



CITY OF LAFAYETTE
ENVIRONMENTAL INDICATORS
2011 ANNUAL REPORT

INTRODUCTION

To monitor the community's progress in meeting its goals towards sustainability, the Environmental Task Force is creating a set of environmental indicators. An environmental indicator is a statistic or trend that displays the direction in which a particular condition is heading; they are grouped under the City's adopted Environmental Strategy goals. The indicators establish baselines and measure, and will continue to measure regularly, the community's progress in meeting these goals. It is anticipated that more indicators will be added every year as data relevant to Lafayette becomes available.

The idea for an annual environmental indicators report came from San Mateo County, and the cities of Santa Monica and Pasadena, when the Task Force discovered very few other cities in California produce similar annual reports on their environmental progress. This will be the first such report produced by a city in Contra Costa County. Some cities and counties have also developing web-based dashboards where the community can track progress on climate and environmental action plans.

BACKGROUND

The City Council adopted the first Environmental Strategy in November 2006 and readopted an updated version in March 2011. The Strategy establishes guiding principles and goals to enable the City and its residents to meet their present needs without sacrificing the ability of future generations to meet their needs.

Guiding Principles

The City recognizes that achieving its commitment requires the effort of individual community members and that it has an important role in educating its citizens and acting as a model. In fulfilling its commitment, the City of Lafayette will be guided by the following principles:

- The importance of environmental sustainability will be considered in City policy and decisions
- The protection, preservation and restoration of the natural environment are high priorities for the City
- Broad community cooperation among the City government, businesses, residents, community organizations, and schools and other service providers is essential to effective community governance
- Community awareness, responsibility, participation, and education are key elements of an environmentally sustainable community
- Environmental quality, economic health, and social equity are related
- The City recognizes that it is part of a wider community and local government issues cannot be separated from their broader context

City Goals

To ensure the environmental sustainability of the community, the City will establish and work towards achieving goals in the following areas:

- Resource conservation
- Environmental effects on public health and welfare
- Environmentally sensitive land use
- Community education and civic involvement

INDICATORS

The indicators were selected based on three criteria: they are meaningful to Lafayette; the data for each is easily obtained; and the data will be easily obtainable in the future. This initial set is focused on environmental indicators. In the future, the set may be expanded to include broader sustainability indicators. Each follows the same format:

- *Description* – explanation of the metric and the source of the data
- *Why this indicator is important*
- *How we are doing*

Goal: Resource Conservation

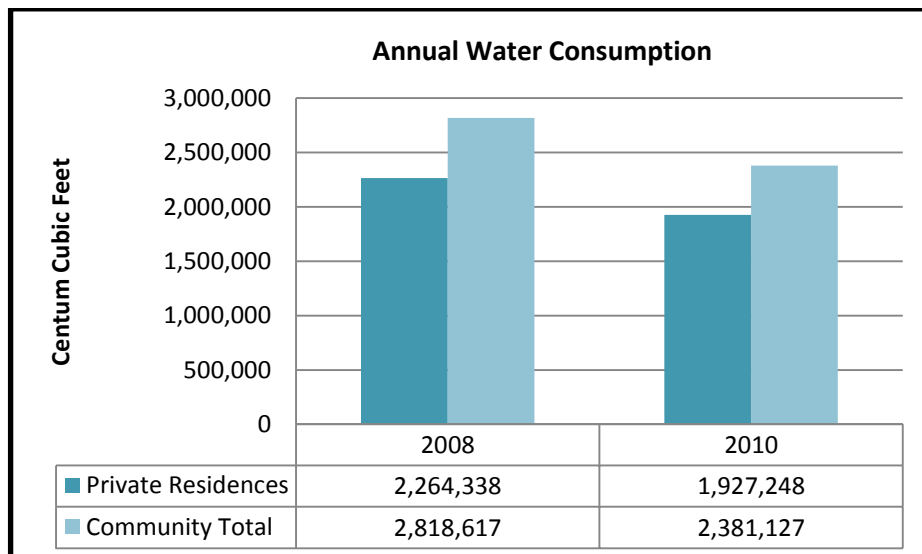
- Water
- Electricity
- Natural Gas
- Alternative Energy
- Alternative Transportation Modes
- Solid Waste
- Reusable Shopping Bags
- Other ideas for future indicators related to resource conservation

▪ **Water**

Description: Water consumption data was provided by EBMUD for 2008 and 2010. The data was categorized by the type of user (such as schools, retail, restaurants, apartments, private residences) and the amount of water consumed by each user type per month for the year. Consumption is measured in centum cubic feet (100 cubic feet = 748 gallons). EBMUD notes that 2008 was considered a drought year.

Why this indicator is important: Water is one of our most precious resources, and its conservation is vitally important to every facet of life. This is particularly true in Lafayette where private residential customers (single family homes) are the largest users of water in the community.

How we are doing: EBMUD was able to provide two years of data, so a comparison is made for the amounts of water consumption. The comparison shows improvement – residents used 15 percent less water in 2010 than in 2008 and the community as a whole used 16 percent less. These reductions probably are the result of a number of factors, including higher water rates and more awareness about conserving water for environmental reasons.

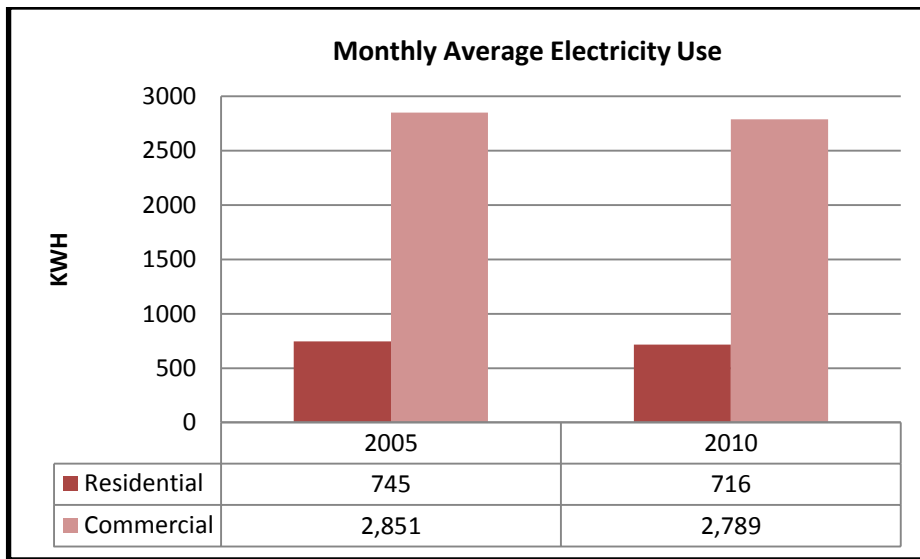


▪ **Electricity**

Description: Electricity use data for residential and commercial customers was provided by PG&E for 2005 and 2010. Average monthly electricity use is calculated by dividing the number of customer months in a year into the total annual residential or commercial usage.

Why this indicator is important: Electricity use contributes directly to greenhouse gas emissions (see below for more information), so using less has a direct impact on reducing these emissions. Having data for 2005 is also important; this is the year that is being used throughout California as the baseline year for monitoring emission reductions.

How we are doing: PG&E provided two years of data, so a comparison is made for electricity use. The comparison shows some improvement – residential customers used 4 percent less electricity in 2010 than in 2005 and commercial customers used 2 percent less. These reductions are probably due to a number of factors, including higher rates, more awareness about greenhouse gas emissions, and more availability of energy saving appliances and other devices.

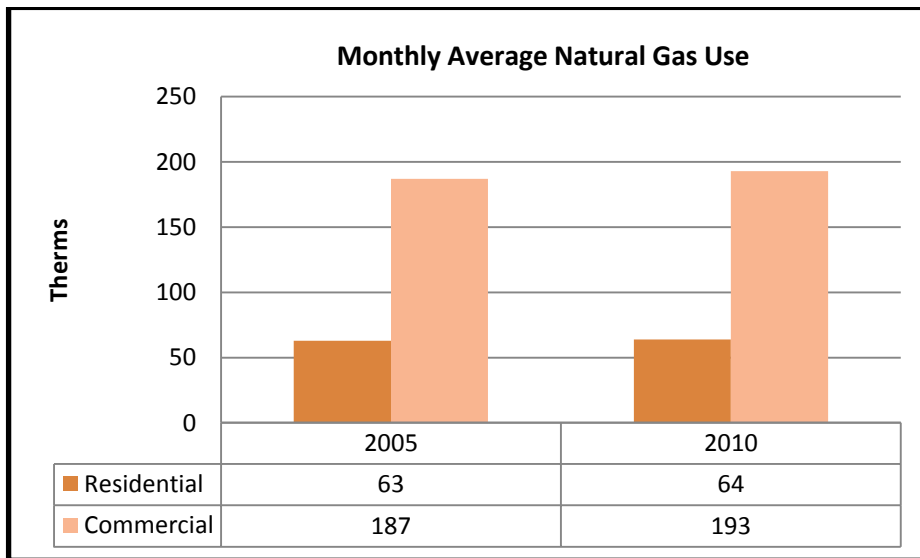


▪ **Natural Gas**

Description: Natural gas use data for residential and commercial customers was provided by PG&E for 2005 and 2010. Average monthly natural gas use is calculated by dividing the number of customer months in a year into the total annual residential or commercial usage.

Why this indicator is important: Natural gas use contributes directly to greenhouse gas emissions (see below for more information), so using less has a direct impact on reducing these emissions. Having data for 2005 is also important; this is the year that is being used throughout California as the baseline year for monitoring emission reductions.

How we are doing: PG&E provided two years of data, so a comparison can be made for natural gas usage. The comparison does not show improvement – residential customers used 2 percent more natural gas in 2010 than in 2005 and commercial customers used 3 percent more.

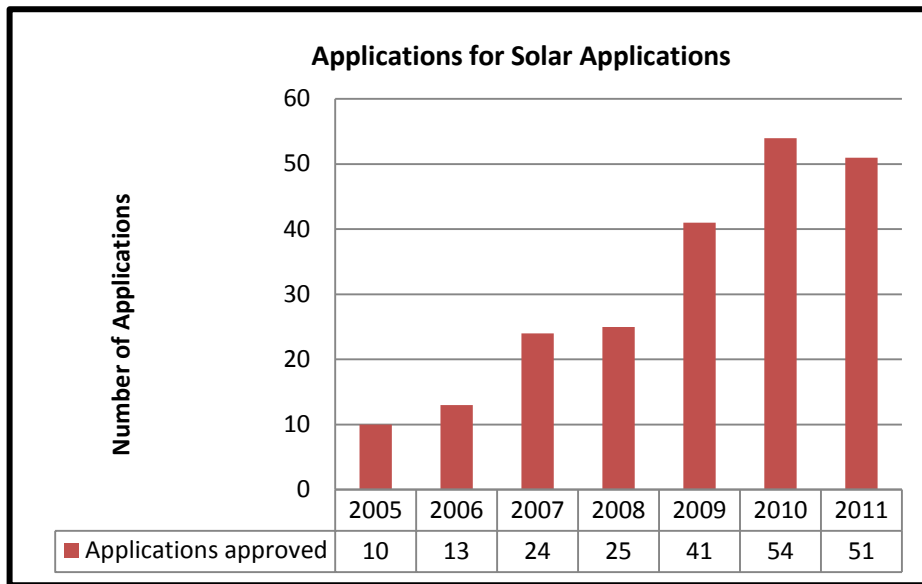


▪ **Alternative Energy**

Description: This indicator is from the Planning Services Division’s database showing applications for building permit plan-checked by Planning staff. It does not show the actual number of permits issued by Contra Costa County Building Inspection Department (e.g., the applicants may have gotten zoning approval, but never pulled a building permit). Applications primarily were for solar panel installations on residential properties. The data for 2011 does not reflect the full year yet.

Why this indicator is important: Using alternative forms of energy reduces dependence on electricity and natural gas and thereby reduces the amounts of emissions.

How we are doing: The number of applications is increasing. The factors contributing to this increase include: higher rates for electricity and natural gas; long-term financial benefits; cheaper costs for equipment; and greater awareness of alternative energy to reduce emissions. In the future, the goal is to calculate the percent of Lafayette’s energy that is clean and renewable.

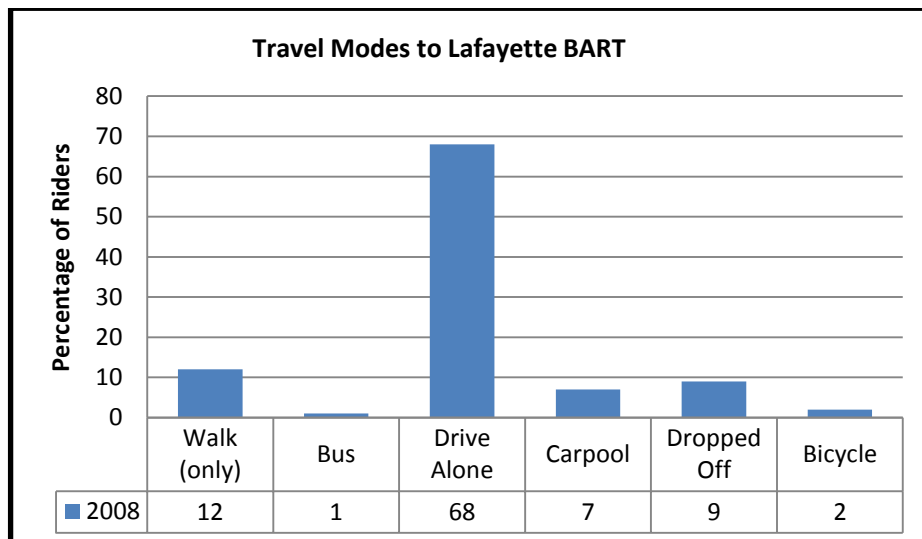
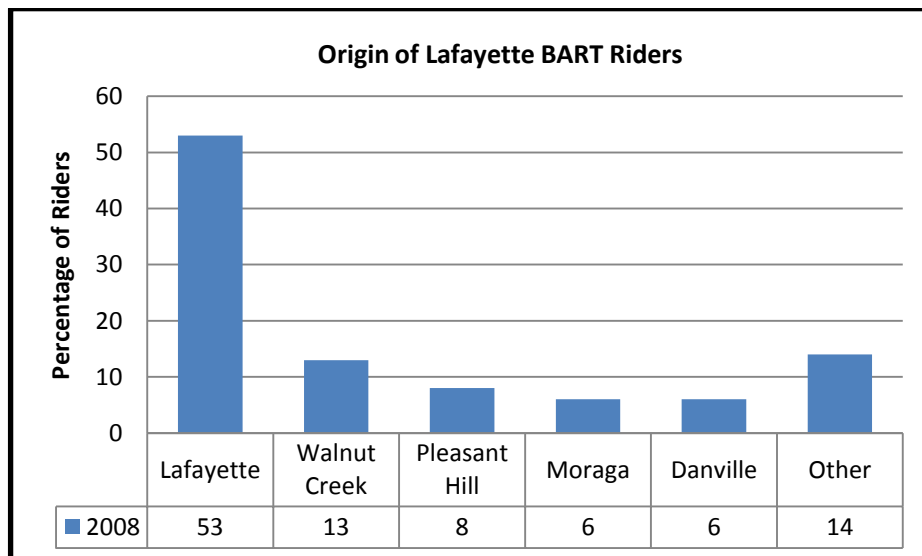


- **Alternative Transportation Modes**

Description: BART prepared a Station Profile for the Lafayette Station in 2008. It determined that on the average weekday, 3,270 riders entered the Station. Of these, 2,658 riders were coming from home. The data shown is the for home origin and travel modes from home.

Why this indicator is important: The value of this indicator is to understand how the Lafayette BART Station was used – how many Lafayette residents use the Station and how they got there. However, this indicator is probably a placeholder until other metrics for alternative transportation modes can be developed. BART was responsible for the data, and there is no indication on when an updated Profile will be completed.

How we are doing: The positive is half of the riders using the Station were from Lafayette. However, most of the riders drove alone.

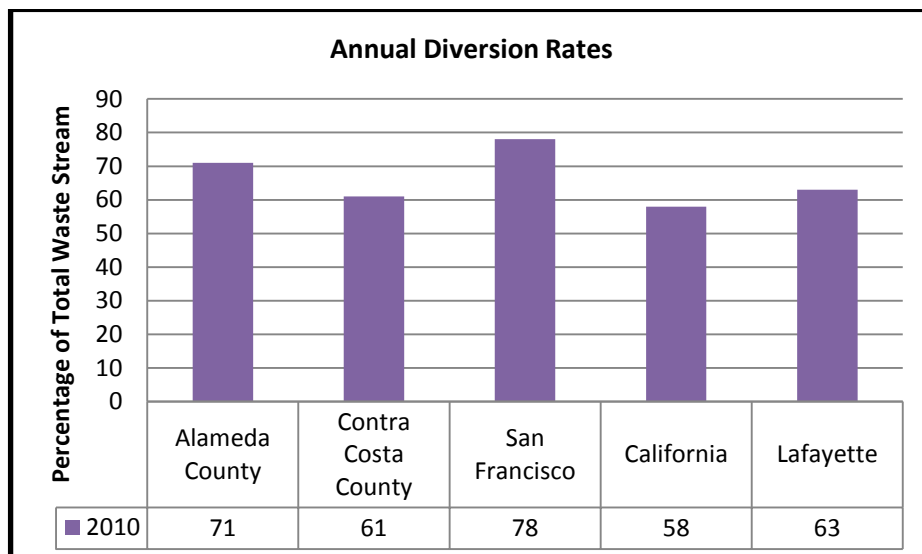
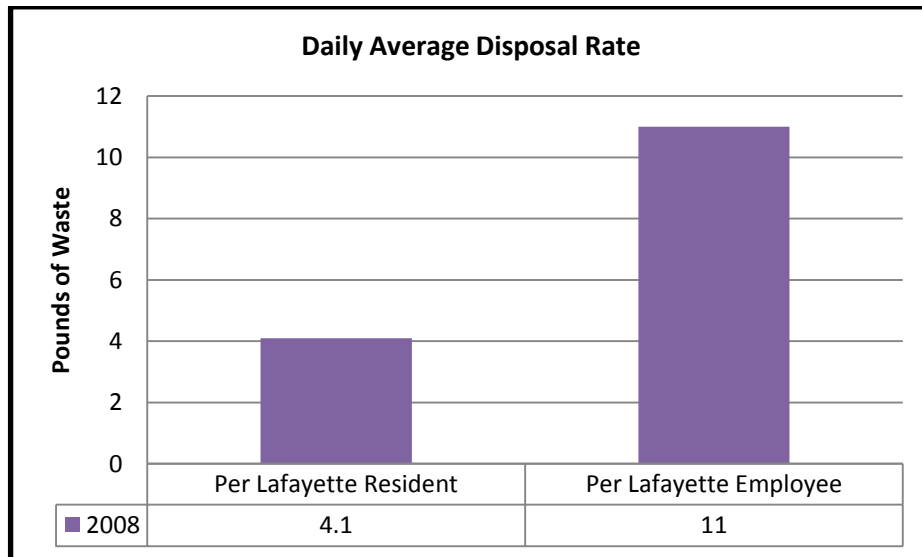


- **Solid Waste**

Description: The data was compiled by a Sustainable Lafayette intern using information from the Contra Costa Solid Waste Authority and other similar agencies, as well as field observations.

Why this indicator is important: Diverting solid waste from landfills and increasing reuse and recycling of products and materials is important to the overall health of the environment. This includes fewer emissions, less pollution of groundwater, and better use of land. The City’s adopted Environmental Strategy includes a diversion rate target of 75%.

How we are doing: The most recent data for Lafayette’s daily average disposal rate is from 2008. This will serve as the baseline for following our progress in increasing our diversion rates in the future. Annual diversion rates are more recent. Lafayette is doing better than Contra Costa County as a whole and California, but not as well as Alameda County and San Francisco. These counties have waste diversion goals that exceed the state mandated 50%, striving for zero waste or a 75% waste diversion rate. Jurisdictions with higher waste diversion goals achieve higher waste diversion rates.

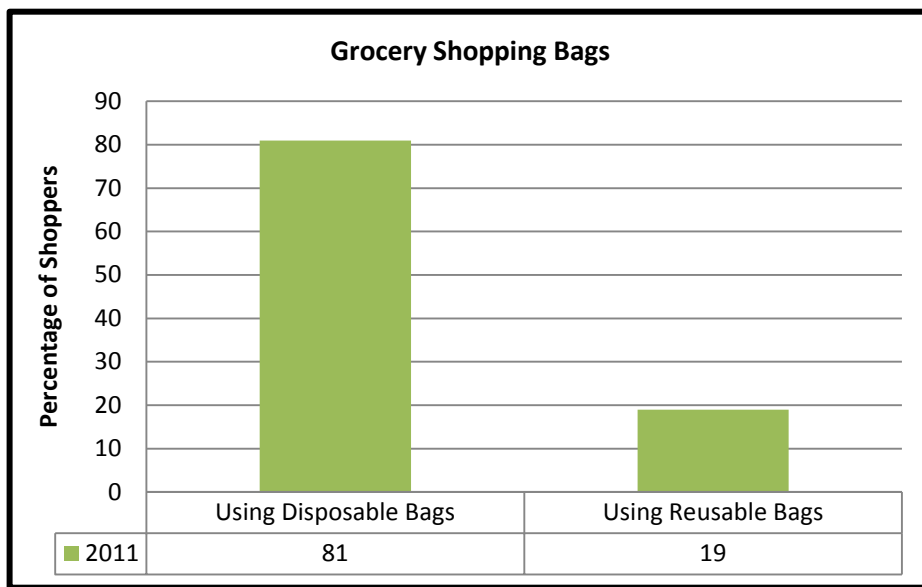


▪ **Reusable Shopping Bags**

Description: A member of the Task Force and a student counted 322 shoppers coming out of the four grocery stores (40 minutes at each store) in Lafayette during August and September to see what percent were using reusable shopping bags. Shoppers were counted by whether they used plastic bags, paper bags (disposable bags) or reusable bags.

Why this indicator is important: This metric may be a good indicator of how many Lafayette residents are pursuing sustainable practices in general.

How we are doing: This is the first year of measuring this metric so progress cannot be measured yet. By making a few assumptions, it can be estimated that between 5,000-10,000 paper and 5,000-10,000 plastic bags leave Lafayette’s grocery stores every day. A factor in the future may be legislation at the State level in limiting the use of plastic bags, an approach being implemented already by a number of larger cities.



▪ **Other ideas for future indicators related to resource conservation**

- Miles of bike trails and lanes
- Miles of walkways
- Number of public bike parking spaces
- Number of electric car charging stations

Goal: Environmental effects on public health and welfare

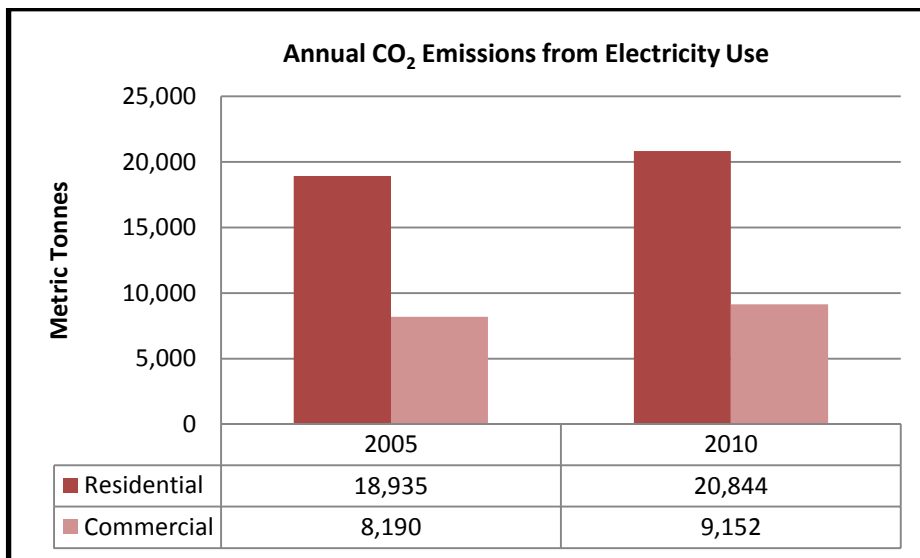
- CO₂ Emissions
- Other ideas for future indicators related to public health and safety

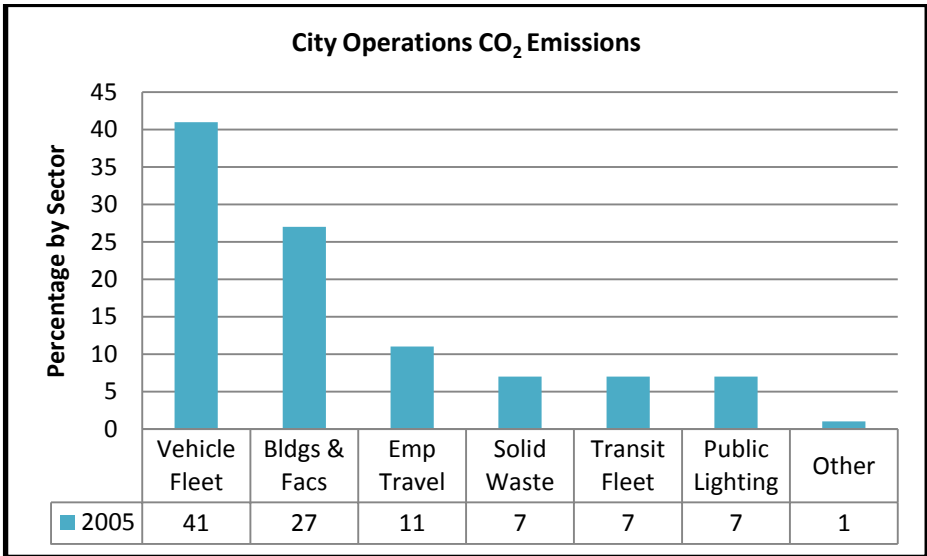
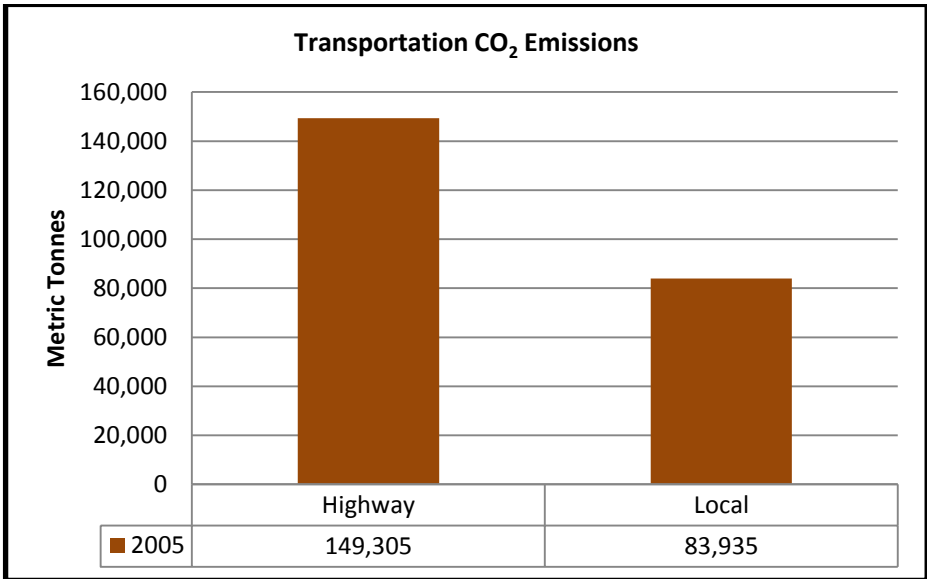
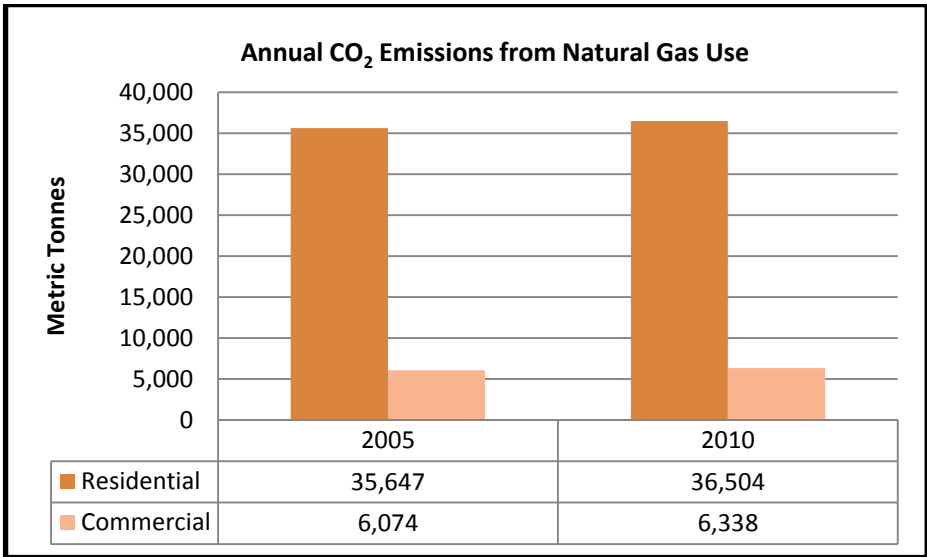
▪ **CO₂ Emissions**

Description: The emissions data from electricity and natural gas use for 2005 and 2010 was provided by PG&E. The transportation data came from ICLEI (Local Governments for Sustainability) when it worked with Contra Costa cities in 2008. Most of the emissions in Lafayette come from Highway 24. The City data came from the report prepared for the City by ICLEI and PG&E last year.

Why this indicator is important: The effects of climate change and greenhouse gas emissions represent an impact on public health and welfare. Most of the greenhouse gas emissions come from CO₂ released from energy use – electricity, natural gas, and particularly motor vehicles.

How we are doing: This data shows the importance of being sensitive to energy use and that reducing its use can affect the amount of emissions. Even though electricity use declined, the emissions level went up due to an increase in the factor used to measure these emissions.





- **Other ideas for future indicators related to public health and welfare**

- Number of families participating in the Community Garden and other outdoor education programs
- Number of senior housing units

Goal: Environmentally sensitive land use

- **Ideas for future indicators**

- Acres of public open space, parks and recreation areas
- Acres of open space preserved through conservation
- Number of residential units within ½-mile of BART Station

Goal: Community education and civic involvement

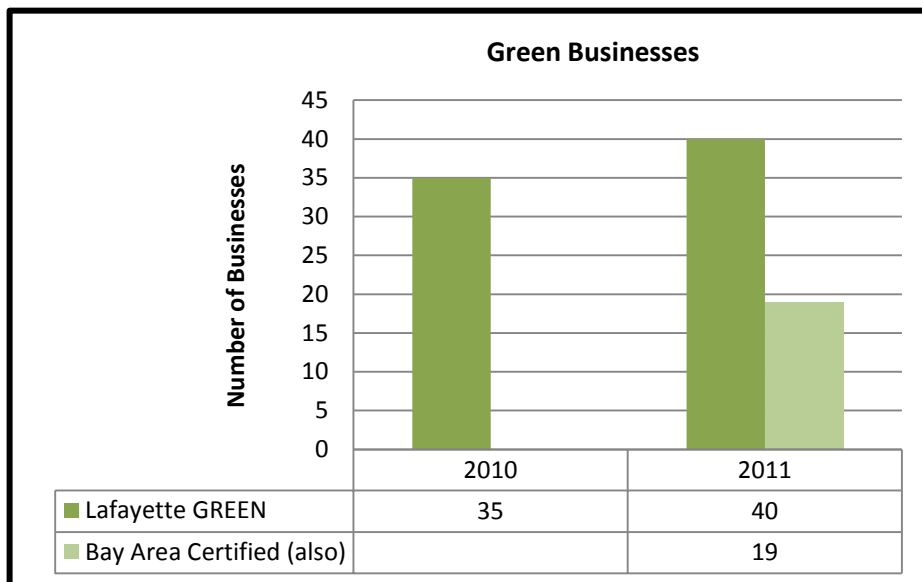
- Green Businesses
- Ideas for future indicators

- **Green Businesses**

Description: This indicator shows the number of businesses participating in the Chamber of Commerce’s Lafayette GREEN program and those that are also a Bay Area Green Certified Business.

Why this indicator is important: Green businesses reduce their waste and energy use and promote local goods and services.

How we are doing: The number of businesses in the Chamber’s program has continued to increase since its start in 2007. The Chamber has a very active program.



- **Ideas for future indicators**

- Number of LLLC and attendance figures for programs related to sustainability
- Number of green programs in local schools