5	0.0	0.0	NA	NA	2.5
Copper Wire	750.9	0.0	0.0	0.0	0.0	750.9	7.9	0.0	0.0	NA	NA	7.9
Glass	530.0	0.0	0.0	0.0	0.0	530.0	5.6	0.0	0.0	NA	NA	5.6
HDPE	147.8	0.0	0.0	0.0	0.0	147.8	1.6	0.0	0.0	NA	NA	1.6
LDPE	1,589.9	0.0	0.0	NA	NA	1,589.9	16.8	0.0	0.0	NA	NA	16.8
PET	187.0	0.0	0.0	0.0	0.0	187.0	2.0	0.0	0.0	NA	NA	2.0
LLDPE	454.7	0.0	0.0	NA	NA	454.7	4.8	0.0	0.0	NA	NA	4.8
PP	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	152.7	0.0	0.0	0.0	0.0	152.7	61.9	0.0	0.0	NA	NA	61.9
Magazines/third-class mail	265.1	0.0	0.0	0.0	0.0	265.1	10.0	0.0	0.0	NA	NA	10.0
Newspaper	468.3	0.0	0.0	0.0	0.0	468.3	(61.5)	0.0	0.0	NA	NA	(61.5)
Office Paper	685.0	0.0	0.0	0.0	0.0	685.0	693.7	0.0	0.0	NA	NA	693.7
Phonebooks	22.6	0.0	0.0	0.0	0.0	22.6	(3.0)	0.0	0.0	NA	NA	(3.0)
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	5,400.5	0.0	0.0	0.0	0.0	5,400.5	109.0	0.0	0.0	NA	NA	109.0
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	5,768.3	0.0	0.0	NA	NA	5,768.3	2,244.0	0.0	0.0	0.0	0.0	2,244.0
Yard Trimmings	8,224.9	0.0	0.0	NA	NA	8,224.9	452.2	0.0	0.0	0.0	0.0	452.2
Grass	1,417.1	0.0	0.0	NA	NA	1,417.1	199.0	0.0	0.0	0.0	0.0	199.0
Leaves	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	230.3	0.0	0.0	NA	NA	230.3	4.6	0.0	0.0	0.0	0.0	4.6
Mixed Paper (general)	4,983.8	NA	NA	0.0	0.0	4,983.8	1,837.2	0.0	0.0	NA	NA	1,837.2
Mixed Paper (primarily residential)	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	2,536.6	NA	NA	0.0	0.0	2,536.6	26.9	0.0	0.0	NA	NA	26.9
Mixed Plastics	1,034.8	NA	NA	0.0	0.0	1,034.8	11.0	0.0	0.0	NA	NA	11.0
Mixed Recyclables	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	3,169.0	NA	NA	NA	NA	3,169.0	714.1	0.0	0.0	0.0	0.0	714.1
Mixed MSW	1,835.8	NA	NA	NA	NA	1,835.8	1,549.9	0.0	0.0	NA	NA	1,549.9
Carpet	1,204.1	0.0	0.0	0.0	0.0	1,204.1	12.7	0.0	0.0	NA	NA	12.7
Personal Computers	202.6	0.0	0.0	0.0	0.0	202.6	2.1	0.0	0.0	NA	NA	2.1
Clay Bricks	1,179.6	0.0	0.0	NA	NA	1,179.6	12.5	NA	NA	NA	NA	12.5
Concrete	452.8	NA	NA	0.0	0.0	452.8	4.8	NA	NA	NA	NA	4.8
Fly Ash	47.3	NA	NA	0.0	0.0	47.3	0.5	NA	NA	NA	NA	0.5
Tires	215.7	0.0	0.0	0.0	0.0	215.7	2.3	0.0	0.0	NA	NA	2.3
Asphalt Concrete	1,617.4	0.0	0.0	0.0	0.0	1,617.4	17.1	NA	NA	NA	NA	17.1
Asphalt Shingles	1,050.9	0.0	0.0	0.0	0.0	1,050.9	11.1	0.0	0.0	NA	NA	11.1
Drywall	2,639.4	0.0	0.0	0.0	0.0	2,639.4	91.1	NA	NA	NA	NA	91.1
Fiberglass Insulation	830.7	0.0	0.0	NA	NA	830.7	8.8	NA	NA	NA	NA	8.8
Vinyl Flooring	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	49,660.0	0.0	0.0	0.0	0.0	49,660.0	8,054.7	0.0	0.0	0.0	0.0	8,054.7

Incremental GHG Emissions from Projected Alternative Management of Municipal Solid Wastes

Material	Source Reduction (Tons)	Incremental GHG Emissions from Source Reduction (MTCE)	Incremental Recycling (Tons)	Incremental GHG Emissions from Recycling (MTCE)	Incremental Landfilling (Tons)	Incremental GHG Emissions from Landfilling (MTCE)	Incremental Combustion (Tons)	Incremental GHG Emissions from Combustion (MTCE)	Incremental Composting (Tons)	Incremental GHG Emissions from Composting (MTCE)	Total Incremental GHG Emissions (MTCE)
Aluminum Cans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Aluminum Ingot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Steel Cans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Copper Wire	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Glass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
HDPE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
LDPE	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
LLDPE	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PP	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Magazines/third-class mail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Newspaper	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Office Paper	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Phonebooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yard Trimmings	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leaves	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mixed Paper (general)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily residential)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Plastics	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Recyclables	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mixed MSW	NA	NA	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Carpet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Personal Computers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Clay Bricks	0.0	0.0	NA	NA	0.0	0.0	NA	NA	NA	NA	0.0
Concrete	NA	NA	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Fly Ash	NA	NA	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Tires	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Asphalt Concrete	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Asphalt Shingles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Drywall	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Fiberglass Insulation	0.0	0.0	NA	NA	0.0	0.0	NA	NA	NA	NA	0.0
Vinyl Flooring	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a) For explanation of methodology, see the EPA report:
Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks (EPA530-R-06-004)
-- available on the Internet at http://epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf (5.6 Mb PDF file).

b) Emissions estimates provided by this model are intended to support voluntary GHG measurement

Waste Reduction Model (WARM) -- Results

Total GHG Emissions from Baseline MSW Generation and Management (MTCE):	8,055
Total GHG Emissions from Alternative MSW Generation and Management (MTCE):	8,055
Incremental GHG Emissions (MTCE):	-

MTCE = metric tons of carbon equivalent

Per Ton Estimates of GHG Emissions for Alternative Management Scenarios

Material	GHG Emissions per Ton of Material Source Reduced (MTCE)	GHG Emissions per Ton of Material Recycled (MTCE)	GHG Emissions per Ton of Material Landfilled (MTCE)	GHG Emissions per Ton of Material Combusted (MTCE)	GHG Emissions per Ton of Material Composted (MTCE)
Aluminum Cans	(1.35)	(2.42)	0.01	0.01	NA
Aluminum Ingot	(1.98)	(1.90)	0.01	0.01	NA
Steel Cans	(0.87)	(0.49)	0.01	(0.42)	NA
Copper Wire	(1.98)	(1.33)	0.01	0.01	NA
Glass	(0.14)	(0.08)	0.01	0.01	NA
HDPE	(0.40)	(0.23)	0.01	0.46	NA
LDPE	(0.49)	NA	0.01	0.46	NA
PET	(0.61)	(0.30)	0.01	0.40	NA
LLDPE	(0.43)	NA	0.01	0.46	NA
PP	(0.42)	NA	0.01	0.46	NA
PS	(0.68)	NA	0.01	0.55	NA
PVC	(0.54)	NA	0.01	0.23	NA
PLA	(0.59)	NA	(0.44)	(0.12)	(0.05)
Corrugated Containers	(1.53)	(0.85)	0.41	(0.09)	NA
Magazines/third-class mail	(2.36)	(0.84)	0.04	(0.06)	NA
Newspaper	(1.32)	(0.76)	(0.13)	(0.10)	NA
Office Paper	(2.18)	(0.78)	1.01	(0.09)	NA
Phonebooks	(1.71)	(0.72)	(0.13)	(0.10)	NA
Textbooks	(2.49)	(0.85)	1.01	(0.09)	NA
Dimensional Lumber	(0.55)	(0.67)	0.02	(0.11)	NA
Medium-density Fiberboard	(0.61)	(0.67)	0.02	(0.11)	NA
Food Scraps	0.00	NA	0.39	(0.02)	(0.05)
Yard Trimmings	0.00	NA	0.05	(0.03)	(0.05)
Grass	0.00	NA	0.14	(0.03)	(0.05)
Leaves	0.00	NA	(0.08)	(0.03)	(0.05)
Branches	0.00	NA	0.02	(0.03)	(0.05)
Mixed Paper (general)	NA	(0.96)	0.37	(0.09)	NA
Mixed Paper (primarily residential)	NA	(0.96)	0.33	(0.09)	NA
Mixed Paper (primarily from offices)	NA	(0.98)	0.39	(0.08)	NA
Mixed Metals	NA	(1.08)	0.01	(0.29)	NA
Mixed Plastics	NA	(0.27)	0.01	0.43	NA
Mixed Recyclables	NA	(0.76)	0.28	(0.08)	NA
Mixed Organics	NA	NA	0.23	(0.02)	(0.05)
Mixed MSW	NA	NA	0.84	0.02	NA
Carpet	(1.08)	(0.65)	0.01	0.34	NA
Personal Computers	(14.77)	(0.64)	0.01	(0.04)	NA
Clay Bricks	(0.08)	NA	0.01	NA	NA
Concrete	NA	(0.00)	0.01	NA	NA
Fly Ash	NA	(0.24)	0.01	NA	NA
Tires	(1.18)	(0.11)	0.01	0.14	NA
Asphalt Concrete	(0.03)	(0.02)	0.01	NA	NA
Asphalt Shingles	(0.05)	(0.02)	0.01	(0.09)	NA
Drywall	(0.06)	0.01	0.03	NA	NA
Fiberglass Insulation	(0.11)	NA	0.01	NA	NA
Vinyl Flooring	(0.17)	NA	0.01	(0.04)	NA
Wood Flooring	(1.11)	NA	0.02	(0.14)	NA

Energy Use from Baseline Management of Municipal Solid Wastes

Material	Baseline Generation of Material (Tons)	Estimated Recycling (Tons)	Annual Energy Consumption from Recycling (million BTU)	Estimated Landfilling (Tons)	Annual Energy Consumption from Landfilling (million BTU)	Estimated Combustion (Tons)	Annual Energy Consumption from Combustion (million BTU)	Estimated Composting (Tons)	Annual Energy Consumption from Composting (million BTU)	Total Annual Energy Consumption (million BTU)
Aluminum Cans	44.8	0.0	0.0	44.8	23.6	0.0	0.0	NA	NA	23.6
Aluminum Ingot	78.9	0.0	0.0	78.9	41.6	0.0	0.0	NA	NA	41.6
Steel Cans	240.9	0.0	0.0	240.9	127.0	0.0	0.0	NA	NA	127.0
Copper Wire	750.9	0.0	0.0	750.9	396.1	0.0	0.0	NA	NA	396.1
Glass	530.0	0.0	0.0	530.0	279.5	0.0	0.0	NA	NA	279.5
HDPE	147.8	0.0	0.0	147.8	77.9	0.0	0.0	NA	NA	77.9
LDPE	1,589.9	NA	NA	1,589.9	838.5	0.0	0.0	NA	NA	838.5
PET	187.0	0.0	0.0	187.0	98.6	0.0	0.0	NA	NA	98.6
LLDPE	454.7	NA	NA	454.7	239.8	0.0	0.0	NA	NA	239.8
PP	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	152.7	0.0	0.0	152.7	80.5	0.0	0.0	NA	NA	80.5
Magazines/third-class mail	265.1	0.0	0.0	265.1	139.8	0.0	0.0	NA	NA	139.8
Newspaper	468.3	0.0	0.0	468.3	247.0	0.0	0.0	NA	NA	247.0
Office Paper	685.0	0.0	0.0	685.0	361.3	0.0	0.0	NA	NA	361.3
Phonebooks	22.6	0.0	0.0	22.6	11.9	0.0	0.0	NA	NA	11.9
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	5,400.5	0.0	0.0	5,400.5	2,848.2	0.0	0.0	NA	NA	2,848.2
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	5,768.3	NA	NA	5,768.3	3,042.2	0.0	0.0	0.0	0.0	3,042.2
Yard Trimmings	8,224.9	NA	NA	8,224.9	4,337.8	0.0	0.0	0.0	0.0	4,337.8
Grass	1,417.1	NA	NA	1,417.1	747.4	0.0	0.0	0.0	0.0	747.4
Leaves	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	230.3	NA	NA	230.3	121.4	0.0	0.0	0.0	0.0	121.4
Mixed Paper (general)	4,983.8	0.0	0.0	4,983.8	2,628.5	0.0	0.0	NA	NA	2,628.5
Mixed Paper (primarily residential)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	2,536.6	0.0	0.0	2,536.6	1,337.8	0.0	0.0	NA	NA	1,337.8
Mixed Plastics	1,034.8	0.0	0.0	1,034.8	545.7	0.0	0.0	NA	NA	545.7
Mixed Recyclables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	3,169.0	NA	NA	3,169.0	1,671.3	0.0	0.0	0.0	0.0	1,671.3
Mixed MSW	1,835.8	NA	NA	1,835.8	968.2	0.0	0.0	NA	NA	968.2
Carpet	1,204.1	0.0	0.0	1,204.1	635.0	0.0	0.0	NA	NA	635.0
Personal Computers	202.6	0.0	0.0	202.6	106.9	0.0	0.0	NA	NA	106.9
Clay Bricks	1,179.6	NA	NA	1,179.6	622.1	NA	NA	NA	NA	622.1
Concrete	452.8	0.0	0.0	452.8	238.8	NA	NA	NA	NA	238.8
Fly Ash	47.3	0.0	0.0	47.3	24.9	NA	NA	NA	NA	24.9
Tires	215.7	0.0	0.0	215.7	113.7	0.0	0.0	NA	NA	113.7
Asphalt Concrete	1,617.4	0.0	0.0	1,617.4	853.0	NA	NA	NA	NA	853.0
Asphalt Shingles	1,050.9	0.0	0.0	1,050.9	554.3	0.0	0.0	NA	NA	554.3
Drywall	2,639.4	0.0	0.0	2,639.4	1,392.0	NA	NA	NA	NA	1,392.0
Fiberglass Insulation	830.7	NA	NA	830.7	438.1	NA	NA	NA	NA	438.1
Vinyl Flooring	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	49,660.0	0.0	0.0	49,660.0	26,190.7	0.0	0.0	0.0	0.0	26,190.7

Energy Use from Projected Alternative Management of Municipal Solid Wastes

Material	Baseline Generation of Material (Tons)	Projected Source Reduction (Tons)	Annual Energy Consumption from Source Reduction (million BTU)	Projected Recycling (Tons)	Annual Energy Consumption from Recycling (million BTU)	Projected Landfilling (Tons)	Annual Energy Consumption from Landfilling (million BTU)	Projected Combustion (Tons)	Annual Energy Consumption from Combustion (million BTU)	Projected Composting (Tons)	Annual Energy Consumption from Composting (million BTU)	Total Annual Energy Consumption (million BTU)
Aluminum Cans	44.8	0.0	0.0	0.0	0.0	44.8	23.6	0.0	0.0	NA	NA	23.6
Aluminum Ingot	78.9	0.0	0.0	0.0	0.0	78.9	41.6	0.0	0.0	NA	NA	41.6
Steel Cans	240.9	0.0	0.0	0.0	0.0	240.9	127.0	0.0	0.0	NA	NA	127.0
Copper Wire	750.9	0.0	0.0	0.0	0.0	750.9	396.1	0.0	0.0	NA	NA	396.1
Glass	530.0	0.0	0.0	0.0	0.0	530.0	279.5	0.0	0.0	NA	NA	279.5
HDPE	147.8	0.0	0.0	0.0	0.0	147.8	77.9	0.0	0.0	NA	NA	77.9
LDPE	1,589.9	0.0	0.0	NA	NA	1,589.9	838.5	0.0	0.0	NA	NA	838.5
PET	187.0	0.0	0.0	0.0	0.0	187.0	98.6	0.0	0.0	NA	NA	98.6
LLDPE	454.7	0.0	0.0	NA	NA	454.7	239.8	0.0	0.0	NA	NA	239.8
PP	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	152.7	0.0	0.0	0.0	0.0	152.7	80.5	0.0	0.0	NA	NA	80.5
Magazines/third-class mail	265.1	0.0	0.0	0.0	0.0	265.1	139.8	0.0	0.0	NA	NA	139.8
Newspaper	468.3	0.0	0.0	0.0	0.0	468.3	247.0	0.0	0.0	NA	NA	247.0
Office Paper	685.0	0.0	0.0	0.0	0.0	685.0	361.3	0.0	0.0	NA	NA	361.3
Phonebooks	22.6	0.0	0.0	0.0	0.0	22.6	11.9	0.0	0.0	NA	NA	11.9
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	5,400.5	0.0	0.0	0.0	0.0	5,400.5	2,848.2	0.0	0.0	NA	NA	2,848.2
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	5,768.3	0.0	0.0	NA	NA	5,768.3	3,042.2	0.0	0.0	0.0	0.0	3,042.2
Yard Trimmings	8,224.9	0.0	0.0	NA	NA	8,224.9	4,337.8	0.0	0.0	0.0	0.0	4,337.8
Grass	1,417.1	0.0	0.0	NA	NA	1,417.1	747.4	0.0	0.0	0.0	0.0	747.4
Leaves	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	230.3	0.0	0.0	NA	NA	230.3	121.4	0.0	0.0	0.0	0.0	121.4
Mixed Paper (general)	4,983.8	NA	NA	0.0	0.0	4,983.8	2,628.5	0.0	0.0	NA	NA	2,628.5
Mixed Paper (primarily residential)	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	2,536.6	NA	NA	0.0	0.0	2,536.6	1,337.8	0.0	0.0	NA	NA	1,337.8
Mixed Plastics	1,034.8	NA	NA	0.0	0.0	1,034.8	545.7	0.0	0.0	NA	NA	545.7
Mixed Recyclables	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	3,169.0	NA	NA	NA	NA	3,169.0	1,671.3	0.0	0.0	0.0	0.0	1,671.3
Mixed MSW	1,835.8	NA	NA	NA	NA	1,835.8	968.2	0.0	0.0	NA	NA	968.2
Carpet	1,204.1	0.0	0.0	0.0	0.0	1,204.1	635.0	0.0	0.0	NA	NA	635.0
Personal Computers	202.6	0.0	0.0	0.0	0.0	202.6	106.9	0.0	0.0	NA	NA	106.9
Clay Bricks	1,179.6	0.0	0.0	NA	NA	1,179.6	622.1	NA	NA	NA	NA	622.1
Concrete	452.8	NA	NA	0.0	0.0	452.8	238.8	NA	NA	NA	NA	238.8
Fly Ash	47.3	NA	NA	0.0	0.0	47.3	24.9	NA	NA	NA	NA	24.9
Tires	215.7	0.0	0.0	0.0	0.0	215.7	113.7	0.0	0.0	NA	NA	113.7
Asphalt Concrete	1,617.4	0.0	0.0	0.0	0.0	1,617.4	853.0	NA	NA	NA	NA	853.0
Asphalt Shingles	1,050.9	0.0	0.0	0.0	0.0	1,050.9	554.3	0.0	0.0	NA	NA	554.3
Drywall	2,639.4	0.0	0.0	0.0	0.0	2,639.4	1,392.0	NA	NA	NA	NA	1,392.0
Fiberglass Insulation	830.7	0.0	0.0	NA	NA	830.7	438.1	NA	NA	NA	NA	438.1
Vinyl Flooring	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	49,660.0	0.0	0.0	0.0	0.0	49,660.0	26,190.7	0.0	0.0	0.0	0.0	26,190.7

Incremental Energy Use from Projected Alternative Management of Municipal Solid Wastes

Material	Source Reduction (Tons)	Incremental Energy Consumption from Source Reduction (million BTU)	Incremental Recycling (Tons)	Incremental Energy Consumption from Recycling (million BTU)	Incremental Landfilling (Tons)	Incremental Energy Consumption from Landfilling (million BTU)	Incremental Combustion (Tons)	Incremental Energy Consumption from Combustion (million BTU)	Incremental Composting (Tons)	Incremental Energy Consumption from Composting (million BTU)	Total Incremental GHG Energy Consumption (million BTU)
Aluminum Cans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Aluminum Ingot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Steel Cans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Copper Wire	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Glass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
HDPE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
LDPE	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
LLDPE	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PP	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Magazines/third-class mail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Newspaper	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Office Paper	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Phonebooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yard Trimmings	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leaves	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mixed Paper (general)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily residential)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Plastics	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Recyclables	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mixed MSW	NA	NA	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Carpet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Personal Computers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Clay Bricks	0.0	0.0	NA	NA	0.0	0.0	NA	NA	NA	NA	0.0
Concrete	NA	NA	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Fly Ash	NA	NA	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Tires	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Asphalt Concrete	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Asphalt Shingles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Drywall	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Fiberglass Insulation	0.0	0.0	NA	NA	0.0	0.0	NA	NA	NA	NA	0.0
Vinyl Flooring	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a) For explanation of methodology, see the EPA report:
Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks (EPA530-R-06-004)
-- available on the Internet at http://epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf (5.6 Mb PDF file).

b) Emissions estimates provided by this model are intended to support voluntary GHG measurement

WAste Reduction Model (WARM) -- Results

Total Energy Use from Baseline MSW Generation and Management (million BTU):	26,191
Total Energy Use from Alternative MSW Generation and Management (million BTU):	26,191
Incremental Energy Use (million BTU):	0

BTU = british thermal unit

Per Ton Estimates of Energy Use for Alternative Management Scenarios

Material	Energy Savings per Ton of Material Source Reduced (million BTU)	Energy Savings per Ton of Material Recycled (million BTU)	Energy Savings per Ton of Material Landfilled (million BTU)	Energy Savings per Ton of Material Combusted (million BTU)	Energy Savings per Ton of Material Composted (million BTU)
Aluminum Cans	(89.68)	(152.76)	0.53	0.58	NA
Aluminum Ingot	(126.94)	(113.85)	0.53	0.58	NA
Steel Cans	(30.82)	(19.97)	0.53	(17.13)	NA
Copper Wire	(122.34)	(82.59)	0.53	0.53	NA
Glass	(6.93)	(2.13)	0.53	0.50	NA
HDPE	(61.27)	(50.37)	0.53	(16.82)	NA
LDPE	(71.09)	NA	0.53	(16.73)	NA
PET	(50.39)	(32.07)	0.53	(8.78)	NA
LLDPE	(66.43)	NA	0.53	(16.78)	NA
PP	(66.67)	NA	0.53	(16.79)	NA
PS	(75.05)	NA	0.53	(15.12)	NA
PVC	(48.48)	NA	0.53	(6.45)	NA
PLA	(30.42)	NA	0.53	(6.87)	0.58
Corrugated Containers	(22.01)	(15.06)	0.53	(5.73)	NA
Magazines/third-class mail	(33.22)	(0.69)	0.53	(4.21)	NA
Newspaper	(36.45)	(16.49)	0.53	(6.51)	NA
Office Paper	(36.59)	(10.08)	0.53	(5.53)	NA
Phonebooks	(40.19)	(11.93)	0.53	(6.51)	NA
Textbooks	(35.59)	(1.03)	0.53	(5.53)	NA
Dimensional Lumber	(3.53)	0.59	0.53	(6.81)	NA
Medium-density Fiberboard	(11.61)	0.86	0.53	(6.81)	NA
Food Scraps	0.00	NA	0.53	(1.73)	0.58
Yard Trimmings	0.00	NA	0.53	(2.10)	0.58
Grass	0.00	NA	0.53	(2.10)	0.58
Leaves	0.00	NA	0.53	(2.10)	0.58
Branches	0.00	NA	0.53	(2.10)	0.58
Mixed Paper (general)	NA	(20.40)	0.53	(5.76)	NA
Mixed Paper (primarily residential)	NA	(20.40)	0.53	(5.73)	NA
Mixed Paper (primarily from offices)	NA	(20.85)	0.53	(5.27)	NA
Mixed Metals	NA	(60.64)	0.53	(11.70)	NA
Mixed Plastics	NA	(41.30)	0.53	(12.83)	NA
Mixed Recyclables	NA	(14.99)	0.53	(5.91)	NA
Mixed Organics	NA	NA	0.53	(1.91)	0.58
Mixed MSW	NA	NA	0.53	(3.99)	NA
Carpet	(91.06)	(21.57)	0.53	(6.21)	NA
Personal Computers	(956.74)	(29.69)	0.53	(6.05)	NA
Clay Bricks	(5.13)	NA	0.53	NA	NA
Concrete	NA	(0.11)	0.53	NA	NA
Fly Ash	NA	(4.77)	0.53	NA	NA
Tires	(71.63)	(3.71)	0.53	(28.49)	NA
Asphalt Concrete	(1.68)	(1.22)	0.53	NA	NA
Asphalt Shingles	(3.17)	(2.46)	0.53	(8.50)	NA
Drywall	(3.59)	(2.64)	0.53	NA	NA
Fiberglass Insulation	(4.76)	NA	0.53	NA	NA
Vinyl Flooring	(10.66)	NA	0.53	(6.45)	NA
Wood Flooring	(14.45)	NA	0.53	(9.01)	NA

Energy Analysis -- Summary Report

Version 12

GHG Emissions Waste Management Analysis for TPC/DC&E
Prepared by: Danville 2008
Project Period for this Analysis: 01/00/00 to 01/00/00

Energy Use from Baseline Waste Management (million BTU): 26,191

Commodity	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total Million BTU
Aluminum Cans	-	44.8	-	NA	24
Aluminum Ingot	-	78.9	-	NA	42
Steel Cans	-	240.9	-	NA	127
Copper Wire	-	750.9	-	NA	396
Glass	-	530.0	-	NA	280
HDPE	-	147.8	-	NA	78
LDPE	NA	1,589.9	-	NA	839
PET	-	187.0	-	NA	99
LLDPE	NA	454.7	-	NA	240
Corrugated Containers	-	152.7	-	NA	81
Magazines/third-class mail	-	265.1	-	NA	140
Newspaper	-	468.3	-	NA	247
Office Paper	-	685.0	-	NA	361
Phonebooks	-	22.6	-	NA	12
Dimensional Lumber	-	5,400.5	-	NA	2,848
Food Scraps	NA	5,768.3	-	-	3,042
Yard Trimmings	NA	8,224.9	-	-	4,338
Grass	NA	1,417.1	-	-	747
Branches	NA	230.3	-	-	121
Mixed Paper (general)	-	4,983.8	-	NA	2,628
Mixed Metals	-	2,536.6	-	NA	1,338
Mixed Plastics	-	1,034.8	-	NA	546
Mixed Organics	NA	3,169.0	-	-	1,671
Mixed MSW	NA	1,835.8	-	NA	968
Carpet	-	1,204.1	-	NA	635
Personal Computers	-	202.6	-	NA	107
Clay Bricks	NA	1,179.6	NA	NA	622
Concrete	-	452.8	NA	NA	239
Fly Ash	-	47.3	NA	NA	25
Tires	-	215.7	-	NA	114
Asphalt Concrete	-	1,617.4	NA	NA	853
Asphalt Shingles	-	1,050.9	-	NA	554
Drywall	-	2,639.4	NA	NA	1,392
Fiberglass Insulation	NA	830.7	NA	NA	438
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0

Energy Use from Alternative Waste Management Scenario (million BTU): 26,191

Commodity	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total Million BTU	Change (Alt - Base) BTU
Aluminum Cans	-	-	44.8	-	NA	24	0
Aluminum Ingot	-	-	78.9	-	NA	42	0
Steel Cans	-	-	240.9	-	NA	127	0
Copper Wire	-	-	750.9	-	NA	396	0
Glass	-	-	530.0	-	NA	280	0
HDPE	-	-	147.8	-	NA	78	0
LDPE	-	NA	1,589.9	-	NA	839	0
PET	-	-	187.0	-	NA	99	0
LLDPE	-	NA	454.7	-	NA	240	0
Corrugated Containers	-	-	152.7	-	NA	81	0
Magazines/third-class mail	-	-	265.1	-	NA	140	0
Newspaper	-	-	468.3	-	NA	247	0
Office Paper	-	-	685.0	-	NA	361	0
Phonebooks	-	-	22.6	-	NA	12	0
Dimensional Lumber	-	-	5,400.5	-	NA	2,848	0
Food Scraps	-	NA	5,768.3	-	-	3,042	0
Yard Trimmings	-	NA	8,224.9	-	-	4,338	0
Grass	-	NA	1,417.1	-	-	747	0
Branches	-	NA	230.3	-	-	121	0
Mixed Paper (general)	NA	-	4,983.8	-	NA	2,628	0
Mixed Metals	NA	-	2,536.6	-	NA	1,338	0
Mixed Plastics	NA	-	1,034.8	-	NA	546	0
Mixed Organics	NA	NA	3,169.0	-	-	1,671	0
Mixed MSW	NA	NA	1,835.8	-	NA	968	0
Carpet	-	-	1,204.1	-	NA	635	0
Personal Computers	-	-	202.6	-	NA	107	0
Clay Bricks	-	NA	1,179.6	NA	NA	622	0
Concrete	NA	-	452.8	NA	NA	239	0
Fly Ash	NA	-	47.3	NA	NA	25	0
Tires	-	-	215.7	-	NA	114	0
Asphalt Concrete	-	-	1,617.4	NA	NA	853	0
Asphalt Shingles	-	-	1,050.9	-	NA	554	0
Drywall	-	-	2,639.4	NA	NA	1,392	0
Fiberglass Insulation	-	NA	830.7	NA	NA	438	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0

Total Change in Energy Use (million BTU): 0

Note: a negative value (i.e., a value in parentheses) indicates a reduction in energy consumption; a positive value indicates an increase.

This is equivalent to…		
Conserving	**0**	Households' Annual Energy Consumption
Conserving	**0**	Barrels of Oil
Conserving	**0**	Gallons of Gasoline

a) For explanation of methodology, see the EPA report:
Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks
(EPA530-R-06-004)
-- available on the Internet at http://epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf (5.6 Mb PDF file).

b) Emissions estimates provided by this model are intended to support voluntary GHG measurement and reporting initiatives.

GHG Emissions from Baseline Management of Municipal Solid Wastes

Material	Baseline Generation of Material (Tons)	Estimated Recycling (Tons)	Annual GHG Emissions from Recycling ($MTCO_2E$)	Estimated Landfilling (Tons)	Annual GHG Emissions from Landfilling ($MTCO_2E$)	Estimated Combustion (Tons)	Annual GHG Emissions from Combustion ($MTCO_2E$)	Estimated Composting (Tons)	Annual GHG Emissions from Composting ($MTCO_2E$)	Total Annual GHG Emissions ($MTCO_2E$)
Aluminum Cans	44.8	0.0	0.0	44.8	1.7	0.0	0.0	NA	NA	1.7
Aluminum Ingot	78.9	0.0	0.0	78.9	3.1	0.0	0.0	NA	NA	3.1
Steel Cans	240.9	0.0	0.0	240.9	9.3	0.0	0.0	NA	NA	9.3
Copper Wire	750.9	0.0	0.0	750.9	29.1	0.0	0.0	NA	NA	29.1
Glass	530.0	0.0	0.0	530.0	20.6	0.0	0.0	NA	NA	20.6
HDPE	147.8	0.0	0.0	147.8	5.7	0.0	0.0	NA	NA	5.7
LDPE	1,589.9	NA	NA	1,589.9	61.7	0.0	0.0	NA	NA	61.7
PET	187.0	0.0	0.0	187.0	7.3	0.0	0.0	NA	NA	7.3
LLDPE	454.7	NA	NA	454.7	17.6	0.0	0.0	NA	NA	17.6
PP	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	152.7	0.0	0.0	152.7	227.0	0.0	0.0	NA	NA	227.0
Magazines/third-class mail	265.1	0.0	0.0	265.1	36.6	0.0	0.0	NA	NA	36.6
Newspaper	468.3	0.0	0.0	468.3	(225.5)	0.0	0.0	NA	NA	(225.5)
Office Paper	685.0	0.0	0.0	685.0	2,543.7	0.0	0.0	NA	NA	2,543.7
Phonebooks	22.6	0.0	0.0	22.6	(10.9)	0.0	0.0	NA	NA	(10.9)
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	5,400.5	0.0	0.0	5,400.5	399.7	0.0	0.0	NA	NA	399.7
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	5,768.3	NA	NA	5,768.3	8,228.0	0.0	0.0	0.0	0.0	8,228.0
Yard Trimmings	8,224.9	NA	NA	8,224.9	1,658.1	0.0	0.0	0.0	0.0	1,658.1
Grass	1,417.1	NA	NA	1,417.1	729.7	0.0	0.0	0.0	0.0	729.7
Leaves	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	230.3	NA	NA	230.3	17.0	0.0	0.0	0.0	0.0	17.0
Mixed Paper (general)	4,983.8	0.0	0.0	4,983.8	6,736.5	0.0	0.0	NA	NA	6,736.5
Mixed Paper (primarily residential)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	2,536.6	0.0	0.0	2,536.6	98.5	0.0	0.0	NA	NA	98.5
Mixed Plastics	1,034.8	0.0	0.0	1,034.8	40.2	0.0	0.0	NA	NA	40.2
Mixed Recyclables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	3,169.0	NA	NA	3,169.0	2,618.3	0.0	0.0	0.0	0.0	2,618.3
Mixed MSW	1,835.8	NA	NA	1,835.8	5,682.9	0.0	0.0	NA	NA	5,682.9
Carpet	1,204.1	0.0	0.0	1,204.1	46.7	0.0	0.0	NA	NA	46.7
Personal Computers	202.6	0.0	0.0	202.6	7.9	0.0	0.0	NA	NA	7.9
Clay Bricks	1,179.6	NA	NA	1,179.6	45.8	NA	NA	NA	NA	45.8
Concrete	452.8	0.0	0.0	452.8	17.6	NA	NA	NA	NA	17.6
Fly Ash	47.3	0.0	0.0	47.3	1.8	NA	NA	NA	NA	1.8
Tires	215.7	0.0	0.0	215.7	8.4	0.0	0.0	NA	NA	8.4
Asphalt Concrete	1,617.4	0.0	0.0	1,617.4	62.8	NA	NA	NA	NA	62.8
Asphalt Shingles	1,050.9	0.0	0.0	1,050.9	40.8	0.0	0.0	NA	NA	40.8
Drywall	2,639.4	0.0	0.0	2,639.4	334.1	NA	NA	NA	NA	334.1
Fiberglass Insulation	830.7	NA	NA	830.7	32.2	NA	NA	NA	NA	32.2
Vinyl Flooring	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	49,660.0	0.0	0.0	49,660.0	29,533.9	0.0	0.0	0.0	0.0	29,533.9

GHG Emissions from Projected Alternative Management of Municipal Solid Wastes

Material	Baseline Generation of Material (Tons)	Projected Source Reduction (Tons)	Annual GHG Emissions from Source Reduction ($MTCO_2E$)	Projected Recycling (Tons)	Annual GHG Emissions from Recycling ($MTCO_2E$)	Projected Landfilling (Tons)	Annual GHG Emissions from Landfilling ($MTCO_2E$)	Projected Combustion (Tons)	Annual GHG Emissions from Combustion ($MTCO_2E$)	Projected Composting (Tons)	Annual GHG Emissions from Composting ($MTCO_2E$)	Total Annual GHG Emissions ($MTCO_2E$)
Aluminum Cans	44.8	0.0	0.0	0.0	0.0	44.8	1.7	0.0	0.0	NA	NA	1.7
Aluminum Ingot	78.9	0.0	0.0	0.0	0.0	78.9	3.1	0.0	0.0	NA	NA	3.1
Steel Cans	240.9	0.0	0.0	0.0	0.0	240.9	9.3	0.0	0.0	NA	NA	9.3
Copper Wire	750.9	0.0	0.0	0.0	0.0	750.9	29.1	0.0	0.0	NA	NA	29.1
Glass	530.0	0.0	0.0	0.0	0.0	530.0	20.6	0.0	0.0	NA	NA	20.6
HDPE	147.8	0.0	0.0	0.0	0.0	147.8	5.7	0.0	0.0	NA	NA	5.7
LDPE	1,589.9	0.0	0.0	NA	NA	1,589.9	61.7	0.0	0.0	NA	NA	61.7
PET	187.0	0.0	0.0	0.0	0.0	187.0	7.3	0.0	0.0	NA	NA	7.3
LLDPE	454.7	0.0	0.0	NA	NA	454.7	17.6	0.0	0.0	NA	NA	17.6
PP	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	152.7	0.0	0.0	0.0	0.0	152.7	227.0	0.0	0.0	NA	NA	227.0
Magazines/third-class mail	265.1	0.0	0.0	0.0	0.0	265.1	36.6	0.0	0.0	NA	NA	36.6
Newspaper	468.3	0.0	0.0	0.0	0.0	468.3	(225.5)	0.0	0.0	NA	NA	(225.5)
Office Paper	685.0	0.0	0.0	0.0	0.0	685.0	2,543.7	0.0	0.0	NA	NA	2,543.7
Phonebooks	22.6	0.0	0.0	0.0	0.0	22.6	(10.9)	0.0	0.0	NA	NA	(10.9)
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	5,400.5	0.0	0.0	0.0	0.0	5,400.5	399.7	0.0	0.0	NA	NA	399.7
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	5,768.3	0.0	0.0	NA	NA	5,768.3	8,228.0	0.0	0.0	0.0	0.0	8,228.0
Yard Trimmings	8,224.9	0.0	0.0	NA	NA	8,224.9	1,658.1	0.0	0.0	0.0	0.0	1,658.1
Grass	1,417.1	0.0	0.0	NA	NA	1,417.1	729.7	0.0	0.0	0.0	0.0	729.7
Leaves	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	230.3	0.0	0.0	NA	NA	230.3	17.0	0.0	0.0	0.0	0.0	17.0
Mixed Paper (general)	4,983.8	NA	NA	0.0	0.0	4,983.8	6,736.5	0.0	0.0	NA	NA	6,736.5
Mixed Paper (primarily residential)	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	2,536.6	NA	NA	0.0	0.0	2,536.6	98.5	0.0	0.0	NA	NA	98.5
Mixed Plastics	1,034.8	NA	NA	0.0	0.0	1,034.8	40.2	0.0	0.0	NA	NA	40.2
Mixed Recyclables	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	3,169.0	NA	NA	NA	NA	3,169.0	2,618.3	0.0	0.0	0.0	0.0	2,618.3
Mixed MSW	1,835.8	NA	NA	NA	NA	1,835.8	5,682.9	0.0	0.0	NA	NA	5,682.9
Carpet	1,204.1	0.0	0.0	0.0	0.0	1,204.1	46.7	0.0	0.0	NA	NA	46.7
Personal Computers	202.6	0.0	0.0	0.0	0.0	202.6	7.9	0.0	0.0	NA	NA	7.9
Clay Bricks	1,179.6	0.0	0.0	NA	NA	1,179.6	45.8	NA	NA	NA	NA	45.8
Concrete	452.8	NA	NA	0.0	0.0	452.8	17.6	NA	NA	NA	NA	17.6
Fly Ash	47.3	NA	NA	0.0	0.0	47.3	1.8	NA	NA	NA	NA	1.8
Tires	215.7	0.0	0.0	0.0	0.0	215.7	8.4	0.0	0.0	NA	NA	8.4
Asphalt Concrete	1,617.4	0.0	0.0	0.0	0.0	1,617.4	62.8	NA	NA	NA	NA	62.8
Asphalt Shingles	1,050.9	0.0	0.0	0.0	0.0	1,050.9	40.8	0.0	0.0	NA	NA	40.8
Drywall	2,639.4	0.0	0.0	0.0	0.0	2,639.4	334.1	NA	NA	NA	NA	334.1
Fiberglass Insulation	830.7	0.0	0.0	NA	NA	830.7	32.2	NA	NA	NA	NA	32.2
Vinyl Flooring	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	49,660.0	0.0	0.0	0.0	0.0	49,660.0	29,533.9	0.0	0.0	0.0	0.0	29,533.9

Incremental GHG Emissions from Projected Alternative Management of Municipal Solid Wastes

Material	Source Reduction (Tons)	Incremental GHG Emissions from Source Reduction ($MTCO_2E$)	Incremental Recycling (Tons)	Incremental GHG Emissions from Recycling ($MTCO_2E$)	Incremental Landfilling (Tons)	Incremental GHG Emissions from Landfilling ($MTCO_2E$)	Incremental Combustion (Tons)	Incremental GHG Emissions from Combustion ($MTCO_2E$)	Incremental Composting (Tons)	Incremental GHG Emissions from Composting ($MTCO_2E$)	Total Incremental GHG Emissions ($MTCO_2E$)
Aluminum Cans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Aluminum Ingot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Steel Cans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Copper Wire	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Glass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
HDPE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
LDPE	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
LLDPE	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PP	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PS	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PVC	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
PLA	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corrugated Containers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Magazines/third-class mail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Newspaper	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Office Paper	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Phonebooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Textbooks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Dimensional Lumber	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Medium-density Fiberboard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Food Scraps	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yard Trimmings	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leaves	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Branches	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mixed Paper (general)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily residential)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Paper (primarily from offices)	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Metals	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Plastics	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Recyclables	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Mixed Organics	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mixed MSW	NA	NA	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Carpet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Personal Computers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Clay Bricks	0.0	0.0	NA	NA	0.0	0.0	NA	NA	NA	NA	0.0
Concrete	NA	NA	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Fly Ash	NA	NA	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Tires	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Asphalt Concrete	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Asphalt Shingles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0
Drywall	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	0.0
Fiberglass Insulation	0.0	0.0	NA	NA	0.0	0.0	NA	NA	NA	NA	0.0
Vinyl Flooring	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Wood Flooring	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a) For explanation of methodology, see the EPA report:
Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks (EPA530-R-06-004)
-- available on the Internet at http://epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf (5.6 Mb PDF file).

b) Emissions estimates provided by this model are intended to support voluntary GHG measurement and reporting initiatives.

Waste Reduction Model (WARM) -- Results

Total GHG Emissions from Baseline MSW Generation and Management ($MTCO_2E$):	29,534
Total GHG Emissions from Alternative MSW Generation and Management ($MTCO_2E$):	29,534
Incremental GHG Emissions ($MTCO_2E$):	-

$MTCO_2E$ = metric tons of carbon dioxide equivalent

Per Ton Estimates of GHG Emissions for Alternative Management Scenarios

Material	GHG Emissions per Ton of Material Source Reduced ($MTCO_2E$)	GHG Emissions per Ton of Material Recycled ($MTCO_2E$)	GHG Emissions per Ton of Material Landfilled ($MTCO_2E$)	GHG Emissions per Ton of Material Combusted ($MTCO_2E$)	GHG Emissions per Ton of Material Composted ($MTCO_2E$)
Aluminum Cans	(4.94)	(8.89)	0.04	0.05	NA
Aluminum Ingot	(7.27)	(6.97)	0.04	0.05	NA
Steel Cans	(3.18)	(1.80)	0.04	(1.55)	NA
Copper Wire	(7.26)	(4.89)	0.04	0.04	NA
Glass	(0.53)	(0.28)	0.04	0.04	NA
HDPE	(1.47)	(0.86)	0.04	1.69	NA
LDPE	(1.79)	NA	0.04	1.70	NA
PET	(2.22)	(1.11)	0.04	1.47	NA
LLDPE	(1.57)	NA	0.04	1.70	NA
PP	(1.55)	NA	0.04	1.70	NA
PS	(2.50)	NA	0.04	2.02	NA
PVC	(1.98)	NA	0.04	0.84	NA
PLA	(2.18)	NA	(1.62)	(0.44)	(0.20)
Corrugated Containers	(5.59)	(3.11)	1.49	(0.33)	NA
Magazines/third-class mail	(8.64)	(3.07)	0.14	(0.23)	NA
Newspaper	(4.85)	(2.78)	(0.48)	(0.38)	NA
Office Paper	(7.99)	(2.85)	3.71	(0.32)	NA
Phonebooks	(6.27)	(2.65)	(0.48)	(0.38)	NA
Textbooks	(9.11)	(3.11)	3.71	(0.32)	NA
Dimensional Lumber	(2.02)	(2.46)	0.07	(0.40)	NA
Medium-density Fiberboard	(2.22)	(2.47)	0.07	(0.40)	NA
Food Scraps	0.00	NA	1.43	(0.07)	(0.20)
Yard Trimmings	0.00	NA	0.20	(0.09)	(0.20)
Grass	0.00	NA	0.51	(0.09)	(0.20)
Leaves	0.00	NA	(0.30)	(0.09)	(0.20)
Branches	0.00	NA	0.07	(0.09)	(0.20)
Mixed Paper (general)	NA	(3.52)	1.35	(0.34)	NA
Mixed Paper (primarily residential)	NA	(3.52)	1.21	(0.33)	NA
Mixed Paper (primarily from offices)	NA	(3.59)	1.43	(0.30)	NA
Mixed Metals	NA	(3.97)	0.04	(1.06)	NA
Mixed Plastics	NA	(0.98)	0.04	1.58	NA
Mixed Recyclables	NA	(2.80)	1.02	(0.29)	NA
Mixed Organics	NA	NA	0.83	(0.08)	(0.20)
Mixed MSW	NA	NA	3.10	0.07	NA
Carpet	(3.96)	(2.37)	0.04	1.26	NA
Personal Computers	(54.15)	(2.35)	0.04	(0.13)	NA
Clay Bricks	(0.28)	NA	0.04	NA	NA
Concrete	NA	(0.01)	0.04	NA	NA
Fly Ash	NA	(0.87)	0.04	NA	NA
Tires	(4.32)	(0.39)	0.04	0.51	NA
Asphalt Concrete	(0.11)	(0.08)	0.04	NA	NA
Asphalt Shingles	(0.20)	(0.09)	0.04	(0.34)	NA
Drywall	(0.22)	0.03	0.13	NA	NA
Fiberglass Insulation	(0.39)	NA	0.04	NA	NA
Vinyl Flooring	(0.62)	NA	0.04	(0.14)	NA
Wood Flooring	(4.06)	NA	0.07	(0.53)	NA

GHG Emissions Analysis -- Summary Report

Version 12

GHG Emissions Waste Management Analysis for TPC/DC&E

Prepared by: Danville 2008

Project Period for this Analysis: 01/00/00 to 01/00/00

Note: If you wish to save these results, rename this file (e.g., WARM-MN1) and save it. Then the "Analysis Inputs" sheet of the "WARM" file will be blank when you are ready to make another model run.

GHG Emissions from Baseline Waste Management ($MTCO_2E$): 29,534

Commodity	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total $MTCO_2E$
Aluminum Cans	-	44.8	-	NA	2
Aluminum Ingot	-	78.9	-	NA	3
Steel Cans	-	240.9	-	NA	9
Copper Wire	-	750.9	-	NA	29
Glass	-	530.0	-	NA	21
HDPE	-	147.8	-	NA	6
LDPE	NA	1,589.9	-	NA	62
PET	-	187.0	-	NA	7
LLDPE	NA	454.7	-	NA	18
Corrugated Containers	-	152.7	-	NA	227
Magazines/third-class mail	-	265.1	-	NA	37
Newspaper	-	468.3	-	NA	(226)
Office Paper	-	685.0	-	NA	2,544
Phonebooks	-	22.6	-	NA	(11)
Dimensional Lumber	-	5,400.5	-	NA	400
Food Scraps	NA	5,768.3	-	-	8,228
Yard Trimmings	NA	8,224.9	-	-	1,658
Grass	NA	1,417.1	-	-	730
Branches	NA	230.3	-	-	17
Mixed Paper (general)	-	4,983.8	-	NA	6,737
Mixed Metals	-	2,536.6	-	NA	98
Mixed Plastics	-	1,034.8	-	NA	40
Mixed Organics	NA	3,169.0	-	-	2,618
Mixed MSW	NA	1,835.8	-	NA	5,683
Carpet	-	1,204.1	-	NA	47
Personal Computers	-	202.6	-	NA	8
Clay Bricks	NA	1,179.6	NA	NA	46
Concrete	-	452.8	NA	NA	18
Fly Ash	-	47.3	NA	NA	2
Tires	-	215.7	-	NA	8
Asphalt Concrete	-	1,617.4	NA	NA	63
Asphalt Shingles	-	1,050.9	-	NA	41
Drywall	-	2,639.4	NA	NA	334
Fiberglass Insulation	NA	830.7	NA	NA	32
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0

GHG Emissions from Alternative Waste Management Scenario ($MTCO_2E$): 29,534

Commodity	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total $MTCO_2E$	Change (Alt - Base) $MTCO_2E$
Aluminum Cans	-	-	44.8	-	NA	2	0
Aluminum Ingot	-	-	78.9	-	NA	3	0
Steel Cans	-	-	240.9	-	NA	9	0
Copper Wire	-	-	750.9	-	NA	29	0
Glass	-	-	530.0	-	NA	21	0
HDPE	-	-	147.8	-	NA	6	0
LDPE	-	NA	1,589.9	-	NA	62	0
PET	-	-	187.0	-	NA	7	0
LLDPE	-	NA	454.7	-	NA	18	0
Corrugated Containers	-	-	152.7	-	NA	227	0
Magazines/third-class mail	-	-	265.1	-	NA	37	0
Newspaper	-	-	468.3	-	NA	(226)	0
Office Paper	-	-	685.0	-	NA	2,544	0
Phonebooks	-	-	22.6	-	NA	(11)	0
Dimensional Lumber	-	-	5,400.5	-	NA	400	0
Food Scraps	-	NA	5,768.3	-	-	8,228	0
Yard Trimmings	-	NA	8,224.9	-	-	1,658	0
Grass	-	NA	1,417.1	-	-	730	0
Branches	-	NA	230.3	-	-	17	0
Mixed Paper (general)	NA	-	4,983.8	-	NA	6,737	0
Mixed Metals	NA	-	2,536.6	-	NA	98	0
Mixed Plastics	NA	-	1,034.8	-	NA	40	0
Mixed Organics	NA	NA	3,169.0	-	-	2,618	0
Mixed MSW	NA	NA	1,835.8	-	NA	5,683	0
Carpet	-	-	1,204.1	-	NA	47	0
Personal Computers	-	-	202.6	-	NA	8	0
Clay Bricks	-	NA	1,179.6	NA	NA	46	0
Concrete	NA	-	452.8	NA	NA	18	0
Fly Ash	NA	-	47.3	NA	NA	2	0
Tires	-	-	215.7	-	NA	8	0
Asphalt Concrete	-	-	1,617.4	NA	NA	63	0
Asphalt Shingles	-	-	1,050.9	-	NA	41	0
Drywall	-	-	2,639.4	NA	NA	334	0
Fiberglass Insulation	-	NA	830.7	NA	NA	32	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0

Total Change in GHG Emissions ($MTCO_2E$): -

Note: a negative value (i.e., a value in parentheses) indicates an emission reduction; a positive value indicates an emission increase.

This is equivalent to…

Removing annual emissions from	-	Passenger Vehicles
Conserving	-	Gallons of Gasoline
Conserving	-	Cylinders of Propane Used for Home Barbeques
Conserving	-	Railway Cars of Coal
	0.00000%	Annual CO_2 emissions from the U.S. transportation sector
	0.00000%	Annual CO_2 emissions from the U.S. electricity sector

a) For explanation of methodology, see the EPA report:
Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks (EPA530-R-06-004)
-- available on the Internet at http://epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf (5.6 Mb PDF file).

b) Emissions estimates provided by this model are intended to support voluntary GHG measurement and reporting initiatives.

c) The GHG emissions results estimated in WARM indicate the full life-cycle benefits waste management alternatives. Due to the timing of the GHG emissions from the waste management pathways, (e.g., avoided landfilling and increased recycling), the actual GHG implications may accrue over the long-term. Therefore, one should not interpret the GHG emissions implications as occurring all in one year, but rather through time.

ersion 12

Waste Reduction Model (WARM) -- Inputs

Use this worksheet to describe the baseline and alternative MSW management scenarios that you want to compare. The blue shaded areas indicate where you need to enter information.

1. Describe the baseline generation and management for the MSW materials listed below. If the material is not generated in your community or you do not want to analyze it, leave it blank or enter 0. Make sure that the total quantity generated equals the total quantity managed.

2. Describe the alternative management scenario for the MSW materials generated in the baseline. Any decrease in generation should be entered in the Source Reduction column. Any increase in generation should be entered in the Source Reduction column as a negative value. (Make sure that the total quantity generated equals the total quantity managed.)

Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Generated	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted
Aluminum Cans		45		NA	44.8			45		NA
Aluminum Ingot		79		NA	78.9			79		NA
Steel Cans		241		NA	240.9			241		NA
Copper Wire		751		NA	750.9			751		NA
Glass		530		NA	530.0			530		NA
HDPE		148		NA	147.8			148		NA
LDPE	NA	1,590		NA	1589.9		NA	1,590		NA
PET		187		NA	187.0			187		NA
LLDPE	NA	455		NA	454.7		NA	455		NA
PP	NA	-		NA	0.0		NA	-		NA
PS	NA	-		NA	0.0		NA	-		NA
PVC	NA	-		NA	0.0		NA	-		NA
PLA	NA	-			0.0		NA	-		
Corrugated Containers		153		NA	152.7			153		NA
Magazines/Third-class Mail		265		NA	265.1			265		NA
Newspaper		468		NA	468.3			468		NA
Office Paper		685		NA	685.0			685		NA
Phonebooks		23		NA	22.6			23		NA
Textbooks		-		NA	0.0			-		NA
Dimensional Lumber		5,400		NA	5400.5			5,400		NA
Medium-density Fiberboard		-		NA	0.0			-		NA
Food Scraps	NA	5,768			5768.3		NA	5,768		
Yard Trimmings	NA	8,225			8224.9		NA	8,225		
Grass	NA	1,417			1417.1		NA	1,417		
Leaves	NA	-			0.0		NA	-		
Branches	NA	230			230.3		NA	230		
Mixed Paper (general)		4,984		NA	4983.8	NA		4,984		NA
Mixed Paper (primarily residential)		-		NA	0.0	NA		-		NA
Mixed Paper (primarily from offices)		-		NA	0.0	NA		-		NA
Mixed Metals		2,537		NA	2536.6	NA		2,537		NA
Mixed Plastics		1,035		NA	1034.8	NA		1,035		NA
Mixed Recyclables		-		NA	0.0	NA		-		NA
Mixed Organics	NA	3,169			3169.0	NA	NA	3,169		
Mixed MSW	NA	1,836		NA	1835.8	NA	NA	1,836		NA
Carpet		1,204		NA	1204.1			1,204		NA
Personal Computers		203		NA	202.6			203		NA
Clay Bricks	NA	1,180	NA	NA	1179.6		NA	1,180	NA	NA
Concrete [1]		453	NA	NA	452.8	NA		453	NA	NA
Fly Ash [2]		47	NA	NA	47.3	NA		47	NA	NA
Tires [3]		216		NA	215.7			216		NA
Asphalt Concrete		1,617	NA	NA	1617.4			1,617	NA	NA
Asphalt Shingles		1,051		NA	1050.9			1,051		NA
Drywall		2,639	NA	NA	2639.4			2,639	NA	NA
Fiberglass Insulation	NA	831	NA	NA	830.7		NA	831	NA	NA
Vinyl Flooring	NA	-		NA	0.0		NA	-		NA
Wood Flooring	NA	-		NA	0.0		NA	-		NA

Please enter data in short tons (1 short ton = 2,000 lbs.)

Please refer to the User's Guide if you need assistance completing this table.

[1] Recycled concrete used as aggregate in the production of new concrete

[2] Recycled fly ash is utilized to displace portland cement in concrete production.

[3] Recycling tires is defined in this analysis as using tires for crumb rubber applications and tire-derived aggregate uses in civil engineering applications

3. In order to account for the avoided electricity-related emissions in the landfilling and combustion pathways, EPA assigns the appropriate regional "marginal" electricity grid mix emission factor based on your location. Select state for which you are conducting this analysis.

Please select state or select national average:	California
Region Location:	Pacific

4. To estimate the benefits from source reduction, EPA usually assumes that the material that is source reduced would have been manufactured from the current mix of virgin and recycled inputs. However, you may choose to estimate the emission reductions from source reduction under the assumption that the material would have been manufactured from 100% virgin inputs in order to obtain an upper bound estimate of the benefits from source reduction. Select which assumption you want to use in the analysis. Note that for materials for which information on the share of recycled inputs used in production is unavailable or is not a common practice; EPA assumes that the current mix is comprised of 100% virgin inputs. Consequently, the source reduction benefits of both the "Current mix" and "100% virgin" inputs are the same.

- (●) Current Mix
- ( ) 100% Virgin

5a. The emissions from landfilling depends on whether the landfill where your waste is disposed has a landfill gas (LFG) control system. If you do not know whether your landfill has LFG control, select "National Average" to calculate emissions based on the estimated proportions of landfills with LFG control in 2009 and go to question 7. If your landfill does not have a LFG system, select "No LFG Recovery" and go to question 7. If a LFG system is in place at your landfill, select "LFG Recovery" and click one of the indented buttons in 5b to indicate whether LFG is recovered for energy or flared.

- ( ) National Average
- ( ) LFG Recovery
- (●) No LFG Recovery

5b. If your landfill has gas recovery, does it recover the methane for energy or flare it?

- ( ) Recover for energy
- ( ) Flare
- (●) Not Applicable

6a. Which of the following moisture conditions and associated bulk MSW decay rate (k) most accurately describes the average conditions at the landfill? The decay rates, also referred to as k values, describe the rate of change per year (yr-1) for the decomposition of organic waste in landfills. A higher average decay rate means that waste decomposes faster in the landfill. Dry landfills typically receive less than 25 inches of rain annually while Average landfills receive more than 25 inches of rain annually. Wet landfills are assumed to represent a landfill that receives relatively high water infiltration. Bioreactor landfills include landfills to which water is added until the moisture content reaches 40 percent moisture on a wet weight basis.

- ( ) Dry (k=0.02)
- (●) Average (k = 0.04) - DEFAULT
- ( ) Wet (k = 0.08)
- ( ) Bioreactor (k = 0.12)

6b. For landfills that recover landfill gas, the landfill gas collection efficiency will vary throughout the life of the landfill. Based on literature and field study measurements for different landfill scenarios, the typical operation landfills represent the current practice at most landfills that capture landfill gas in the United States. The worst-cast collection represent landfills that are just barely in compliance with EPA's New Source Performance Standards (NSPS). The aggressive gas collection best-case recovery scenario for bioreactor landfills, where conditions are controlled in order to achieve decomposition as quickly as possible and to collect gas aggressively.

- (●) Typical operation - DEFAULT
- ( ) Worst-case collection
- ( ) Aggressive gas collection

	Landfill gas collection efficiency (%) assumptions
Typical	*Years 0-2: 0%; Year 3: 50%; Year 4-7: 75%; Years 8-100: 95%*
Worst-case	*Years 0-5: 0%; Years 6-7: 75%; Years 8-100: 95%*
Aggressive	*Year 1: 25%; Years 2-3: 50%; Years 4-7: 75%; Years 8-100: 95%*

7a. Emissions that occur during transport of materials to the management facility are included in this model. You may use default transport distances, indicated in the table below, or provide information on the transport distances for the various MSW management options.

- (●) Use Default Distances
- ( ) Provide Information

7b. If you have chosen to provide information, please fill in the table below. Distances should be from the curb to the landfill, combustor, or material recovery facility (MRF).
***Please note that if you chose to provide information, you must provide distances for both the baseline and the alternative scenarios.**

Management Option	Default Distance (Miles)	Distance (Miles)
Landfill	20	
Combustion	20	
Recycling	20	
Composting	20	

8. If you wish to personalize your results report, input your name & organization, and also specify the project period corresponding to the data you entered above.

Name	Danville 2008
Organization	TPC/DC&E

Project Period	From		to	

Congratulations! You have finished all the inputs.
A summary of your results awaits you on the sheet(s) titled "Summary Report."
For more detailed analyses of GHG emissions, see the sheet(s) titled "Analysis Results."

WARM User's Guide

Calculating Greenhouse Gas Emissions with the Excel© Version of the Waste Reduction Model

WHAT IS THE WASTE REDUCTION MODEL?

The Waste Reduction Model (WARM) was created by the U.S. Environmental Protection Agency (EPA) to help solid waste planners and organizations estimate greenhouse gas (GHG) emission reductions from several different waste management practices. WARM is available in a Web-based calculator format and as a Microsoft Excel© spreadsheet. Both versions of WARM are available on EPA's Web site at http://www.epa.gov/warm.

WARM calculates GHG emissions for baseline and alternative waste management practices, including source reduction, recycling, combustion, composting, and landfilling. The model calculates emissions in metric tons of carbon dioxide equivalent ($MTCO_2E$) and metric tons of carbon equivalent (MTCE) across a wide range of material types commonly found in municipal solid waste (MSW).

The user can construct various scenarios by simply entering data on the amount of waste handled by material type and by management practice. WARM then automatically applies material-specific emission factors for each management practice to calculate the GHG emissions and energy savings of each scenario. Several key inputs, such as landfill gas recovery practices and transportation distances to MSW facilities, can be modified by the user.

The GHG emission factors were developed following a life-cycle assessment methodology using estimation techniques developed for national inventories of GHG emissions. The methodologies used to develop these emission factors are described in detail in the background reports available for download at http://epa.gov/climatechange/wycd/waste/SWMGHGreport.html. This version also reflects revised data on the average recycled content values for materials available in the marketplace, and the EPA's latest MSW characterization report *Municipal Solid Waste in the United States: 2010 Facts and Figures*.

WHO SHOULD USE WARM?

WARM was developed for solid waste managers (from state and local governments and other organizations) who want to calculate the GHG emissions associated with different waste management options. Emissions estimates provided by WARM are intended to support voluntary GHG measurement and reporting initiatives. These initiatives include waste management components of state and local climate change action plans, and other waste management projects for which an understanding of GHG emissions is desired.

USING THE EXCEL© VERSION OF WARM

Before using WARM, you first need to gather data on your baseline waste management practices and an alternative scenario. In order to effectively use the tool, users should know how many tons of waste you manage (or would manage) for a given time period under each scenario by material type and by management practice. Both models allow you to customize your results based on project-specific landfill gas recovery practices and transportation distances. Note that you may use default values if you are unsure of landfill gas recovery practices and/or transportation distances.

Instructions:

-- Click on the "Analysis Inputs" tab at the bottom center of the screen to open the input sheet. Follow the instructions for Steps 1 and 2. This involves filling in the tables describing your baseline and proposed alternative waste management scenarios. The "mixed" material types are defined as the following:

Mixed Metals: Aluminum Cans 39%, Steel Cans 61%
Mixed Plastics: HDPE 51%, PET 49%.
Mixed Recyclables: Aluminum Cans 1.4%, Steel Cans 3.1%, Glass 6.4%, HDPE 1.2%, LDPE 0.9%, PET 1.1%, Corrugated Containers 50.4%, Magazines/Third-class Mail 7.6%, Newspaper 14%, Office Paper 8.1%, Phonebooks 0.5%, Textbooks 0.7%, Dimensional Lumber 4.7%
Mixed Organics: Food Scraps 51%, Yard Trimmings 49%.
Mixed MSW- represents the entire municipal solid waste stream as disposed.

-- Fill in the data requested in Steps 3–7. WARM will use the answers to these questions to customize GHG estimates to reflect your waste management situation and location. For example, you are asked for data on transportation distances and on your landfill gas recovery systems, if applicable. If the requested data is not available, WARM will use the national average defaults.

-- Step 8 allows you to customize your report, with your name, organization, and project period.

-- Once you have completed Steps 1–8 on the “Analysis Inputs” sheet, WARM will calculate the GHG emissions and energy attributable to the baseline and alternative waste management scenarios you have specified. Emissions and energy calculations are presented on separate output sheets, as described below. From the “Analysis Inputs” sheet, click on a tab at the bottom of the screen for the results sheet you want to view first.

-- The “Summary Report” sheet provides a concise report of GHG emissions or energy results from the baseline and alternative waste management scenarios, as well as an estimate of net emissions or energy.

-- The “Analysis Results” sheet shows GHG emissions or energy results for each scenario in the units selected. You can compare the total impact of the baseline and alternative scenarios, or, if you want more detail, you can scroll down to view GHG emissions or energy results by material type and management practice. The bottom table shows the relative emissions or energy difference between the alternative and baseline scenarios for each material type and management pathway.

USING THE ONLINE VERSION OF WARM
The online WARM is a simpler version of this Excel© version, with fewer options for customization (e.g., it does not include options for altering the landfill characteristics or decay rates). You can access the online WARM at the following website: http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_Form.html. The website also includes a User's Guide that gives detailed instructions for using both the online and Excel© version of WARM.

ASSISTANCE
If you need additional assistance with using WARM, please email orcrWARMquestions@epa.gov.

WARM OUTPUTs

2035		TONS MSW		TONS ADC	TOTAL		MTons CO2e
		42,506		14,225	56,731		33,739
	MSW	TONS MSW	ADC	TONS ADC		TOTAL	MTons CO2e With 75% Landfill Recovery
Inputs For WARM	%	42,506	%	14,225	56,731	%	8,435
Aluminum Cans	0.1%	51		0	51	0.1%	
Aluminum Ingot	0.2%	90		0	90	0.2%	
Steel Cans	0.6%	275		0	275	0.5%	
Copper Wire	2.0%	858		0	858	1.5%	
Glass	1.4%	605		0	605	1.1%	
HDPE	0.4%	169		0	169	0.3%	
LDPE	4.3%	1,816		0	1,816	3.2%	
PET	0.5%	214		0	214	0.4%	
LLDPE	1.2%	519		0	519	0.9%	
PP	0.0%	0		0	0	0.0%	
PS	0.0%	0		0	0	0.0%	
PVC	0.0%	0		0	0	0.0%	
PLA	0.0%	0		0	0	0.0%	
Corrugated Containers	0.4%	174		0	174	0.3%	
Magazines/Third-class Mail	0.7%	303		0	303	0.5%	
Newspaper	1.3%	535		0	535	0.9%	
Office Paper	1.8%	783		0	783	1.4%	
Phonebooks	0.1%	26		0	26	0.0%	
Textbooks	0.0%	0		0	0	0.0%	
Dimensional Lumber	14.5%	6,169		0	6,169	10.9%	
Medium-density Fiberboard	0.0%	0		0	0	0.0%	
Food Scraps	15.5%	6,590		0	6,590	11.6%	
Yard Trimmings	2.7%	1,133	58.1%	8,263	9,396	16.6%	
Grass	3.8%	1,619		0	1,619	2.9%	
Leaves	0.0%	0		0	0	0.0%	
Branches	0.6%	263		0	263	0.5%	
Mixed Paper (general)	13.4%	5,693		0	5,693	10.0%	
Mixed Paper (primarily residential)	0.0%	0		0	0	0.0%	
Mixed Paper (primarily from offices)	0.0%	0		0	0	0.0%	
Mixed Metals	1.6%	662	15.7%	2,236	2,898	5.1%	
Mixed Plastics	2.8%	1,182		0	1,182	2.1%	
Mixed Recyclables	0.0%	0		0	0	0.0%	
Mixed Organics	4.4%	1,862	12.4%	1,758	3,620	6.4%	
Mixed MSW	4.8%	2,030	0.5%	67	2,097	3.7%	
Carpet	3.2%	1,376		0	1,376	2.4%	
Personal Computers	0.5%	231		0	231	0.4%	
Clay Bricks	3.2%	1,348		0	1,348	2.4%	
Concrete	1.2%	517		0	517	0.9%	
Fly Ash	0.1%	44	0.1%	10	54	0.1%	
Tires	0.2%	64	1.3%	182	246	0.4%	
Asphalt Concrete	0.3%	139	12.0%	1,709	1,848	3.3%	
Asphalt Shingles	2.8%	1,201		0	1,201	2.1%	
Drywall	7.1%	3,015		0	3,015	5.3%	
Fiberglass Insulation	2.2%	949		0	949	1.7%	
Vinyl Flooring	0.0%	0		0	0	0.0%	
Wood Flooring	0.0%	0		0	0	0.0%	
	100%	42,506	100.0%	14,225	56,731	100.0%	

Assumes a 75 percent of fugitive GHG emissions are captured within the landfill's Landfill Gas Capture System with a landfill gas capture efficiency of 75%. The Landfill gas capture efficiency is based on the California Air Resources Board's (CARB) Local Government Operations Protocol (LGOP), Version 1.1. Because the landfill gas captured is not under the jurisdiction of Danville, the landfill gas emissions from the capture system are not included in Danville's inventory. Only fugitive sources of GHG emissions from landfill are included.

Does not include tonnage from alternative daily cover (ADC) disposed of in Danville.

WARM OUTPUTs

2035		TONS MSW		TONS ADC	TOTAL		MTons CO2e
		22,442		5,356	27,798		17,285
	MSW	TONS MSW	ADC	TONS ADC		TOTAL	MTons CO2e With 75% Landfill Recovery
Inputs For WARM	%	22,442	%	5,356	27,798	%	4,321
Aluminum Cans	0.1%	27		0	27	0.1%	
Aluminum Ingot	0.2%	48		0	48	0.2%	
Steel Cans	0.6%	145		0	145	0.5%	
Copper Wire	2.0%	453		0	453	1.6%	
Glass	1.4%	320		0	320	1.2%	
HDPE	0.4%	89		0	89	0.3%	
LDPE	4.3%	959		0	959	3.4%	
PET	0.5%	113		0	113	0.4%	
LLDPE	1.2%	274		0	274	1.0%	
PP	0.0%	0		0	0	0.0%	
PS	0.0%	0		0	0	0.0%	
PVC	0.0%	0		0	0	0.0%	
PLA	0.0%	0		0	0	0.0%	
Corrugated Containers	0.4%	92		0	92	0.3%	
Magazines/Third-class Mail	0.7%	160		0	160	0.6%	
Newspaper	1.3%	282		0	282	1.0%	
Office Paper	1.8%	413		0	413	1.5%	
Phonebooks	0.1%	14		0	14	0.0%	
Textbooks	0.0%	0		0	0	0.0%	
Dimensional Lumber	14.5%	3,257		0	3,257	11.7%	
Medium-density Fiberboard	0.0%	0		0	0	0.0%	
Food Scraps	15.5%	3,479		0	3,479	12.5%	
Yard Trimmings	2.7%	598	58.1%	3,111	3,709	13.3%	
Grass	3.8%	855		0	855	3.1%	
Leaves	0.0%	0		0	0	0.0%	
Branches	0.6%	139		0	139	0.5%	
Mixed Paper (general)	13.4%	3,006		0	3,006	10.8%	
Mixed Paper (primarily residential)	0.0%	0		0	0	0.0%	
Mixed Paper (primarily from offices)	0.0%	0		0	0	0.0%	
Mixed Metals	1.6%	350	15.7%	842	1,191	4.3%	
Mixed Plastics	2.8%	624		0	624	2.2%	
Mixed Recyclables	0.0%	0		0	0	0.0%	
Mixed Organics	4.4%	983	12.4%	662	1,645	5.9%	
Mixed MSW	4.8%	1,072	0.5%	25	1,097	3.9%	
Carpet	3.2%	726		0	726	2.6%	
Personal Computers	0.5%	122		0	122	0.4%	
Clay Bricks	3.2%	711		0	711	2.6%	
Concrete	1.2%	273		0	273	1.0%	
Fly Ash	0.1%	23	0.1%	4	27	0.1%	
Tires	0.2%	34	1.3%	69	103	0.4%	
Asphalt Concrete	0.3%	73	12.0%	643	717	2.6%	
Asphalt Shingles	2.8%	634		0	634	2.3%	
Drywall	7.1%	1,592		0	1,592	5.7%	
Fiberglass Insulation	2.2%	501		0	501	1.8%	
Vinyl Flooring	0.0%	0		0	0	0.0%	
Wood Flooring	0.0%	0		0	0	0.0%	
	100%	22,442	100.0%	5,356	27,798	100.0%	

Assumes a 75 percent of fugitive GHG emissions are captured within the landfill's Landfill Gas Capture System with a landfill gas capture efficiency of 75%. The Landfill gas capture efficiency is based on the California Air Resources Board's (CARB) Local Government Operations Protocol (LGOP), Version 1.1. Because the landfill gas captured is not under the jurisdiction of Danville, the landfill gas emissions from the capture system are not included in Danville's inventory. Only fugitive sources of GHG emissions from landfill are included.

Does not include tonnage from alternative daily cover (ADC) disposed of in Danville.

WARM OUTPUTs

2020		TONS MSW		TONS ADC	TOTAL		MTons CO2e
		39,563		13,240	52,803		31,403
	MSW	TONS MSW	ADC	TONS ADC		TOTAL	MTons CO2e With 75% Landfill Recovery
Inputs For WARM	%	39,563	%	13,240	52,803	%	7,851
Aluminum Cans	0.1%	48		0	48	0.1%	
Aluminum Ingot	0.2%	84		0	84	0.2%	
Steel Cans	0.6%	256		0	256	0.5%	
Copper Wire	2.0%	798		0	798	1.5%	
Glass	1.4%	564		0	564	1.1%	
HDPE	0.4%	157		0	157	0.3%	
LDPE	4.3%	1,691		0	1,691	3.2%	
PET	0.5%	199		0	199	0.4%	
LLDPE	1.2%	483		0	483	0.9%	
PP	0.0%	0		0	0	0.0%	
PS	0.0%	0		0	0	0.0%	
PVC	0.0%	0		0	0	0.0%	
PLA	0.0%	0		0	0	0.0%	
Corrugated Containers	0.4%	162		0	162	0.3%	
Magazines/Third-class Mail	0.7%	282		0	282	0.5%	
Newspaper	1.3%	498		0	498	0.9%	
Office Paper	1.8%	728		0	728	1.4%	
Phonebooks	0.1%	24		0	24	0.0%	
Textbooks	0.0%	0		0	0	0.0%	
Dimensional Lumber	14.5%	5,742		0	5,742	10.9%	
Medium-density Fiberboard	0.0%	0		0	0	0.0%	
Food Scraps	15.5%	6,133		0	6,133	11.6%	
Yard Trimmings	2.7%	1,055	58.1%	7,691	8,745	16.6%	
Grass	3.8%	1,507		0	1,507	2.9%	
Leaves	0.0%	0		0	0	0.0%	
Branches	0.6%	245		0	245	0.5%	
Mixed Paper (general)	13.4%	5,299		0	5,299	10.0%	
Mixed Paper (primarily residential)	0.0%	0		0	0	0.0%	
Mixed Paper (primarily from offices)	0.0%	0		0	0	0.0%	
Mixed Metals	1.6%	616	15.7%	2,081	2,697	5.1%	
Mixed Plastics	2.8%	1,100		0	1,100	2.1%	
Mixed Recyclables	0.0%	0		0	0	0.0%	
Mixed Organics	4.4%	1,733	12.4%	1,636	3,370	6.4%	
Mixed MSW	4.8%	1,890	0.5%	62	1,952	3.7%	
Carpet	3.2%	1,280		0	1,280	2.4%	
Personal Computers	0.5%	215		0	215	0.4%	
Clay Bricks	3.2%	1,254		0	1,254	2.4%	
Concrete	1.2%	481		0	481	0.9%	
Fly Ash	0.1%	41	0.1%	10	50	0.1%	
Tires	0.2%	60	1.3%	169	229	0.4%	
Asphalt Concrete	0.3%	129	12.0%	1,590	1,720	3.3%	
Asphalt Shingles	2.8%	1,117		0	1,117	2.1%	
Drywall	7.1%	2,806		0	2,806	5.3%	
Fiberglass Insulation	2.2%	883		0	883	1.7%	
Vinyl Flooring	0.0%	0		0	0	0.0%	
Wood Flooring	0.0%	0		0	0	0.0%	
	100%	39,563	100.0%	13,240	52,803	100.0%	

Assumes a 75 percent of fugitive GHG emissions are captured within the landfill's Landfill Gas Capture System with a landfill gas capture efficiency of 75%. The Landfill gas capture efficiency is based on the California Air Resources Board's (CARB) Local Government Operations Protocol (LGOP), Version 1.1. Because the landfill gas captured is not under the jurisdiction of Danville, the landfill gas emissions from the capture system are not included in Danville's inventory. Only fugitive sources of GHG emissions from landfill are included.

Does not include tonnage from alternative daily cover (ADC) disposed of in Danville.

WARM OUTPUTs

2020		TONS MSW		TONS ADC	TOTAL		MTons CO2e
		30,234		8,776	39,010		23,669
	MSW	TONS MSW	ADC	TONS ADC		TOTAL	MTons CO2e With 75% Landfill Recovery
Inputs For WARM	%	30,234	%	8,776	39,010	%	5,917
Aluminum Cans	0.1%	36		0	36	0.1%	
Aluminum Ingot	0.2%	64		0	64	0.2%	
Steel Cans	0.6%	196		0	196	0.5%	
Copper Wire	2.0%	610		0	610	1.6%	
Glass	1.4%	431		0	431	1.1%	
HDPE	0.4%	120		0	120	0.3%	
LDPE	4.3%	1,292		0	1,292	3.3%	
PET	0.5%	152		0	152	0.4%	
LLDPE	1.2%	369		0	369	0.9%	
PP	0.0%	0		0	0	0.0%	
PS	0.0%	0		0	0	0.0%	
PVC	0.0%	0		0	0	0.0%	
PLA	0.0%	0		0	0	0.0%	
Corrugated Containers	0.4%	124		0	124	0.3%	
Magazines/Third-class Mail	0.7%	215		0	215	0.6%	
Newspaper	1.3%	381		0	381	1.0%	
Office Paper	1.8%	557		0	557	1.4%	
Phonebooks	0.1%	18		0	18	0.0%	
Textbooks	0.0%	0		0	0	0.0%	
Dimensional Lumber	14.5%	4,388		0	4,388	11.2%	
Medium-density Fiberboard	0.0%	0		0	0	0.0%	
Food Scraps	15.5%	4,687		0	4,687	12.0%	
Yard Trimmings	2.7%	806	58.1%	5,098	5,904	15.1%	
Grass	3.8%	1,151		0	1,151	3.0%	
Leaves	0.0%	0		0	0	0.0%	
Branches	0.6%	187		0	187	0.5%	
Mixed Paper (general)	13.4%	4,050		0	4,050	10.4%	
Mixed Paper (primarily residential)	0.0%	0		0	0	0.0%	
Mixed Paper (primarily from offices)	0.0%	0		0	0	0.0%	
Mixed Metals	1.6%	471	15.7%	1,379	1,850	4.7%	
Mixed Plastics	2.8%	841		0	841	2.2%	
Mixed Recyclables	0.0%	0		0	0	0.0%	
Mixed Organics	4.4%	1,324	12.4%	1,085	2,409	6.2%	
Mixed MSW	4.8%	1,444	0.5%	41	1,485	3.8%	
Carpet	3.2%	978		0	978	2.5%	
Personal Computers	0.5%	165		0	165	0.4%	
Clay Bricks	3.2%	958		0	958	2.5%	
Concrete	1.2%	368		0	368	0.9%	
Fly Ash	0.1%	31	0.1%	6	37	0.1%	
Tires	0.2%	46	1.3%	112	158	0.4%	
Asphalt Concrete	0.3%	99	12.0%	1,054	1,153	3.0%	
Asphalt Shingles	2.8%	854		0	854	2.2%	
Drywall	7.1%	2,145		0	2,145	5.5%	
Fiberglass Insulation	2.2%	675		0	675	1.7%	
Vinyl Flooring	0.0%	0		0	0	0.0%	
Wood Flooring	0.0%	0		0	0	0.0%	
	100%	30,234	100.0%	8,776	39,010	100.0%	

Assumes a 75 percent of fugitive GHG emissions are captured within the landfill's Landfill Gas Capture System with a landfill gas capture efficiency of 75%. The Landfill gas capture efficiency is based on the California Air Resources Board's (CARB) Local Government Operations Protocol (LGOP), Version 1.1. Because the landfill gas captured is not under the jurisdiction of Danville, the landfill gas emissions from the capture system are not included in Danville's inventory. Only fugitive sources of GHG emissions from landfill are included.

Does not include tonnage from alternative daily cover (ADC) disposed of in Danville.

Water and Wastewater

	2008 avg	2020	2035	2008 avg	2020	2035
	Cubic Feet Per Day			Million Gallons Per Year		
Water	7,061,933	7,508,783	8,067,346	19,282	20,502	22,027
Wastewater	3,177,870	3,378,952	3,630,306	8,677	9,226	9,912

	2008 avg	2020	2035	2008 avg	2020	2035
	Acre-Feet/Year			Liters Per/Year		
Water	59,174	62,918	67,598	72,981,716,156	77,599,698,210	83,372,180,946
Wastewater	26,628	28,313	30,419	32,841,772,270	34,919,864,195	37,517,481,426

Wastewater use is estimated based on total water use. All indoor water useage is assumed to be treated as wastewater. Assumes 55% of water use is indoor water use and 45% is outdoor water use. Indoor/Outdoor ratios based on the California Department of Water Resources's 20x2020 Water Conservation Plan for the San Francisco Bay Hydrologic Region.

	2008	2020	2035	Adjusted 2020	Adjusted 2035
GHG Emissions	MTons/Year				
Energy	22,179	23,582	25,337	12,051	12,948
Fugitive	2,036	2,165	2,326	2,165	2,326
Total Water/Wastewater	24,215	25,747	27,663	14,216	15,274

General Conversion Factors

Cubic Feet to Gallons	7.480519	
killowatt hrs to megawatt hrs	0.001	
million gallons to AF	0.3259	325851.429
gallons to Liters	3.785	
lbs to Tons	2000	
Tons to Mton	0.9071847	

Source: California Air Resources Board (CARB). 2010. Local Government Operations Protocol. Version 1.1. Appendix F, Standard Conversion Factors

Wastewater - Fugitive Emissions

WASTEWATER: Wastewater in Danville is collected, transported, and treated by the Central Contra Costa Sanitary District (CCCSD). The Martinez CCCSD Treatment Plan is powered by a cogeneration facility and treats and average of 45 million gallons of wastewater per day (16,425 mgy). The majority of wastewater is treated to secondary levels and then discharged into Suison Bay. Approximately 600 million gallons per year (3.7%) are treated to tertiary levels and redistributed as recycled water.

Fugitive Emissions from Wastewater Associated with Aerobic and Anaerobic Process

CH4 - Microorganisms can biodegrade soluble organic material in wastewater under aerobic (presense of oxygen) or anaerobic (absense of oxygen) conditions. Aneorbic conditions result in the production of CH4.

N2O - Treatment of domestc wastwater during both nitrification and denitrification of the nitrogen present leads to the formation of N2O, usually in the form of urea, ammonia, and proteins. These compounds are converted to nitrate through the aerobic process of nitrification. Denitrification occus under anoxic conditions (without free oxygen), and incolves the biological conversion of nitrate into dinitrogen. N2O can be an intermediate product of both processes, but more often is associated with denitrification.

Notes: Waste Discharge facilities in compliance with the United States Environmental Protection Agency's Clean Water Standards do not typically result in CH4 emissions. However, poorly-operated aerobic wastewater treatment systems can result in the generation of CH4. Because wastewater treatment systems are assumed to operate in compliance with state and federal laws pertaining to water quality, CH4 emissions from centralized aerobic treatments are not included in the inventory.

Fugitive Emissions - Process Emissions from WWTP with Nitrification/Denitrification

LGOP Version 1.1. Equation 10.9.

N2O = Wastewater x 10^-6 x Nload x EF effluent x 10^3

	2008	2020	2035
wastewater (Liters)=	32,841,772,270	34,919,864,195	37,517,481,426
10^-6 =	1.00E-06	conversion factor; kg/mg	
N Load	40.00	mg/L of wastewater	USEPA 2008
EF effluent	0.01	kg//N2O/kg N	
10^-3 =	1.00E-03	conversion factor: MTons/kg	

	2008	2020	2035
		MTons	
N2O	6.568	6.984	7.503
CO2e =	2,036	2,165	2,326

Source: California Air Resources Board (CARB). 2010, May. Local Government Operations Protocol (LGOP), Version 1.1. The LGOP protocol provides default values for all the terms except the Nitrogen Load, which is assumed to be 40 mg of N per Liter of wastewater effluent based on USEPA methodology outlined in the CalEEMod program manual. South Coast Air Quality Management District (SCAQMD). 2011. California Emissions Estimator Model (CalEEMod), Version 2011.1.1. User's Manual. USEPA. 2008. Page 8-12. USEPA cites Metcalf & Eddy, Inc., 1991, “Wastewater Engineering: Treatment Disposal, and Reuse,” 3rd Ed. McGraw Hill Publishing.

Water and Wastewater - Embodied Energy (electricity)

East Bay Municipal Utility District (EBMUD)

Water Supply and Conveyance	Water Treatement	Water Distribution	Total Water	Wastewater Treatment
		kWhr/million gallons		
2,117	111	1,272	3,500	1,911

Source: California Energy Commission (CEC). 2006, December. Refining Estimates of Water-Related Energy Use in California. CEC-500-2006-118. Prepared by Navigant Consulting, Inc. Based on the electricity use for Northern California

Pacific Gas & Electric - Emission Factors

	Intensity factor				CO_2e
	lbs CO_2/MWH	MTons CO_2/MWh	CH4 MTons/MWH	N2O MTons/MWH	MTons/MWh
2005	489	0.222	0.000013	0.000005	0.224
2006	456	0.207	0.000013	0.000005	0.209
2007	636	0.288	0.000013	0.000005	0.290
2008	641	0.291	0.000013	0.000005	0.293
2009	575	0.261	0.000013	0.000005	0.263
2010	559	0.254	0.000013	0.000005	0.256
rage (2006-2008) based on PG&E	578	0.262	0.000013	0.000005	**0.264**
2020 (CO_2)	290	0.133	0.000013	0.000005	**0.135**
Source: Pacific Gas & Electric (PG&E). 2011, April. Greenhouse Gas Emissions Factors Info Sheet. *CO2 intentsiy for 2010 and earlier is based on PG&E's third-party-verified GHG inventory submitted to the California Climate Action Registry (CCAR) (2003-2008) or The Climate Registry (TCR).			Source: CH_4 and N_2O intensity based on California E-Grid data (CH_4 = 0.029 lbs/MWH; N_2O = 0.011 lbs/MWH)		

Note: The 2020 emissions rate is estimated by PG&E. It includes reductions from 33% Renewable Portfolio Standard (RPS), Cap-and-Trade, and other regulatory reductions for High Global Warming Potential (HGWP) gases such as reductions of SF_6.

2011 GHG Emissions from Water Use - Purchased Energy

Energy Associated with Water Use	2008 MwH/Year	2020	2035
Water	67,486	71,757	77,094
Wastewater	16,581	17,631	18,942
Total Water/Wastewater	84,068	89,387	96,037

Indirect GHG Emissions from Energy Associated with Water	2008 MTons/Year	2020	2035
Water	17,804	18,931	20,339
Wastewater	4,375	4,651	4,997
Total Water/Wastewater	22,179	23,582	25,337

Adjusted Forecast - 2020 PG&E CO2 Intensity

Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. The California Air Resources Board (CARB) has now approved an even higher goal of 33 percent by 2020. Investor-owned utilities, such as PG&E are also required to participate in CARB's Cap-and-Trade program and reduce High Global Warming Potential (HGWP) gases, such as reductions of SF6.

Source: Pacific Gas & Electric (PG&E). 2011, April 8. Greenhouse Gas Emission Factors Info Sheet.
http://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

Indirect GHG Emissions from Energy Associated with Water	2008 MTons/Year	Adjusted 2020	Adjusted 2035
Water	17,804	9,674	10,394
Wastewater	4,375	2,377	2,554
Total Water/Wastewater	22,179	12,051	12,948
	Reductions	11,531	12,389

Local Water/Wastewater Measures

Local Measures that are Required Pursuant to the Water Efficient Landscape Ordinance (WELO) or California Building Code

WW-1 Require new development to use native plants or other appropriate non-invasive plants that are drought-tolerant.

WW-2 Implement a Water Efficient Landscape Ordinance with improved conservation programs and incentives for non-residential customers.

GHG reduction estimates are not quantified for these measures

Local Measures that Support EBMUD's Urban Water Management Plan to Achieve 20% Per Capita Water reductions.

The California Department of Water Resources adopted a plan to reduce per capita water use by 20 percent by 2020 in accordance with the Final 20X2020 Water Conservation Plan. New development is required to comply with the new Title 24 California Green Building Code (CALGreen) water efficiency provisions that mandate an improvement over existing plumbing and irrigation water efficiency. This efficiency corresponds with the 20X2020 goal to reduce per-capita water use by 20 percent.
Reductions from these measures are capped at the 20 percent per capita goal.

WW-3 For new development, require all water use and efficiency measures identified as voluntary in the California Green Building Standards Code, and consider more stringent targets. California Green Building Standards Code requirements include: 1) reduce indoor potable water use by 20 percent after meeting the Energy Policy Act of 1992 fixture performance requirements, and 2) reduce outdoor potable water use by 50 percent from a calibrated mid-summer baseline case, for example through irrigation efficiency, plant species, recycled wastewater, and captured rainwater. Establish Town requirements for discretionary projects regarding watering timing, water-efficient irrigation equipment, water-efficient fixtures, and offsetting demand so that there is no net increase in imported water use. Include clear parameters for integrating water conservation infrastructure and technologies, including low-flush toilets and low-flow showerheads. As appropriate, partner with local water conservation companies on the development and implementation of this measure.

WW-4 Adopt a water efficiency retrofit ordinance that requires upgrades as a condition of issuing permits for renovations or additions. Work with local water purveyors to achieve consistent standards and review and approval procedures for implementation.

WW-5 Work with EBMUD to adopt water conservation pricing, such as tiered rate structures, to encourage efficient water use. As part of this measure, the water districts would conduct the following: 1) Provide notices in each billing to accounts with water use budgets showing the relationship between the budget and actual consumption. 2) Encourage wholesale water suppliers to provide financial incentives to their retail water agency customers that encourage water conservation efforts. 2) Work with EBMUD to meter with commodity rates for all new connections, and retrofit existing connections. 3) To help monitor landscaping water use, create accounts with dedicated irrigation meters, or develop and implement a strategy targeting and marketing large landscape water use surveys to commercial/industrial/ institutional accounts with mixed-use meters.

WW-6 In collaboration with EBMUD, promote water audit programs that offer free water audits to single-family, multi-family, large landscape accounts, and commercial customers. Collaborate with purveyors to enact conservation programs for commercial, industrial, and institutional (CII) accounts and create programs to install ultra-low-flush toilets in facilities.

WW-7 Promote the use of reclaimed water (i.e., treated wastewater) and gray water for irrigation purposes consistent with the appropriate provisions of Title 22 and approval of the State Health Department. As part of this measure, conduct the following:
• Inventory potential non-potable uses of water for potential substitution by recycled and/or gray water.
• Collaborate with responsible agencies to encourage the use of recycled water where cost and energy efficiencies for its production, distribution and use are favorable.

WW-8 Develop a Non-Potable Water Master Plan, which covers the use of recycled water for non-potable uses. 1) Inventory potential non-potable uses of water for potential substitution by recycled water. 2) Assess associated energy/GHG tradeoffs versus non-recycled water supply. 3) Collaborate with responsible agencies to encourage the use of recycled water where cost and energy efficiencies for its production, distribution and use are favorable.

WW-9 Implement a public information and school education program to promote water conservation and its benefits in coordination with efforts of local water purveyors. Conduct public education and outreach to reduce watering of non-vegetated surfaces and promote the use of pervious paving materials.

	2020 w/20% Reduction	2035 w/20% Reduction	2020 w/20% Reduction	2035 w/20% Reduction
	Cubic Feet Per Day		Million Gallons Per Year	
Water	6,007,026	6,453,877	16,402	17,622
Wastewater	2,703,162	2,904,245	7,381	7,930

	2020 w/20% Reduction	2035 w/20% Reduction	2020 w/20% Reduction	2035 w/20% Reduction
	Acre-Feet/Year		Liters Per/Year	
Water	50,334	54,079	62,079,758,568	66,697,744,757
Wastewater	22,650	24,335	27,935,891,356	30,013,985,141

Wastewater use is estimated based on total water use. All indoor water useage is assumed to be treated as wastewater. Assumes 55% of water use is indoor water use and 45% is outdoor water use.
Indoor/Outdoor ratios based on the California Department of Water Resources's 20x2020 Water Conservation Plan for the San Francisco Bay Hydrologic Region.

Energy

Energy Associated with Water Use	2020	2035
	MwH/Year	
Water	57,405	61,676
Wastewater	14,104	15,154
Total Water/Wastewater	71,510	76,829

Indirect GHG Emissions from Energy Associated with Water Use	2020	2035	Reduction from Adjusted 2020	Reduction 2035
	MTons/Year		MTons/Year	
Water	7,740	8,315	-1,935	-2,079
Wastewater	1,902	2,043	-475	-511
Total Water/Wastewater	9,641	10,358	-2,410	-2,590

Energy
LGOP Version 1.1. Equation 10.9.

N2O = Wastewater x 10^-6 x Nload x EF effluent x 10^3

	2020	2035	Reduction 2020	Reduction 2035
	MTons/Year		MTons/Year	
N2O	5.587	6.003	-1.397	-1.501
CO2e =	1,732	1,861	-433	-465

Source: California Air Resources Board (CARB). 2010, May. Local Government Operations Protocol (LGOP), Version 1.1. The LGOP protocol provides default values for all the terms except the Nitrogen Load, which is assumed to be 40 mg of N per Liter of wastewater effluent based on USEPA methodology outlined in the CalEEMod program manual. South Coast Air Quality Management District (SCAQMD). 2011. California Emissions Estimator Model (CalEEMod), Version 2011.1.1. User's Manual. USEPA. 2008. Page 8-12. USEPA cites Metcalf & Eddy, Inc., 1991, "Wastewater Engineering: Treatment Disposal, and Reuse," 3rd Ed. McGraw Hill Publishing.

Total

	2020	2035	Reduction from Adjusted 2020	Reduction 2035
	MTons/Year		MTons/Year	
Total Water/Wastewater	11,373	12,219	-2,843	-3,055

Agriculture

Table 4.2-2 **Acreages of Important Farmland (2010)**

Type	Acres	Percentage
Within Town Limit		
Grazing Land	2,123.37	18.30%
Farmland of Local Importance	494.58	4.30%
Unique Farmland	21.44	0.19%
Non-Farmland	8,929.21	77.20%
Total Land Acreage Within Town Limit	**11,568.60**	**100%**
Within Planning Area (including Town Limit)		
Grazing Land	3,051.45	21.70%
Farmland of Local Importance	1,020.16	7.30%
Unique Farmland	21.44	0.15%
Non-Farmland	9,977.15	70.90%
Total Land Acreage Within Planning Area	**14,070.20**	**100%**

Source: Town of Danville, 2011; California Farmland and Mapping Monitoring Program, 2010.

Table 4.2-3 **Acreages of Land under Williamson Act Contracts (2010)**

Type	Acres	Percentage
Within Town Limit		
Active, Non-Prime Farmland	205.8	1.80%
Total Land Acreage Within Town Limit	**11,568.60**	**100%**
Within Planning Area (including Town Limit)		
Active, Non-Prime Farmland	532.1	3.80%
Total Acreage Within Town Planning Area	**14,070.20**	**100%**

Source: Town of Danville, 2011; California Farmland and Mapping Monitoring Program, 2010, updated to note the Nonrenewal status of the Borel site

	Acres	
Total Orchards	2,296	Offroad Equipment assumed
Total Grazing	5,175	No offroad Equipment
Cattle		

	Harvested Acreage 2010	
Field Crops	193,350	
Vegetable & Seed Crops	7,019	
Nut Crops	3,459	
Nursary Products	220,600	
Acres of Crop Land	424,428	
Head of Cattle	27,000	
Liveweight	196,000	Cwt

Source: County of Contra Costa, Department of Agriculture. 2011. 2010 Contra Costa County Crop Report.

	Agricultural and Grazing Land as a Percent of the County
Total Orchards	0.5%
Total Grazing	

2008 data for the Town is unavailable. Therefore, percentage is based on 2010 data for the agricultural sector.

										Tons/Day				MTons/Year
CY	Season	Equipment	Class	County	Air Basin	Air Dist.	Population	Activity	Consumption	CO2 Exhaust	N2O Exhaust	CH4 Exhaust	CO2e	CO2e
2008	Annual	2-Wheel Tractors	Agricultural Equipment	Contra Costa	SF	BA	7.72E+00	3.39E+00	7.11E-01	3.98E-03	5.90E-06	5.45E-06	5.92E-03	2
2008	Annual	2-Wheel Tractors	Agricultural Equipment	Contra Costa	SF	BA	8.99E+00	8.19E+00	4.04E+00	1.92E-02	2.12E-05	1.69E-05	2.62E-02	9
2008	Annual	2-Wheel Tractors	Agricultural Equipment	Contra Costa	SF	BA	2.41E-01	2.20E-01	2.23E-01	1.03E-03	7.90E-07	9.55E-07	1.30E-03	0
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	3.03E+00	4.58E+00	2.32E+01	1.99E-01	5.43E-05	4.78E-05	2.17E-01	72
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	4.16E-01	6.27E-01	4.46E+00	4.04E-02	9.92E-06	4.40E-06	4.35E-02	14
2008	Annual	Combines	Agricultural Equipment	Contra Costa	SF	BA	7.60E-01	2.61E-01	1.89E+00	1.70E-02	3.06E-06	2.08E-06	1.80E-02	6
2008	Annual	Combines	Agricultural Equipment	Contra Costa	SF	BA	4.22E-01	1.45E-01	1.60E+00	1.46E-02	2.29E-06	1.06E-06	1.53E-02	5
2008	Annual	Combines	Agricultural Equipment	Contra Costa	SF	BA	7.79E-02	2.67E-02	3.39E-01	3.10E-03	4.44E-07	1.92E-07	3.24E-03	1
2008	Annual	Balers	Agricultural Equipment	Contra Costa	SF	BA	1.11E+01	2.07E+00	4.23E+00	3.43E-02	1.19E-05	7.86E-06	3.82E-02	13
2008	Annual	Balers	Agricultural Equipment	Contra Costa	SF	BA	5.66E+00	1.06E+00	3.58E+00	3.18E-02	1.00E-05	4.92E-06	3.50E-02	12
2008	Annual	Agricultural Mowers	Agricultural Equipment	Contra Costa	SF	BA	8.02E+00	3.96E+00	1.62E+00	7.20E-03	8.34E-06	9.04E-06	9.98E-03	3
2008	Annual	Agricultural Mowers	Agricultural Equipment	Contra Costa	SF	BA	6.56E+00	3.24E+00	3.01E+00	1.33E-02	9.94E-06	1.58E-05	1.67E-02	6
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	3.04E+01	8.18E+00	1.40E+00	7.75E-03	1.26E-05	1.05E-05	1.19E-02	4
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	9.47E+00	2.55E+00	1.01E+00	4.22E-03	4.84E-06	6.59E-06	5.86E-03	2
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	2.45E+01	6.59E+00	6.28E+00	2.65E-02	1.89E-05	3.75E-05	3.31E-02	11
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	2.08E+00	4.58E-01	8.04E-01	6.52E-03	2.42E-06	1.51E-06	7.30E-03	2
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	3.51E+00	7.71E-01	2.53E+00	2.24E-02	7.18E-06	3.52E-06	2.47E-02	8
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	7.92E-01	1.74E-01	1.11E+00	1.01E-02	2.50E-06	9.38E-07	1.09E-02	4
2008	Annual	Tillers	Agricultural Equipment	Contra Costa	SF	BA	1.04E+03	2.02E+02	1.11E+02	4.75E-01	4.56E-04	6.74E-04	6.30E-01	209
2008	Annual	Swathers	Agricultural Equipment	Contra Costa	SF	BA	1.14E+01	2.96E+00	1.31E+01	1.16E-01	3.23E-05	1.85E-05	1.26E-01	42
2008	Annual	Swathers	Agricultural Equipment	Contra Costa	SF	BA	8.70E+00	2.27E+00	1.38E+01	1.26E-01	3.19E-05	1.18E-05	1.37E-01	45
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	1.83E+00	8.81E-01	2.07E-01	1.17E-03	1.64E-06	1.62E-06	1.71E-03	1
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	3.66E+00	4.66E+00	2.08E+00	9.88E-03	1.16E-05	8.92E-06	1.37E-02	5
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	1.40E+00	1.78E+00	1.74E+00	8.01E-03	6.36E-06	7.64E-06	1.01E-02	3
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	1.04E-01	1.28E-01	2.86E-01	2.36E-03	5.06E-07	2.71E-07	2.52E-03	1
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	1.30E-02	1.60E-02	5.44E-02	5.06E-04	6.01E-08	1.50E-08	5.25E-04	0
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	1.28E+00	5.09E-01	9.56E-02	5.30E-04	8.22E-07	7.13E-07	8.00E-04	0
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	1.12E+00	4.45E-01	2.65E-01	1.16E-03	1.11E-06	1.53E-06	1.53E-03	1
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	2.85E-01	1.13E-01	1.69E-01	7.38E-04	4.33E-07	9.15E-07	8.91E-04	0
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	3.44E-01	1.17E-01	2.01E-01	1.61E-03	6.35E-07	4.10E-07	1.82E-03	1
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	1.99E+00	6.78E-01	2.43E+00	2.13E-02	6.87E-06	3.71E-06	2.36E-02	8
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	2.27E-01	7.73E-02	5.27E-01	4.80E-03	1.20E-06	4.82E-07	5.19E-03	2
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	8.44E-02	2.87E-02	3.44E-01	3.14E-03	5.70E-07	2.81E-07	3.32E-03	1
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	9.40E+01	1.37E+02	6.59E+01	7.22E-01	0.00E+00	7.67E-05	7.23E-01	240
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	1.16E+02	1.69E+02	1.55E+02	1.71E+00	0.00E+00	2.04E-04	1.71E+00	566
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	2.70E+02	3.52E+02	5.62E+02	6.02E+00	0.00E+00	2.56E-03	6.08E+00	2,012
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	3.12E+02	4.07E+02	1.36E+03	1.48E+01	0.00E+00	2.86E-03	1.49E+01	4,928
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	1.76E+02	2.29E+02	1.30E+03	1.43E+01	0.00E+00	1.81E-03	1.43E+01	4,741
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	1.14E+02	1.48E+02	1.20E+03	1.32E+01	0.00E+00	1.15E-03	1.32E+01	4,375
2008	Annual	Agricultural Tractors	Agricultural Equipment	Contra Costa	SF	BA	2.26E+01	2.94E+01	3.89E+02	4.28E+00	0.00E+00	3.35E-04	4.29E+00	1,421
2008	Annual	Combines	Agricultural Equipment	Contra Costa	SF	BA	6.60E+00	2.71E+00	1.18E+01	1.29E-01	0.00E+00	2.11E-05	1.29E-01	43
2008	Annual	Combines	Agricultural Equipment	Contra Costa	SF	BA	9.79E+00	4.03E+00	2.29E+01	2.51E-01	0.00E+00	2.70E-05	2.51E-01	83
2008	Annual	Combines	Agricultural Equipment	Contra Costa	SF	BA	1.05E+01	4.31E+00	3.43E+01	3.78E-01	0.00E+00	2.74E-05	3.78E-01	125
2008	Annual	Combines	Agricultural Equipment	Contra Costa	SF	BA	4.18E-01	1.72E-01	1.88E+00	2.08E-02	0.00E+00	1.38E-06	2.08E-02	7
2008	Annual	Balers	Agricultural Equipment	Contra Costa	SF	BA	1.25E-02	3.25E-03	5.46E-03	5.91E-05	0.00E+00	1.65E-08	5.94E-05	0
2008	Annual	Balers	Agricultural Equipment	Contra Costa	SF	BA	8.79E+00	2.29E+00	5.72E+00	6.24E-02	0.00E+00	9.96E-06	6.26E-02	21
2008	Annual	Agricultural Mowers	Agricultural Equipment	Contra Costa	SF	BA	4.12E-01	4.10E-01	6.59E-01	7.18E-03	0.00E+00	1.32E-06	7.21E-03	2
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	1.93E+00	5.84E-01	3.19E-01	3.47E-03	0.00E+00	8.06E-07	3.49E-03	1
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	4.37E-01	1.08E-01	1.12E-01	1.22E-03	0.00E+00	3.38E-07	1.22E-03	0
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	4.18E+00	1.03E+00	2.70E+00	2.94E-02	0.00E+00	4.69E-06	2.95E-02	10
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	1.76E+00	4.35E-01	1.87E+00	2.06E-02	0.00E+00	2.13E-06	2.06E-02	7
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	1.10E+00	2.71E-01	1.91E+00	2.11E-02	0.00E+00	1.47E-06	2.11E-02	7
2008	Annual	Sprayers	Agricultural Equipment	Contra Costa	SF	BA	1.87E-01	4.62E-02	3.56E-01	3.92E-03	0.00E+00	2.52E-07	3.93E-03	1
2008	Annual	Tillers	Agricultural Equipment	Contra Costa	SF	BA	4.37E-02	3.15E-02	9.85E-03	1.08E-04	0.00E+00	1.18E-08	1.08E-04	0
2008	Annual	Tillers	Agricultural Equipment	Contra Costa	SF	BA	6.24E-03	2.94E-03	3.20E-02	3.53E-04	0.00E+00	2.60E-08	3.53E-04	0
2008	Annual	Tillers	Agricultural Equipment	Contra Costa	SF	BA	1.87E-02	8.83E-03	1.71E-01	1.89E-03	0.00E+00	1.27E-07	1.89E-03	1
2008	Annual	Swathers	Agricultural Equipment	Contra Costa	SF	BA	4.75E+01	1.43E+01	3.53E+01	3.85E-01	0.00E+00	6.20E-05	3.87E-01	128

2008	Annual	Swathers	Agricultural Equipment	Contra Costa	SF	BA	4.24E-01	1.28E-01	6.04E-01	6.62E-03	0.00E+00	6.96E-07	6.63E-03	2
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	3.62E-01	8.08E-01	2.22E-01	2.43E-03	0.00E+00	2.58E-07	2.44E-03	1
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	1.09E+00	2.44E+00	1.27E+00	1.39E-02	0.00E+00	1.67E-06	1.40E-02	5
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	1.22E+00	2.65E+00	2.62E+00	2.79E-02	0.00E+00	1.45E-05	2.82E-02	9
2008	Annual	Hydro Power Units	Agricultural Equipment	Contra Costa	SF	BA	1.12E-01	2.43E-01	4.71E-01	5.12E-03	0.00E+00	1.09E-06	5.15E-03	2
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	1.32E+00	1.62E+00	5.67E-01	6.21E-03	0.00E+00	6.96E-07	6.22E-03	2
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	3.68E+00	4.51E+00	2.90E+00	3.17E-02	0.00E+00	5.67E-06	3.18E-02	11
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	3.22E+00	3.37E+00	4.01E+00	4.30E-02	0.00E+00	1.68E-05	4.34E-02	14
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	1.09E+01	1.14E+01	2.67E+01	2.90E-01	0.00E+00	5.37E-05	2.92E-01	97
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	9.05E-01	9.46E-01	4.00E+00	4.38E-02	0.00E+00	5.32E-06	4.39E-02	15
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	9.05E-01	9.46E-01	5.76E+00	6.35E-02	0.00E+00	5.28E-06	6.36E-02	21
2008	Annual	Other Agricultural Equipment	Agricultural Equipment	Contra Costa	SF	BA	2.18E-01	2.28E-01	2.00E+00	2.20E-02	0.00E+00	1.65E-06	2.21E-02	7
COUNTYWIDE							2,415	1,796	5,416	58	0	0	59	19,394
Danville as Percent of the County's agricultural area - non-grazing				0.5%			13	10	29	0	0	0	0	105

Source: County of Contra Costa, Department of Agriculture. 2011. 2010 Contra Costa County Crop Report (County); and Danville 2012 General Plan EIR (Town).

										Tons/Day				MTons/Year
CY	Season	Equipment	Class	County	Air Basin	Air Dist.	Population	Activity	Consumption	CO2 Exhaust	N2O Exhaust	CH4 Exhaust	CO2e	CO2e
2008	Annual	Tampers/Rammers	Construction and Mining Equipment	Contra Costa	SF	BA	1.28E+02	6.37E+01	1.29E+01	6.63E-02	9.86E-05	5.14E-05	9.79E-02	32
2008	Annual	Plate Compactors	Construction and Mining Equipment	Contra Costa	SF	BA	1.09E+01	6.18E+00	1.25E+00	6.44E-03	9.61E-06	4.87E-06	9.52E-03	3
2008	Annual	Asphalt Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	2.78E+00	3.02E+00	1.78E+00	8.49E-03	8.64E-06	7.48E-06	1.13E-02	4
2008	Annual	Asphalt Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	4.76E+00	5.17E+00	7.69E+00	3.55E-02	2.28E-05	3.30E-05	4.33E-02	14
2008	Annual	Asphalt Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	2.58E+00	2.77E+00	6.52E+00	5.06E-02	1.78E-05	1.61E-05	5.64E-02	19
2008	Annual	Asphalt Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	1.42E+00	1.52E+00	6.05E+00	5.24E-02	1.63E-05	1.14E-05	5.77E-02	19
2008	Annual	Tampers/Rammers	Construction and Mining Equipment	Contra Costa	SF	BA	5.89E+00	2.94E+00	1.52E+00	6.88E-03	7.19E-06	7.90E-06	9.28E-03	3
2008	Annual	Plate Compactors	Construction and Mining Equipment	Contra Costa	SF	BA	2.16E+02	1.07E+02	1.97E+01	1.11E-01	1.75E-04	1.54E-04	1.69E-01	56
2008	Annual	Plate Compactors	Construction and Mining Equipment	Contra Costa	SF	BA	2.29E+02	1.29E+02	5.83E+01	2.70E-01	3.05E-04	2.76E-04	3.70E-01	122
2008	Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	2.41E+01	5.48E+00	1.51E+00	8.04E-03	1.02E-05	1.00E-05	1.14E-02	4
2008	Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	3.89E+01	3.31E+01	1.84E+01	8.74E-02	9.11E-05	7.63E-05	1.17E-01	39
2008	Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	2.63E+01	2.23E+01	2.70E+01	1.25E-01	8.78E-05	1.15E-04	1.54E-01	51
2008	Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	1.82E+00	3.10E+00	8.12E+00	6.13E-02	2.07E-05	2.27E-05	6.82E-02	23
2008	Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	3.42E+00	5.82E+00	2.71E+01	2.31E-01	6.61E-05	5.84E-05	2.53E-01	84
2008	Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	3.02E+02	1.41E+02	2.80E+01	1.57E-01	2.40E-04	2.17E-04	2.36E-01	78
2008	Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	5.12E+02	2.81E+02	1.69E+02	7.84E-01	7.71E-04	8.00E-04	1.04E+00	344
2008	Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.14E+01	6.24E+00	8.45E+00	3.83E-02	2.49E-05	3.93E-05	4.68E-02	16
2008	Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	7.05E+00	3.38E+00	7.95E+00	6.38E-02	2.06E-05	1.56E-05	7.05E-02	23
2008	Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.82E+00	8.72E-01	3.29E+00	2.90E-02	8.52E-06	4.81E-06	3.17E-02	11
2008	Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	5.55E+01	3.04E+01	6.20E+00	3.53E-02	5.35E-05	4.98E-05	5.29E-02	18
2008	Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.65E+02	2.28E+02	8.89E+01	4.22E-01	5.33E-04	3.86E-04	5.95E-01	197
2008	Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	2.26E+00	3.11E+00	2.98E+00	1.37E-02	1.11E-05	1.33E-05	1.74E-02	6
2008	Annual	Signal Boards	Construction and Mining Equipment	Contra Costa	SF	BA	6.85E-01	2.44E-01	8.06E-02	4.39E-04	5.20E-07	5.74E-07	6.13E-04	0
2008	Annual	Signal Boards	Construction and Mining Equipment	Contra Costa	SF	BA	4.88E+00	3.80E+00	2.30E+00	1.09E-02	1.09E-05	9.47E-06	1.45E-02	5
2008	Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	4.51E+01	5.37E+01	3.53E+01	1.68E-01	1.64E-04	1.50E-04	2.22E-01	73
2008	Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	3.50E+01	4.16E+01	5.92E+01	2.73E-01	1.81E-04	2.57E-04	3.34E-01	111
2008	Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	1.65E+01	1.82E+01	4.01E+01	3.12E-01	1.10E-04	9.80E-05	3.48E-01	115
2008	Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	5.49E+00	6.05E+00	2.60E+01	2.25E-01	6.56E-05	4.82E-05	2.46E-01	82
2008	Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	1.29E+00	4.39E-01	3.62E-01	1.64E-03	1.35E-06	1.83E-06	2.10E-03	1
2008	Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	6.41E+00	2.18E+00	3.28E+00	1.47E-02	8.70E-06	1.59E-05	1.77E-02	6
2008	Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	8.00E-01	2.35E-01	6.34E-01	5.12E-03	1.57E-06	1.22E-06	5.63E-03	2
2008	Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	3.67E+00	1.08E+00	7.23E+00	6.39E-02	1.47E-05	1.04E-05	6.87E-02	23
2008	Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	9.09E-01	2.67E-01	2.42E+00	2.20E-02	4.64E-06	2.07E-06	2.35E-02	8
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	2.37E+01	8.44E+00	2.28E+00	1.25E-02	1.62E-05	1.63E-05	1.78E-02	6
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	1.06E+02	9.05E+01	6.31E+01	3.01E-01	2.81E-04	2.62E-04	3.93E-01	130
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	3.33E+01	2.83E+01	3.85E+01	1.78E-01	1.19E-04	1.64E-04	2.18E-01	72
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	2.98E+00	4.99E+00	1.39E+01	1.18E-01	1.71E-05	8.20E-06	1.23E-01	41
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	1.71E+00	2.86E+00	1.35E+01	1.26E-01	1.08E-05	3.39E-06	1.29E-01	43
2008	Annual	Cement and Mortar Mixers	Construction and Mining Equipment	Contra Costa	SF	BA	4.30E+02	1.08E+02	2.80E+01	1.51E-01	1.99E-04	1.94E-04	2.17E-01	72
2008	Annual	Cement and Mortar Mixers	Construction and Mining Equipment	Contra Costa	SF	BA	7.28E+02	1.84E+02	9.86E+01	4.10E-01	4.03E-04	6.56E-04	5.49E-01	182
2008	Annual	Cement and Mortar Mixers	Construction and Mining Equipment	Contra Costa	SF	BA	3.06E+00	7.73E-01	1.28E+00	5.40E-03	2.92E-06	7.76E-06	6.46E-03	2
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	9.09E-01	1.03E+00	2.00E+00	1.55E-02	5.84E-06	4.93E-06	1.74E-02	6
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	1.82E+00	2.07E+00	7.09E+00	6.14E-02	1.99E-05	1.33E-05	6.79E-02	22
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	7.27E-02	8.27E-02	4.45E-01	4.04E-03	1.12E-06	4.21E-07	4.39E-03	1
2008	Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.17E+00	9.27E-01	7.04E-01	3.36E-03	3.01E-06	2.91E-06	4.35E-03	1
2008	Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	7.66E-01	6.07E-01	8.46E-01	3.91E-03	2.57E-06	3.58E-06	4.78E-03	2
2008	Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.05E+00	6.97E-01	5.54E+00	4.85E-02	1.04E-05	9.01E-06	5.20E-02	17
2008	Annual	Rough Terrain Forklifts	Construction and Mining Equipment	Contra Costa	SF	BA	3.64E-01	4.12E-01	1.36E+00	1.05E-02	3.09E-06	3.34E-06	1.16E-02	4
2008	Annual	Rough Terrain Forklifts	Construction and Mining Equipment	Contra Costa	SF	BA	5.16E+00	5.85E+00	3.09E+01	2.67E-01	7.07E-05	5.78E-05	2.90E-01	96
2008	Annual	Rough Terrain Forklifts	Construction and Mining Equipment	Contra Costa	SF	BA	1.82E-01	2.06E-01	1.68E+00	1.53E-02	3.48E-06	1.60E-06	1.64E-02	5
2008	Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	9.09E-01	1.28E+00	3.11E+00	2.38E-02	8.27E-06	8.21E-06	2.65E-02	9
2008	Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	6.04E+00	8.47E+00	3.27E+01	2.81E-01	8.83E-05	6.64E-05	3.10E-01	103
2008	Annual	Tractors/Loaders/Backhoes	Construction and Mining Equipment	Contra Costa	SF	BA	3.20E+00	7.63E+00	2.30E+01	1.97E-01	6.28E-05	4.60E-05	2.17E-01	72
2008	Annual	Skid Steer Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	2.30E+00	2.01E+00	1.63E+00	7.73E-03	6.77E-06	7.06E-06	9.97E-03	3
2008	Annual	Skid Steer Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	1.54E+02	1.34E+02	1.52E+02	7.01E-01	5.10E-04	6.69E-04	8.73E-01	289
2008	Annual	Skid Steer Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	2.48E+01	2.11E+01	4.13E+01	3.38E-01	9.35E-05	5.83E-05	3.68E-01	122

2008 Annual	Skid Steer Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	1.48E+01	1.26E+01	5.54E+01	5.00E-01	9.96E-05	5.37E-05	5.31E-01	176
2008 Annual	Dumpers/Tenders	Construction and Mining Equipment	Contra Costa	SF	BA	2.19E+01	8.96E+00	1.22E+00	6.96E-03	1.27E-05	9.78E-06	1.11E-02	4
2008 Annual	Dumpers/Tenders	Construction and Mining Equipment	Contra Costa	SF	BA	4.68E+01	1.91E+01	7.99E+00	3.34E-02	3.72E-05	5.36E-05	4.60E-02	15
2008 Annual	Dumpers/Tenders	Construction and Mining Equipment	Contra Costa	SF	BA	8.67E+00	3.54E+00	3.09E+00	1.31E-02	9.60E-06	1.89E-05	1.64E-02	5
2008 Annual	Dumpers/Tenders	Construction and Mining Equipment	Contra Costa	SF	BA	6.54E-01	2.28E-01	5.96E-01	5.27E-03	1.88E-06	8.71E-07	5.87E-03	2
2008 Annual	Other Construction Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	2.54E+00	2.59E+00	1.42E+01	1.30E-01	2.19E-05	6.60E-06	1.37E-01	45
2008 Annual	Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	6.30E-01	1.42E+00	1.21E+00	1.32E-02	0.00E+00	2.10E-06	1.33E-02	4
2008 Annual	Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	3.66E+01	8.41E+01	1.11E+02	1.18E+00	0.00E+00	6.81E-04	1.19E+00	394
2008 Annual	Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	4.32E+01	9.91E+01	3.16E+02	3.43E+00	0.00E+00	8.14E-04	3.44E+00	1,140
2008 Annual	Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	2.68E+01	6.16E+01	3.62E+02	3.95E+00	0.00E+00	6.25E-04	3.96E+00	1,312
2008 Annual	Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	3.23E+00	7.42E+00	6.57E+01	7.21E-01	0.00E+00	9.02E-05	7.23E-01	239
2008 Annual	Pavers	Construction and Mining Equipment	Contra Costa	SF	BA	3.32E+00	7.62E+00	8.11E+01	8.88E-01	0.00E+00	9.89E-05	8.90E-01	295
2008 Annual	Plate Compactors	Construction and Mining Equipment	Contra Costa	SF	BA	1.35E+01	2.22E+01	4.38E+00	4.79E-02	0.00E+00	5.17E-06	4.80E-02	16
2008 Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	2.54E+01	4.84E+01	1.40E+01	1.53E-01	0.00E+00	1.62E-05	1.53E-01	51
2008 Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	1.06E+01	2.02E+01	1.23E+01	1.35E-01	0.00E+00	1.60E-05	1.35E-01	45
2008 Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	3.30E+01	6.36E+01	7.75E+01	8.25E-01	0.00E+00	4.12E-04	8.34E-01	276
2008 Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	1.77E+02	3.41E+02	9.25E+02	1.01E+01	0.00E+00	2.10E-03	1.01E+01	3,344
2008 Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	7.13E+01	1.37E+02	6.78E+02	7.41E+00	0.00E+00	1.02E-03	7.44E+00	2,462
2008 Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	1.01E+01	1.95E+01	1.35E+02	1.49E+00	0.00E+00	1.54E-04	1.49E+00	494
2008 Annual	Rollers	Construction and Mining Equipment	Contra Costa	SF	BA	7.10E+00	1.37E+01	1.36E+02	1.49E+00	0.00E+00	1.38E-04	1.50E+00	496
2008 Annual	Scrapers	Construction and Mining Equipment	Contra Costa	SF	BA	1.64E+00	5.02E+00	2.17E+01	2.36E-01	0.00E+00	5.66E-05	2.37E-01	78
2008 Annual	Scrapers	Construction and Mining Equipment	Contra Costa	SF	BA	1.50E+01	4.60E+01	3.12E+02	3.40E+00	0.00E+00	5.46E-04	3.41E+00	1,130
2008 Annual	Scrapers	Construction and Mining Equipment	Contra Costa	SF	BA	1.46E+01	4.48E+01	4.27E+02	4.69E+00	0.00E+00	5.84E-04	4.70E+00	1,557
2008 Annual	Scrapers	Construction and Mining Equipment	Contra Costa	SF	BA	4.02E+01	1.23E+02	1.81E+03	1.98E+01	0.00E+00	2.21E-03	1.99E+01	6,575
2008 Annual	Scrapers	Construction and Mining Equipment	Contra Costa	SF	BA	2.05E+01	6.30E+01	1.60E+03	1.75E+01	0.00E+00	1.97E-03	1.75E+01	5,802
2008 Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.09E+00	2.48E+00	1.43E+00	1.57E-02	0.00E+00	1.85E-06	1.57E-02	5
2008 Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	9.24E-01	2.12E+00	2.40E+00	2.54E-02	0.00E+00	1.46E-05	2.57E-02	9
2008 Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.33E+01	3.06E+01	7.67E+01	8.33E-01	0.00E+00	1.97E-04	8.37E-01	277
2008 Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	6.26E+00	1.44E+01	6.65E+01	7.26E-01	0.00E+00	1.14E-04	7.28E-01	241
2008 Annual	Paving Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.76E+00	4.05E+00	2.26E+01	2.48E-01	0.00E+00	3.07E-05	2.48E-01	82
2008 Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	8.40E-01	1.05E+00	6.88E-01	7.36E-03	0.00E+00	3.15E-06	7.43E-03	2
2008 Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.68E-01	2.09E-01	6.11E-01	6.66E-03	0.00E+00	1.28E-06	6.68E-03	2
2008 Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.26E-01	1.57E-01	6.14E-01	6.72E-03	0.00E+00	8.52E-07	6.73E-03	2
2008 Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	2.52E-01	3.14E-01	1.92E+00	2.11E-02	0.00E+00	2.01E-06	2.12E-02	7
2008 Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	2.10E+00	2.61E+00	2.63E+01	2.89E-01	0.00E+00	2.46E-05	2.89E-01	96
2008 Annual	Surfacing Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	3.93E+00	4.89E+00	7.71E+01	8.47E-01	0.00E+00	7.37E-05	8.49E-01	281
2008 Annual	Signal Boards	Construction and Mining Equipment	Contra Costa	SF	BA	1.18E+02	2.43E+02	6.84E+01	7.49E-01	0.00E+00	7.87E-05	7.51E-01	249
2008 Annual	Signal Boards	Construction and Mining Equipment	Contra Costa	SF	BA	5.88E-01	8.62E-01	1.46E+00	1.56E-02	0.00E+00	6.46E-06	1.57E-02	5
2008 Annual	Signal Boards	Construction and Mining Equipment	Contra Costa	SF	BA	9.61E+00	1.41E+01	5.19E+01	5.65E-01	0.00E+00	1.07E-04	5.67E-01	188
2008 Annual	Signal Boards	Construction and Mining Equipment	Contra Costa	SF	BA	5.96E+00	8.75E+00	6.17E+01	6.75E-01	0.00E+00	8.35E-05	6.77E-01	224
2008 Annual	Signal Boards	Construction and Mining Equipment	Contra Costa	SF	BA	1.26E+00	1.85E+00	2.14E+01	2.36E-01	0.00E+00	1.95E-05	2.36E-01	78
2008 Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	3.15E+00	5.34E+00	2.06E+00	2.26E-02	0.00E+00	2.37E-06	2.26E-02	7
2008 Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	3.32E+00	5.62E+00	8.42E+00	9.24E-02	0.00E+00	1.04E-05	9.27E-02	31
2008 Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	1.26E+02	2.20E+02	3.41E+02	3.61E+00	0.00E+00	2.00E-03	3.65E+00	1,210
2008 Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	1.71E+02	2.98E+02	8.89E+02	9.65E+00	0.00E+00	2.25E-03	9.70E+00	3,211
2008 Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	1.87E+01	3.26E+01	2.14E+02	2.34E+00	0.00E+00	3.64E-04	2.35E+00	778
2008 Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	1.68E+00	2.92E+00	2.97E+01	3.25E-01	0.00E+00	4.05E-05	3.26E-01	108
2008 Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	2.14E+00	3.73E+00	5.29E+01	5.79E-01	0.00E+00	6.42E-05	5.81E-01	192
2008 Annual	Trenchers	Construction and Mining Equipment	Contra Costa	SF	BA	7.85E-01	1.37E+00	3.66E+01	4.00E-01	0.00E+00	4.49E-05	4.01E-01	133
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	4.20E-01	9.34E-01	4.41E-01	4.83E-03	0.00E+00	5.12E-07	4.84E-03	2
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	1.26E+00	2.80E+00	2.04E+00	2.24E-02	0.00E+00	2.65E-06	2.24E-02	7
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	5.50E+00	1.28E+01	1.83E+01	1.98E-01	0.00E+00	4.68E-05	1.99E-01	66
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	1.69E+01	3.92E+01	1.38E+02	1.51E+00	0.00E+00	1.80E-04	1.51E+00	501
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	3.90E+00	9.07E+00	5.82E+01	6.39E-01	0.00E+00	4.91E-05	6.40E-01	212
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	3.36E+00	7.80E+00	6.63E+01	7.33E-01	0.00E+00	3.71E-05	7.34E-01	243
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	7.47E+00	1.74E+01	2.44E+02	2.70E+00	0.00E+00	1.22E-04	2.70E+00	894
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	1.22E+01	2.83E+01	7.86E+02	8.68E+00	0.00E+00	4.07E-04	8.69E+00	2,878
2008 Annual	Bore/Drill Rigs	Construction and Mining Equipment	Contra Costa	SF	BA	2.04E+01	4.73E+01	1.99E+03	2.20E+01	0.00E+00	1.34E-03	2.20E+01	7,280
2008 Annual	Excavators	Construction and Mining Equipment	Contra Costa	SF	BA	1.55E+00	5.95E+00	4.45E+00	4.88E-02	0.00E+00	5.39E-06	4.90E-02	16

2008	Annual	Excavators	Construction and Mining Equipment	Contra Costa	SF	BA	5.85E+01	2.28E+02	2.68E+02	2.85E+00	0.00E+00	1.42E-03	2.88E+00	955
2008	Annual	Excavators	Construction and Mining Equipment	Contra Costa	SF	BA	1.59E+02	6.20E+02	2.10E+03	2.28E+01	0.00E+00	4.61E-03	2.29E+01	7,585
2008	Annual	Excavators	Construction and Mining Equipment	Contra Costa	SF	BA	3.06E+02	1.20E+03	6.13E+03	6.71E+01	0.00E+00	9.02E-03	6.73E+01	22,272
2008	Annual	Excavators	Construction and Mining Equipment	Contra Costa	SF	BA	1.25E+02	4.87E+02	3.50E+03	3.86E+01	0.00E+00	3.55E-03	3.86E+01	12,796
2008	Annual	Excavators	Construction and Mining Equipment	Contra Costa	SF	BA	8.99E+01	3.51E+02	3.72E+03	4.10E+01	0.00E+00	3.44E-03	4.11E+01	13,594
2008	Annual	Excavators	Construction and Mining Equipment	Contra Costa	SF	BA	6.15E+00	2.40E+01	4.22E+02	4.65E+00	0.00E+00	3.94E-04	4.66E+00	1,542
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	1.68E-01	2.73E-01	2.04E-01	2.24E-03	0.00E+00	2.54E-07	2.25E-03	1
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	1.47E+00	2.34E+00	3.29E+00	3.53E-02	0.00E+00	1.49E-05	3.56E-02	12
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	2.56E+00	4.07E+00	1.39E+01	1.51E-01	0.00E+00	2.84E-05	1.51E-01	50
2008	Annual	Concrete/Industrial Saws	Construction and Mining Equipment	Contra Costa	SF	BA	8.40E-02	1.34E-01	9.76E-01	1.07E-02	0.00E+00	1.32E-06	1.07E-02	4
2008	Annual	Cement and Mortar Mixers	Construction and Mining Equipment	Contra Costa	SF	BA	2.15E+01	1.76E+01	5.10E+00	5.57E-02	0.00E+00	6.90E-06	5.59E-02	18
2008	Annual	Cement and Mortar Mixers	Construction and Mining Equipment	Contra Costa	SF	BA	1.93E+00	1.59E+00	1.28E+00	1.39E-02	0.00E+00	2.88E-06	1.40E-02	5
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	1.43E+00	5.01E+00	5.49E+00	5.81E-02	0.00E+00	3.31E-05	5.88E-02	19
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	1.57E+01	5.50E+01	1.27E+02	1.38E+00	0.00E+00	3.12E-04	1.38E+00	458
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	1.57E+01	5.50E+01	2.02E+02	2.21E+00	0.00E+00	3.33E-04	2.21E+00	733
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	3.04E+01	1.07E+02	5.44E+02	5.97E+00	0.00E+00	6.69E-04	5.99E+00	1,982
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	1.11E+01	3.91E+01	3.20E+02	3.52E+00	0.00E+00	3.54E-04	3.52E+00	1,166
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	2.55E+01	8.96E+01	1.24E+03	1.36E+01	0.00E+00	1.38E-03	1.36E+01	4,501
2008	Annual	Cranes	Construction and Mining Equipment	Contra Costa	SF	BA	3.21E+01	1.12E+02	4.97E+03	5.45E+01	0.00E+00	6.15E-03	5.47E+01	18,100
2008	Annual	Graders	Construction and Mining Equipment	Contra Costa	SF	BA	5.88E-01	1.54E+00	2.00E+00	2.12E-02	0.00E+00	1.13E-05	2.14E-02	7
2008	Annual	Graders	Construction and Mining Equipment	Contra Costa	SF	BA	3.92E+01	1.03E+02	3.54E+02	3.85E+00	0.00E+00	8.25E-04	3.87E+00	1,281
2008	Annual	Graders	Construction and Mining Equipment	Contra Costa	SF	BA	1.34E+02	3.51E+02	1.99E+03	2.18E+01	0.00E+00	3.10E-03	2.18E+01	7,225
2008	Annual	Graders	Construction and Mining Equipment	Contra Costa	SF	BA	8.31E+01	2.18E+02	1.70E+03	1.87E+01	0.00E+00	1.93E-03	1.88E+01	6,221
2008	Annual	Graders	Construction and Mining Equipment	Contra Costa	SF	BA	2.35E+00	6.17E+00	6.43E+01	7.07E-01	0.00E+00	6.56E-05	7.08E-01	235
2008	Annual	Graders	Construction and Mining Equipment	Contra Costa	SF	BA	3.93E-01	1.03E+00	2.27E+01	2.50E-01	0.00E+00	2.34E-05	2.50E-01	83
2008	Annual	Off-Highway Trucks	Construction and Mining Equipment	Contra Costa	SF	BA	2.73E+00	1.49E+01	8.52E+01	9.31E-01	0.00E+00	1.32E-04	9.34E-01	309
2008	Annual	Off-Highway Trucks	Construction and Mining Equipment	Contra Costa	SF	BA	2.02E+01	1.10E+02	8.32E+02	9.15E+00	0.00E+00	9.04E-04	9.17E+00	3,037
2008	Annual	Off-Highway Trucks	Construction and Mining Equipment	Contra Costa	SF	BA	2.84E+01	1.55E+02	1.92E+03	2.11E+01	0.00E+00	1.91E-03	2.11E+01	6,993
2008	Annual	Off-Highway Trucks	Construction and Mining Equipment	Contra Costa	SF	BA	8.23E+01	4.49E+02	9.01E+03	9.92E+01	0.00E+00	9.03E-03	9.93E+01	32,895
2008	Annual	Off-Highway Trucks	Construction and Mining Equipment	Contra Costa	SF	BA	3.86E+01	2.11E+02	5.98E+03	6.57E+01	0.00E+00	6.75E-03	6.58E+01	21,802
2008	Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	6.72E+00	1.76E+01	3.64E+01	3.87E-01	0.00E+00	2.00E-04	3.91E-01	129

2008 Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.89E+01	4.96E+01	1.89E+02	2.06E+00	0.00E+00	4.37E-04	2.07E+00	685
2008 Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	8.02E+00	2.10E+01	1.60E+02	1.75E+00	0.00E+00	2.46E-04	1.76E+00	583
2008 Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	7.98E-01	2.09E+00	2.32E+01	2.55E-01	0.00E+00	2.38E-05	2.56E-01	85
2008 Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	4.49E+00	1.18E+01	2.00E+02	2.20E+00	0.00E+00	1.83E-04	2.20E+00	728
2008 Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	6.54E-01	1.71E+00	4.58E+01	5.04E-01	0.00E+00	4.25E-05	5.05E-01	167
2008 Annual	Crushing/Proc. Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	6.54E-01	1.71E+00	1.02E+02	1.12E+00	0.00E+00	1.18E-04	1.12E+00	371
2008 Annual	Rough Terrain Forklifts	Construction and Mining Equipment	Contra Costa	SF	BA	4.66E+00	1.45E+01	2.31E+01	2.45E-01	0.00E+00	1.22E-04	2.48E-01	82
2008 Annual	Rough Terrain Forklifts	Construction and Mining Equipment	Contra Costa	SF	BA	2.23E+02	6.94E+02	1.99E+03	2.17E+01	0.00E+00	4.39E-03	2.18E+01	7,204
2008 Annual	Rough Terrain Forklifts	Construction and Mining Equipment	Contra Costa	SF	BA	2.86E+01	8.90E+01	5.08E+02	5.55E+00	0.00E+00	7.45E-04	5.57E+00	1,843
2008 Annual	Rough Terrain Forklifts	Construction and Mining Equipment	Contra Costa	SF	BA	1.60E+00	4.96E+00	3.85E+01	4.24E-01	0.00E+00	3.91E-05	4.24E-01	141
2008 Annual	Rough Terrain Forklifts	Construction and Mining Equipment	Contra Costa	SF	BA	1.05E+00	3.27E+00	3.80E+01	4.19E-01	0.00E+00	3.47E-05	4.19E-01	139
2008 Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	5.88E-01	1.54E+00	1.19E+00	1.30E-02	0.00E+00	1.47E-06	1.31E-02	4
2008 Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	1.14E+01	3.06E+01	4.48E+01	4.76E-01	0.00E+00	2.50E-04	4.81E-01	159
2008 Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	3.10E+02	8.31E+02	2.25E+03	2.45E+01	0.00E+00	5.18E-03	2.46E+01	8,137
2008 Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	1.75E+02	4.69E+02	2.28E+03	2.49E+01	0.00E+00	3.50E-03	2.50E+01	8,264
2008 Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	1.74E+02	4.66E+02	3.15E+03	3.47E+01	0.00E+00	3.52E-03	3.48E+01	11,507
2008 Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	7.24E+01	1.94E+02	2.09E+03	2.30E+01	0.00E+00	2.09E-03	2.30E+01	7,617
2008 Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	1.58E+01	4.24E+01	9.35E+02	1.03E+01	0.00E+00	9.48E-04	1.03E+01	3,411
2008 Annual	Rubber Tired Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	1.70E+00	4.55E+00	1.23E+02	1.35E+00	0.00E+00	1.42E-04	1.35E+00	448
2008 Annual	Rubber Tired Dozers	Construction and Mining Equipment	Contra Costa	SF	BA	4.20E-01	1.89E+00	1.12E+01	1.22E-01	0.00E+00	2.21E-05	1.23E-01	41
2008 Annual	Rubber Tired Dozers	Construction and Mining Equipment	Contra Costa	SF	BA	1.03E+01	4.62E+01	3.87E+02	4.24E+00	0.00E+00	6.28E-04	4.25E+00	1,408
2008 Annual	Rubber Tired Dozers	Construction and Mining Equipment	Contra Costa	SF	BA	1.58E+01	7.11E+01	8.63E+02	9.41E+00	0.00E+00	1.25E-03	9.44E+00	3,126
2008 Annual	Rubber Tired Dozers	Construction and Mining Equipment	Contra Costa	SF	BA	1.74E+01	7.82E+01	1.43E+03	1.56E+01	0.00E+00	2.08E-03	1.56E+01	5,174
2008 Annual	Rubber Tired Dozers	Construction and Mining Equipment	Contra Costa	SF	BA	1.18E+00	5.29E+00	1.43E+02	1.56E+00	0.00E+00	2.19E-04	1.57E+00	519
2008 Annual	Tractors/Loaders/Backhoes	Construction and Mining Equipment	Contra Costa	SF	BA	1.18E+01	3.06E+01	2.21E+01	2.42E-01	0.00E+00	3.27E-05	2.43E-01	80
2008 Annual	Tractors/Loaders/Backhoes	Construction and Mining Equipment	Contra Costa	SF	BA	7.07E+01	1.87E+02	2.66E+02	2.84E+00	0.00E+00	1.30E-03	2.87E+00	950
2008 Annual	Tractors/Loaders/Backhoes	Construction and Mining Equipment	Contra Costa	SF	BA	9.46E+02	2.51E+03	5.95E+03	6.48E+01	0.00E+00	1.22E-02	6.50E+01	21,535
2008 Annual	Tractors/Loaders/Backhoes	Construction and Mining Equipment	Contra Costa	SF	BA	7.06E+01	1.87E+02	8.66E+02	9.48E+00	0.00E+00	1.18E-03	9.50E+00	3,146
2008 Annual	Tractors/Loaders/Backhoes	Construction and Mining Equipment	Contra Costa	SF	BA	2.28E+01	6.05E+01	4.71E+02	5.19E+00	0.00E+00	4.36E-04	5.20E+00	1,722
2008 Annual	Tractors/Loaders/Backhoes	Construction and Mining Equipment	Contra Costa	SF	BA	3.69E+01	9.77E+01	1.53E+03	1.68E+01	0.00E+00	1.28E-03	1.69E+01	5,580
2008 Annual	Tractors/Loaders/Backhoes	Construction and Mining Equipment	Contra Costa	SF	BA	7.92E+01	2.10E+02	4.92E+03	5.42E+01	0.00E+00	4.17E-03	5.43E+01	17,974
2008 Annual	Crawler Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	5.88E-01	1.70E+00	2.00E+00	2.11E-02	0.00E+00	1.25E-05	2.14E-02	7
2008 Annual	Crawler Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	3.33E+02	9.65E+02	2.92E+03	3.17E+01	0.00E+00	7.58E-03	3.19E+01	10,562
2008 Annual	Crawler Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	1.13E+02	3.27E+02	1.81E+03	1.98E+01	0.00E+00	3.16E-03	1.98E+01	6,571
2008 Annual	Crawler Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	9.70E+01	2.81E+02	2.12E+03	2.33E+01	0.00E+00	2.87E-03	2.34E+01	7,735
2008 Annual	Crawler Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	6.65E+01	1.92E+02	2.27E+03	2.49E+01	0.00E+00	2.75E-03	2.50E+01	8,269
2008 Annual	Crawler Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	1.05E+01	3.03E+01	6.42E+02	7.03E+00	0.00E+00	7.82E-04	7.05E+00	2,335
2008 Annual	Crawler Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	1.05E+01	3.03E+01	9.10E+02	9.95E+00	0.00E+00	1.20E-03	9.98E+00	3,304
2008 Annual	Skid Steer Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	8.06E+01	1.84E+02	1.16E+02	1.27E+00	0.00E+00	2.43E-04	1.28E+00	422
2008 Annual	Skid Steer Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	7.31E+02	1.72E+03	2.03E+03	2.19E+01	0.00E+00	7.79E-03	2.20E+01	7,295
2008 Annual	Skid Steer Loaders	Construction and Mining Equipment	Contra Costa	SF	BA	3.83E+02	8.99E+02	1.76E+03	1.92E+01	0.00E+00	3.06E-03	1.93E+01	6,379
2008 Annual	Off-Highway Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	4.20E-02	1.29E-01	5.59E-01	6.06E-03	0.00E+00	1.58E-06	6.09E-03	2
2008 Annual	Off-Highway Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	5.13E+01	1.58E+02	9.45E+02	1.03E+01	0.00E+00	1.80E-03	1.03E+01	3,425
2008 Annual	Off-Highway Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	4.85E+01	1.50E+02	8.89E+02	9.74E+00	0.00E+00	1.38E-03	9.77E+00	3,235
2008 Annual	Off-Highway Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	6.57E+01	2.02E+02	5.26E+03	5.74E+01	0.00E+00	7.32E-03	5.76E+01	19,066
2008 Annual	Off-Highway Tractors	Construction and Mining Equipment	Contra Costa	SF	BA	6.94E+00	2.13E+01	7.96E+02	8.68E+00	0.00E+00	1.18E-03	8.71E+00	2,883
2008 Annual	Dumpers/Tenders	Construction and Mining Equipment	Contra Costa	SF	BA	1.01E+00	1.83E+00	6.36E-01	6.97E-03	0.00E+00	9.96E-07	6.99E-03	2
2008 Annual	Other Construction Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.39E+01	2.63E+01	1.21E+01	1.33E-01	0.00E+00	1.41E-05	1.33E-01	44
2008 Annual	Other Construction Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	2.35E+00	4.45E+00	2.68E+00	2.94E-02	0.00E+00	3.48E-06	2.94E-02	10
2008 Annual	Other Construction Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	3.61E+00	6.98E+00	9.10E+00	9.76E-02	0.00E+00	3.91E-05	9.84E-02	33
2008 Annual	Other Construction Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	5.96E+00	1.15E+01	4.27E+01	4.65E-01	0.00E+00	8.15E-05	4.67E-01	155
2008 Annual	Other Construction Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	8.23E+00	1.59E+01	7.73E+01	8.46E-01	0.00E+00	9.71E-05	8.48E-01	281
2008 Annual	Other Construction Equipment	Construction and Mining Equipment	Contra Costa	SF	BA	1.91E+01	3.69E+01	4.25E+02	4.69E+00	0.00E+00	3.24E-04	4.70E+00	1,555
COUNTYWIDE						10,354	20,866	113,467	1,235	0	0	1,241	410,776
Building Permits issued for Residential Development in Costra Costa County			2,155										
Building Permits issued in Danville			86										
Percent Land Acreage			3.99%			413	833	4,528	49	0	0	50	16,393

Source: According to the Association of Bay Area Governments (ABAG 2009), Danville had 86 housing (building) permits issued in 2008 compared to 2,155 (3.99%) within Contra Costa County. http://www.abag.ca.gov/pdfs/2009_Housing_Data.pdf. Since data on non-residential permits is not collected by ABAG, it is

										Tons/Day				MTons/Year
CY	Season	Equipment	Class	County	Air Basin	Air Dist.	Population	Activity	Consumption	CO2 Exhaust	N2O Exhaust	CH4 Exhaust	CO2e	CO2e
2008	Annual	Chainsaws	Lawn and Garden Equipment	Contra Costa	SF	BA	2.30E+03	1.82E+03	1.09E+02	4.45E-01	7.37E-04	5.65E-03	7.92E-01	262
2008	Annual	Chainsaws	Lawn and Garden Equipment	Contra Costa	SF	BA	2.59E+04	3.48E+02	2.49E+01	8.47E-02	1.36E-04	1.11E-03	1.50E-01	50
2008	Annual	Chainsaws	Lawn and Garden Equipment	Contra Costa	SF	BA	1.62E+03	1.29E+03	1.85E+02	7.57E-01	8.32E-04	9.63E-03	1.22E+00	403
2008	Annual	Chainsaws	Lawn and Garden Equipment	Contra Costa	SF	BA	1.82E+04	2.45E+02	3.84E+01	1.44E-01	1.49E-04	1.59E-03	2.24E-01	74
2008	Annual	Chainsaws Preempt	Lawn and Garden Equipment	Contra Costa	SF	BA	2.02E+03	1.60E+03	2.31E+02	9.43E-01	1.04E-03	1.20E-02	1.52E+00	502
2008	Annual	Chainsaws Preempt	Lawn and Garden Equipment	Contra Costa	SF	BA	2.27E+04	3.05E+02	5.50E+01	1.80E-01	1.65E-04	2.52E-03	2.84E-01	94
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	3.62E+00	1.25E+01	1.08E+01	5.08E-02	4.44E-05	4.65E-05	6.55E-02	22
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	6.46E+00	2.92E-01	2.79E-01	1.19E-03	8.41E-07	1.29E-06	1.47E-03	0
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	2.05E+01	7.10E+01	1.03E+02	4.72E-01	3.15E-04	4.56E-04	5.79E-01	192
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	3.66E+01	1.65E+00	2.60E+00	1.10E-02	5.88E-06	1.12E-05	1.30E-02	4
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	2.91E-01	3.70E-01	3.39E-01	3.73E-03	0.00E+00	4.22E-07	3.73E-03	1
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	8.01E+00	1.02E+01	3.56E+01	3.87E-01	0.00E+00	7.33E-05	3.89E-01	129
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	5.49E-01	6.99E-01	4.21E+00	4.61E-02	0.00E+00	5.73E-06	4.62E-02	15
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	1.29E-01	1.65E-01	1.66E+00	1.83E-02	0.00E+00	1.62E-06	1.83E-02	6
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	1.20E+00	1.52E+00	1.71E+01	1.88E-01	0.00E+00	1.50E-05	1.88E-01	62
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	1.36E+00	1.73E+00	4.67E+01	5.14E-01	0.00E+00	4.19E-05	5.15E-01	170
2008	Annual	Chippers/Stump Grinders	Lawn and Garden Equipment	Contra Costa	SF	BA	2.58E+00	3.29E+00	1.27E+02	1.39E+00	0.00E+00	1.40E-04	1.39E+00	462
2008	Annual	Commercial Turf Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	3.00E+01	6.58E+01	2.71E+01	1.40E-01	1.45E-04	1.01E-04	1.87E-01	62
2008	Annual	Commercial Turf Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	1.48E+01	3.25E+01	2.91E+01	1.46E-01	1.03E-04	1.10E-04	1.80E-01	60
2008	Annual	Commercial Turf Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	2.71E+02	5.93E+02	3.25E+02	1.54E+00	1.58E-03	1.32E-03	2.06E+00	683
2008	Annual	Commercial Turf Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	1.33E+02	2.92E+02	2.85E+02	1.31E+00	1.02E-03	1.16E-03	1.65E+00	547
2008	Annual	Commercial Turf Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	5.38E+01	1.08E+02	1.76E+02	1.30E+00	5.28E-04	4.30E-04	1.48E+00	489
2008	Annual	Commercial Turf Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	3.55E-01	7.13E-01	1.75E+00	1.61E-02	3.03E-06	5.01E-07	1.71E-02	6
2008	Annual	Commercial Turf Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	1.57E+01	4.59E+01	2.02E+01	2.22E-01	0.00E+00	2.17E-05	2.22E-01	74
2008	Annual	Commercial Turf Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	2.95E+02	8.63E+02	5.69E+02	6.25E+00	0.00E+00	6.90E-04	6.26E+00	2,073
2008	Annual	Front Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	1.91E+02	1.42E+02	7.63E+01	3.67E-01	3.02E-04	2.07E-04	4.65E-01	154
2008	Annual	Front Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	6.18E+03	4.77E+02	2.70E+02	1.23E+00	1.06E-03	1.06E-03	1.58E+00	525
2008	Annual	Front Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	1.50E+02	1.11E+02	8.04E+01	3.76E-01	2.72E-04	2.14E-04	4.65E-01	154
2008	Annual	Front Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	4.84E+03	3.74E+02	2.81E+02	1.26E+00	9.06E-04	1.05E-03	1.57E+00	519
2008	Annual	Lawn & Garden Tractors	Lawn and Garden Equipment	Contra Costa	SF	BA	7.64E+02	2.69E+02	1.74E+02	8.41E-01	5.79E-04	3.99E-04	1.03E+00	341
2008	Annual	Lawn & Garden Tractors	Lawn and Garden Equipment	Contra Costa	SF	BA	4.96E+03	1.99E+02	1.34E+02	6.20E-01	4.77E-04	4.49E-04	7.78E-01	257
2008	Annual	Lawn & Garden Tractors	Lawn and Garden Equipment	Contra Costa	SF	BA	3.01E+02	1.06E+02	1.09E+02	5.12E-01	2.82E-04	2.50E-04	6.05E-01	200
2008	Annual	Lawn & Garden Tractors	Lawn and Garden Equipment	Contra Costa	SF	BA	1.96E+03	7.83E+01	8.35E+01	3.78E-01	2.24E-04	2.72E-04	4.53E-01	150
2008	Annual	Lawn & Garden Tractors	Lawn and Garden Equipment	Contra Costa	SF	BA	4.36E+00	1.24E+00	1.97E+00	1.61E-02	5.93E-06	3.30E-06	1.80E-02	6
2008	Annual	Lawn & Garden Tractors	Lawn and Garden Equipment	Contra Costa	SF	BA	6.24E+02	9.29E+02	3.94E+02	4.31E+00	0.00E+00	4.90E-04	4.32E+00	1,432
2008	Annual	Lawn & Garden Tractors	Lawn and Garden Equipment	Contra Costa	SF	BA	4.88E+02	7.27E+02	4.73E+02	5.19E+00	0.00E+00	6.10E-04	5.21E+00	1,724
2008	Annual	Lawn Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	1.29E+03	8.05E+02	9.10E+01	5.49E-01	7.11E-04	6.40E-04	7.83E-01	259
2008	Annual	Lawn Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	9.65E+03	4.10E+02	6.97E+01	2.79E-01	3.54E-04	1.86E-03	4.28E-01	142
2008	Annual	Lawn Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	7.61E+03	4.77E+03	5.76E+02	3.25E+00	4.21E-03	3.79E-03	4.63E+00	1,535
2008	Annual	Lawn Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	1.21E+05	5.12E+03	8.16E+02	3.49E+00	5.09E-03	6.25E-03	5.20E+00	1,722
2008	Annual	Leaf Blowers/Vacuums	Lawn and Garden Equipment	Contra Costa	SF	BA	1.12E+04	6.03E+03	3.22E+02	1.43E+00	2.40E-03	1.38E-02	2.46E+00	815
2008	Annual	Leaf Blowers/Vacuums	Lawn and Garden Equipment	Contra Costa	SF	BA	2.89E+04	3.80E+02	2.65E+01	8.99E-02	1.47E-04	1.18E-03	1.60E-01	53
2008	Annual	Leaf Blowers/Vacuums	Lawn and Garden Equipment	Contra Costa	SF	BA	3.54E+02	6.02E+01	4.05E+00	2.05E-02	3.18E-05	1.72E-05	3.07E-02	10
2008	Annual	Leaf Blowers/Vacuums	Lawn and Garden Equipment	Contra Costa	SF	BA	3.04E+02	4.00E+00	3.41E-01	1.36E-03	2.55E-06	2.45E-06	2.21E-03	1
2008	Annual	Leaf Blowers/Vacuums	Lawn and Garden Equipment	Contra Costa	SF	BA	2.58E-01	8.49E-02	1.17E-02	1.28E-04	0.00E+00	1.39E-08	1.28E-04	0
2008	Annual	Leaf Blowers/Vacuums	Lawn and Garden Equipment	Contra Costa	SF	BA	2.26E-01	7.43E-02	1.65E-01	1.81E-03	0.00E+00	2.89E-07	1.81E-03	1
2008	Annual	Leaf Blowers/Vacuums	Lawn and Garden Equipment	Contra Costa	SF	BA	6.46E-02	2.12E-02	9.66E-02	1.06E-03	0.00E+00	7.77E-08	1.07E-03	0
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	1.27E+01	2.39E+00	1.33E-01	6.55E-04	1.03E-06	4.07E-06	1.06E-03	0
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	3.89E+02	4.58E+00	3.70E-01	1.26E-03	1.91E-06	1.64E-05	2.20E-03	1
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	5.52E+00	1.04E+00	2.90E-01	1.42E-03	1.05E-06	8.85E-06	1.94E-03	1
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	1.69E+02	2.00E+00	7.27E-01	2.74E-03	1.91E-06	3.01E-05	3.96E-03	1
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	2.38E+02	4.46E+01	9.33E+00	4.90E-02	5.37E-05	4.98E-05	6.67E-02	22
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	7.28E+03	8.58E+01	2.35E+01	9.42E-02	1.02E-04	1.65E-04	1.29E-01	43
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	1.06E+02	1.98E+01	9.06E+00	4.35E-02	4.04E-05	2.64E-05	5.66E-02	19
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	3.23E+03	3.81E+01	1.88E+01	8.37E-02	7.55E-05	6.35E-05	1.08E-01	36
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	2.23E+00	4.19E-01	4.19E-01	1.95E-03	1.23E-06	1.25E-06	2.36E-03	1

2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	6.87E+01	8.10E-01	8.62E-01	3.78E-03	2.26E-06	2.82E-06	4.54E-03	2
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	1.62E-01	2.70E-02	5.95E-02	4.87E-04	1.59E-07	1.02E-07	5.38E-04	0
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	3.88E-01	6.48E-02	3.67E-01	3.27E-03	7.99E-07	4.60E-07	3.53E-03	1
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	2.26E-01	2.68E-01	1.50E-01	1.64E-03	0.00E+00	1.70E-07	1.64E-03	1
2008	Annual	Other Lawn & Garden Equipment	Lawn and Garden Equipment	Contra Costa	SF	BA	3.23E-02	3.83E-02	2.84E-02	3.12E-04	0.00E+00	3.51E-08	3.13E-04	0
2008	Annual	Rear Engine Riding Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	4.17E+03	3.10E+03	1.04E+03	5.02E+00	5.13E-03	2.83E-03	6.67E+00	2,207
2008	Annual	Rear Engine Riding Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	3.66E+03	2.82E+02	1.00E+02	4.57E-01	4.89E-04	3.94E-04	6.17E-01	204
2008	Annual	Rear Engine Riding Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	1.91E+01	1.42E+01	9.27E+00	4.33E-02	3.28E-05	2.47E-05	5.40E-02	18
2008	Annual	Rear Engine Riding Mowers	Lawn and Garden Equipment	Contra Costa	SF	BA	1.64E+01	1.27E+00	8.64E-01	3.88E-03	2.92E-06	3.24E-06	4.86E-03	2
2008	Annual	Shredders	Lawn and Garden Equipment	Contra Costa	SF	BA	5.67E+01	2.11E+01	9.24E+00	4.79E-02	4.67E-05	3.23E-05	6.30E-02	21
2008	Annual	Shredders	Lawn and Garden Equipment	Contra Costa	SF	BA	2.02E+03	4.97E+00	3.06E+00	1.13E-02	7.80E-06	9.86E-05	1.58E-02	5
2008	Annual	Shredders	Lawn and Garden Equipment	Contra Costa	SF	BA	1.50E+02	5.58E+01	1.54E+01	8.45E-02	1.09E-04	1.12E-04	1.21E-01	40
2008	Annual	Shredders	Lawn and Garden Equipment	Contra Costa	SF	BA	5.58E+03	1.38E+01	5.34E+00	2.08E-02	2.01E-05	3.73E-05	2.79E-02	9
2008	Annual	Tillers	Lawn and Garden Equipment	Contra Costa	SF	BA	7.90E+02	1.21E+02	1.75E+01	9.16E-02	1.27E-04	9.74E-05	1.33E-01	44
2008	Annual	Tillers	Lawn and Garden Equipment	Contra Costa	SF	BA	3.07E+03	1.51E+02	2.71E+01	1.15E-01	1.59E-04	2.25E-04	1.69E-01	56
2008	Annual	Trimmers/Edgers/Brush Cutters	Lawn and Garden Equipment	Contra Costa	SF	BA	7.51E+03	2.50E+03	1.11E+02	5.32E-01	9.39E-04	3.71E-03	9.01E-01	298
2008	Annual	Trimmers/Edgers/Brush Cutters	Lawn and Garden Equipment	Contra Costa	SF	BA	8.37E+04	4.93E+03	2.18E+02	1.05E+00	2.00E-03	6.75E-03	1.81E+00	600
2008	Annual	Trimmers/Edgers/Brush Cutters	Lawn and Garden Equipment	Contra Costa	SF	BA	1.39E+03	5.16E+02	1.60E+01	8.80E-02	3.15E-04	1.16E-04	1.88E-01	62
2008	Annual	Trimmers/Edgers/Brush Cutters	Lawn and Garden Equipment	Contra Costa	SF	BA	6.47E+03	3.81E+02	1.65E+01	6.50E-02	1.95E-04	1.73E-04	1.29E-01	43
2008	Annual	Wood Splitters	Lawn and Garden Equipment	Contra Costa	SF	BA	2.57E+02	9.04E+01	2.69E+01	1.48E-01	1.28E-04	1.61E-04	1.91E-01	63
2008	Annual	Wood Splitters	Lawn and Garden Equipment	Contra Costa	SF	BA	6.42E+03	1.93E+01	7.79E+00	3.16E-02	2.78E-05	4.71E-05	4.12E-02	14
COUNTYWIDE							410,889	41,099	8,098	49	0	0	61	20,254
Housing Units in Contra Costa (2008):				399,737										
Housing Units in Danville 2008*				17,160	4.29%		17,639	1,764	348	2	0	0	3	869

County Source: Association of Bay Area Governments (ABAG), 2009. San Francisco Bay Area Housing Data. October. http://www.abag.ca.gov/pdfs/2009_Housing_Data.pdf

.* Danville housing units is based on the General Plan Update

										Tons/Day				MTons/Year
CY	Season	Equipment	Class	County	Air Basin	Air Dist.	Population	Activity	Consumption	CO2 Exhaust	N2O Exhaust	CH4 Exhaust	CO2e	CO2e
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	5.68E+01	2.09E+01	1.56E+00	6.73E-03	1.57E-05	3.68E-05	1.24E-02	4
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	4.47E+01	1.10E+01	9.10E-01	3.56E-03	7.96E-06	2.62E-05	6.57E-03	2
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	5.73E-01	2.11E-01	1.28E-01	6.11E-04	5.15E-07	1.02E-06	7.92E-04	0
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	4.37E-01	1.08E-01	7.33E-02	3.13E-04	2.39E-07	1.32E-06	4.15E-04	0
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	2.26E+02	1.60E+02	9.64E+00	5.21E-02	1.29E-04	1.27E-04	9.48E-02	31
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	1.78E+02	8.43E+01	6.14E+00	2.75E-02	6.45E-05	1.31E-04	5.03E-02	17
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	6.09E+01	4.30E+01	2.28E+01	1.12E-01	1.06E-04	1.28E-04	1.48E-01	49
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	4.79E+01	2.27E+01	1.31E+01	5.94E-02	5.21E-05	1.60E-04	7.89E-02	26
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	7.37E-01	5.21E-01	5.81E-01	2.89E-03	1.89E-06	2.47E-06	3.53E-03	1
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	5.73E-01	2.72E-01	3.20E-01	1.51E-03	9.22E-07	2.44E-06	1.85E-03	1
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	7.46E+02	2.74E+02	8.11E+01	3.53E-01	4.41E-04	9.96E-04	5.11E-01	169
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	5.86E+02	1.45E+02	4.50E+01	1.87E-01	2.28E-04	5.72E-04	2.70E-01	89
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	2.05E+03	7.54E+02	4.95E+02	2.18E+00	1.95E-03	2.77E-03	2.85E+00	943
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	1.61E+03	3.98E+02	2.73E+02	1.15E+00	9.98E-04	1.76E-03	1.50E+00	497
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	1.10E+03	4.05E+02	5.64E+02	2.48E+00	1.48E-03	2.95E-03	3.00E+00	992
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	8.65E+02	2.14E+02	3.07E+02	1.31E+00	7.50E-04	1.80E-03	1.58E+00	523
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	3.67E+02	1.15E+02	2.67E+02	2.17E+00	6.95E-04	4.77E-04	2.39E+00	792
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	7.08E+01	2.23E+01	1.21E+02	1.07E+00	2.67E-04	1.59E-04	1.16E+00	384
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	6.69E+00	2.11E+00	1.90E+01	1.74E-01	3.56E-05	1.49E-05	1.85E-01	61
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	2.65E+02	1.87E+02	3.67E+01	1.83E-01	2.94E-04	4.05E-04	2.83E-01	94
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	2.08E+02	9.88E+01	2.32E+01	9.68E-02	1.44E-04	3.01E-04	1.48E-01	49
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	2.87E+02	2.03E+02	1.17E+02	5.30E-01	5.33E-04	6.18E-04	7.08E-01	234
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	2.25E+02	1.07E+02	6.49E+01	2.80E-01	2.68E-04	3.95E-04	3.71E-01	123
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	7.35E+01	5.19E+01	6.31E+01	2.88E-01	2.01E-04	2.86E-04	3.56E-01	118
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	5.77E+01	2.74E+01	3.46E+01	1.52E-01	9.91E-05	1.81E-04	1.87E-01	62
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	2.93E+01	1.77E+01	4.08E+01	3.27E-01	1.07E-04	8.32E-05	3.62E-01	120
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	3.71E+01	2.25E+01	1.40E+02	1.23E+00	2.86E-04	2.12E-04	1.32E+00	438
2008	Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	1.12E+00	6.77E-01	6.12E+00	5.59E-02	1.15E-05	5.23E-06	5.95E-02	20
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	9.56E+01	1.48E+02	3.30E+01	1.96E-01	2.90E-04	2.96E-04	2.92E-01	97
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	7.51E+01	7.82E+01	1.74E+01	1.04E-01	1.53E-04	1.57E-04	1.54E-01	51
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	4.84E+01	7.49E+01	2.93E+01	1.39E-01	1.75E-04	1.27E-04	1.96E-01	65
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	3.80E+01	3.96E+01	1.55E+01	7.34E-02	9.10E-05	6.78E-05	1.03E-01	34
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	6.53E+00	1.01E+01	9.88E+00	4.55E-02	3.64E-05	4.40E-05	5.77E-02	19
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	5.13E+00	5.34E+00	5.28E+00	2.41E-02	1.87E-05	2.43E-05	3.04E-02	10
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	1.11E+01	1.48E+01	3.24E+01	2.50E-01	8.98E-05	8.46E-05	2.79E-01	92
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	3.61E+01	4.78E+01	1.86E+02	1.60E+00	4.96E-04	3.72E-04	1.76E+00	584
2008	Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	2.43E+00	3.22E+00	2.21E+01	2.01E-01	5.02E-05	2.15E-05	2.17E-01	72
2008	Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	1.87E+02	1.06E+02	6.65E+01	2.83E-01	2.67E-04	4.22E-04	3.74E-01	124
2008	Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	6.76E+02	3.85E+02	3.62E+02	1.58E+00	1.18E-03	1.98E-03	1.99E+00	657
2008	Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	5.82E+01	3.31E+01	8.22E+01	6.57E-01	2.14E-04	1.75E-04	7.27E-01	241
2008	Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	5.94E+01	3.38E+01	1.17E+02	1.03E+00	3.29E-04	1.88E-04	1.14E+00	376
2008	Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	4.10E+00	2.33E+00	1.41E+01	1.28E-01	3.33E-05	1.26E-05	1.39E-01	46
2008	Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	2.00E+02	7.37E+01	3.06E+01	1.48E-01	1.53E-04	3.26E-04	2.03E-01	67
2008	Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	1.57E+02	3.90E+01	1.85E+01	7.84E-02	7.83E-05	2.31E-04	1.07E-01	36
2008	Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	1.79E+02	6.58E+01	4.20E+01	1.85E-01	1.68E-04	2.35E-04	2.42E-01	80
2008	Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	1.41E+02	3.48E+01	2.31E+01	9.79E-02	8.58E-05	1.49E-04	1.28E-01	42
2008	Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	3.36E+01	1.24E+01	2.01E+01	8.95E-02	5.01E-05	1.00E-04	1.07E-01	35
2008	Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	2.64E+01	6.52E+00	1.10E+01	4.73E-02	2.49E-05	6.40E-05	5.63E-02	19
2008	Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	3.28E+00	1.03E+00	2.70E+00	2.19E-02	6.65E-06	5.06E-06	2.41E-02	8
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	5.27E+00	1.66E+00	1.04E+01	6.96E-02	0.00E+00	9.37E-05	7.16E-02	24
2008	Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	4.37E+00	1.37E+00	1.51E+01	1.02E-01	0.00E+00	1.10E-04	1.04E-01	34
2008	Annual	Gas Compressors	Light Commercial Equipment	Contra Costa	SF	BA	8.19E-01	1.91E+01	6.52E+01	4.48E-01	0.00E+00	3.11E-04	4.54E-01	150
2008	Annual	Gas Compressors	Light Commercial Equipment	Contra Costa	SF	BA	1.69E+00	3.94E+01	3.82E+02	2.52E+00	0.00E+00	1.70E-03	2.55E+00	845
2008	Annual	Gas Compressors	Light Commercial Equipment	Contra Costa	SF	BA	2.73E-01	6.36E+00	9.80E+01	6.55E-01	0.00E+00	4.73E-04	6.65E-01	220
2008	Annual	Gas Compressors	Light Commercial Equipment	Contra Costa	SF	BA	2.18E-01	5.09E+00	1.01E+02	6.75E-01	0.00E+00	3.64E-04	6.83E-01	226

2008 Annual	Gas Compressors	Light Commercial Equipment	Contra Costa	SF	BA	1.91E-01	4.45E+00	1.43E+02	9.51E-01	0.00E+00	6.51E-04	9.64E-01	319
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	1.38E+02	1.27E+02	5.97E+01	6.50E-01	0.00E+00	1.08E-04	6.52E-01	216
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	1.01E+02	9.33E+01	7.53E+01	8.21E-01	0.00E+00	1.38E-04	8.24E-01	273
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	1.23E+02	1.14E+02	1.62E+02	1.74E+00	0.00E+00	6.23E-04	1.76E+00	581
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	1.87E+02	1.73E+02	6.18E+02	6.74E+00	0.00E+00	1.19E-03	6.76E+00	2,240
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	1.11E+01	1.02E+01	6.62E+01	7.25E-01	0.00E+00	8.39E-05	7.27E-01	241
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	6.18E+00	5.72E+00	5.51E+01	6.07E-01	0.00E+00	4.70E-05	6.08E-01	201
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	1.37E+01	1.27E+01	1.94E+02	2.14E+00	0.00E+00	1.49E-04	2.14E+00	709
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	8.54E+00	7.90E+00	1.95E+02	2.15E+00	0.00E+00	1.54E-04	2.15E+00	711
2008 Annual	Generator Sets	Light Commercial Equipment	Contra Costa	SF	BA	2.22E+00	2.06E+00	9.80E+01	1.08E+00	0.00E+00	1.03E-04	1.08E+00	357
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	1.04E+02	1.14E+02	3.89E+01	4.23E-01	0.00E+00	8.20E-05	4.25E-01	141
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	3.09E+01	3.41E+01	3.05E+01	3.32E-01	0.00E+00	7.34E-05	3.34E-01	110
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	5.39E+01	5.94E+01	9.49E+01	1.02E+00	0.00E+00	3.88E-04	1.03E+00	340
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	1.06E+02	1.17E+02	4.16E+02	4.54E+00	0.00E+00	8.29E-04	4.56E+00	1,509
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	1.14E+01	1.26E+01	8.06E+01	8.83E-01	0.00E+00	1.05E-04	8.85E-01	293
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	8.24E+00	9.09E+00	8.30E+01	9.14E-01	0.00E+00	7.33E-05	9.16E-01	303
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	1.63E-01	1.79E-01	2.81E+00	3.09E-02	0.00E+00	2.22E-06	3.10E-02	10
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	2.71E-02	2.99E-02	7.74E-01	8.52E-03	0.00E+00	6.30E-07	8.53E-03	3
2008 Annual	Pumps	Light Commercial Equipment	Contra Costa	SF	BA	5.96E-01	6.58E-01	4.05E+01	4.45E-01	0.00E+00	4.34E-05	4.46E-01	148
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	1.41E+00	3.14E+00	1.04E+00	1.13E-02	0.00E+00	2.20E-06	1.14E-02	4
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	2.79E+00	6.23E+00	4.13E+00	4.49E-02	0.00E+00	9.93E-06	4.51E-02	15
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	2.54E+01	5.66E+01	5.91E+01	6.29E-01	0.00E+00	3.16E-04	6.36E-01	211
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	1.69E+02	3.77E+02	8.13E+02	8.84E+00	0.00E+00	1.86E-03	8.88E+00	2,939
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	6.40E+00	1.43E+01	5.77E+01	6.31E-01	0.00E+00	8.72E-05	6.32E-01	209
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	9.00E+00	2.01E+01	1.20E+02	1.32E+00	0.00E+00	1.23E-04	1.32E+00	436
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	1.17E+01	2.62E+01	2.75E+02	3.03E+00	0.00E+00	2.52E-04	3.04E+00	1,005
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	4.39E+00	9.79E+00	1.59E+02	1.75E+00	0.00E+00	1.48E-04	1.76E+00	581
2008 Annual	Air Compressors	Light Commercial Equipment	Contra Costa	SF	BA	1.08E-01	2.42E-01	5.35E+00	5.87E-02	0.00E+00	6.16E-06	5.89E-02	19
2008 Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	4.68E+01	8.24E+01	2.35E+01	2.55E-01	0.00E+00	4.94E-05	2.56E-01	85
2008 Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	4.12E+01	7.25E+01	3.75E+01	4.09E-01	0.00E+00	9.03E-05	4.11E-01	136
2008 Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	1.27E+02	2.23E+02	2.71E+02	2.89E+00	0.00E+00	1.32E-03	2.92E+00	967
2008 Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	9.85E+01	1.73E+02	3.14E+02	3.42E+00	0.00E+00	6.83E-04	3.43E+00	1,137
2008 Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	4.88E-01	8.58E-01	3.85E+00	4.21E-02	0.00E+00	5.53E-06	4.22E-02	14
2008 Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	1.08E-01	1.91E-01	1.03E+00	1.13E-02	0.00E+00	1.01E-06	1.14E-02	4
2008 Annual	Welders	Light Commercial Equipment	Contra Costa	SF	BA	2.71E-01	4.77E-01	3.63E+00	3.99E-02	0.00E+00	3.15E-06	4.00E-02	13
2008 Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	6.40E+00	2.54E+00	5.69E-01	6.20E-03	0.00E+00	1.03E-06	6.22E-03	2
2008 Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	1.49E+00	5.91E-01	1.94E-01	2.11E-03	0.00E+00	3.55E-07	2.12E-03	1
2008 Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	2.95E+00	1.17E+00	7.74E-01	8.37E-03	0.00E+00	2.42E-06	8.42E-03	3
2008 Annual	Pressure Washers	Light Commercial Equipment	Contra Costa	SF	BA	1.22E+00	4.84E-01	5.33E-01	5.82E-03	0.00E+00	9.40E-07	5.84E-03	2
COUNTYWIDE						12,721	6,646	9,171	76	0	0	80	26,585
Employment in Contra Costa County (2010):		376,820											
Employment in Danville (2008)*		15,162	4.02%			512	267	369	3	0	0	3	1,070

County Source: Association of Bay Area Governments. 2009. Population, Housing, and Employment Projections

.* Danville employment is based on the General Plan Update

Other Emissions Sources - Off-road Equipment

	2008 MTons of CO2e	Notes:
Agricultural Equipment	105	Based on the percentage of Farmland & other agricultural (crop) land in Danville compared to the agricultural land in Contra Costa County. (excludes grazing land)
Construction Equipment	16,393	Based on the percentage of building building permits issued in Danville compared to Contra Costa County.
Lawn & Garden Equipment	869	Based on the percentage of residential units in Danville compared to Contra Costa County.
Light Commercial Equipment	1,070	Based on the percentage of employment in Danville compared to Contra Costa County.
TOTAL	18,437	

Source: OFFROAD2007. Based on equipment use in Contra Costa County.

Year 2020 BAU	2020 MTons of CO2e	Notes
Agricultural Equipment	52	Phase out of Agriculture
Construction Equipment	16,393	similar to historic
Lawn & Garden Equipment	930	proportional to population growth
Light Commercial Equipment	1,118	proportional to employment growth
TOTAL	18,493	

Forecast Year (based on increase in jobs and housing)

Year 2035 BAU	2035 MTons of CO2e	Notes
Agricultural Equipment	0	No agriculture
Construction Equipment	16,393	similar to historic
Lawn & Garden Equipment	1,005	proportional to population growth
Light Commercial Equipment	1,178	proportional to employment growth
TOTAL	18,576	

Forecast Year (based on increase in jobs and housing)

State and Federal Low Carbon Fuel Standard (LCFS)

On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the court's rulings preliminarily enjoins the CARB from enforcing the regulation during the pendency of the litigation. In January 2012, CARB appealed the decision and on April 23, 2012, the Night Circuit Court granted CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision.

Year 2020 Adjusted	2020 MTons of CO2e	Notes
Agricultural Equipment	47	With LCFS (10% reduction)
Construction Equipment	14,754	With LCFS (10% reduction)
Lawn&Garden Equipment	837	With LCFS (10% reduction)
Light Commercial Equipment	1,006	With LCFS (10% reduction)
TOTAL	16,644	
reduction	1,849	

Year 2035 Adjusted	2035 MTons of CO2e	Notes
Agricultural Equipment	0	With LCFS (10% reduction)
Construction Equipment	14,754	With LCFS (10% reduction)
Lawn&Garden Equipment	904	With LCFS (10% reduction)
Light Commercial Equipment	1,060	With LCFS (10% reduction)
TOTAL	16,718	
reduction	1,858	

Other Measures - Offroad Equipment

EC-17	Initiate yard equipment exchange program to allow residents to trade in gas-powered machines for electric models.
EC-16	Adopt an ordinance to ban the use of two-stroke engine leaf blowers. As part of this ordinance, establish planting and maintenance guidelines to reduce maintenance needs.
EC-14	Require new developments to have outdoor electrical outlets to support use of electrical yard equipment.

Leaf Blowers and Mowers:		195	MTons (Existing)
	2020	208	MTons
	2035	225	MTons
Percent of Participating Residents that switch to Electric:		0.05%	
GHG Reductions			
	2020	0.1	MTons
	2035	0.1	MTons

Other Support Measures

GB-5	Require the use of cement substitutes and recycled building materials for new construction.
P-1	Develop policies, incentives, and design guidelines that encourage the public and private purchase and use of durable and nondurable items, including building materials, made from recycled materials or renewable resources.
OS-1	Identify and inventory potential community garden and urban farm sites on public easements, PG&E easements, right-of-ways, and schoolyards, and develop a program to establish community gardens in appropriate locations.
OS-2	Allow small-scale and pesticide-free food production through the Zoning Ordinance, with an emphasis on local food production.
OS-3	Encourage significant new residential developments over 50 units to include space that can be used to grow food.
OS-4	Establish a process through which a neighborhood can propose and adopt a site as a community garden.
OS-5	Continue to support the Danville Farmers' Market as a source for locally-grown food.
OS-6	Require the Danville farmers' market to accept food stamps and other public food benefits.
CA-1	Develop and implement an outreach plan to engage local businesses in climate change reduction programs.
CA-2	Establish and maintain a "sustainability information center" at Town Hall or Library to inform the public and distribute available brochures, and provide information on sustainability on the Town's website.
CA-3	Create Growing Greener Together Campaign, which provides Town employees and community members with a newsletter featuring green tips and best practices for home and at work.
CA-4	Continue economic vitality programs aimed at supporting local business by encouraging residents to shop locally.