

Our Carbon Footprint

SLVWD

Greenhouse gas emissions



What is a carbon footprint and how is it measured?

A carbon footprint is the total CO₂ and other greenhouse gases produced by a home, business or government agency. To measure its carbon footprint, SLVWD joined the California Climate Action Registry (CCAR) in 2007 and the national Climate Action Registry in 2008.

Using established protocols, SLVWD has assessed and reported its greenhouse gas emissions (GHG) for the past five years:

[LINK TO 2006 GHG EMISSIONS REPORT](#)

[LINK TO 2007 GHG EMISSIONS REPORT,](#)

[LINK TO 2008 GHG EMISSIONS REPORT](#)

[LINK to 2009 GHG EMISSIONS](#),

[LINK to 2010 GHG EMISSIONS](#)

Reports for all five years have been certified by CCAR and CAR, with SLVWD consistently recognized as a “Climate Action Leader.”

What are SLVWD’s sources of greenhouse gas emissions?

As the chart below shows, SLVWD's largest source of greenhouse gas emissions is electricity, which is used mostly to operate our deep-water wells. SLVWD purchases our electricity from PG & E, which includes both fossil-fuel and alternative energy sources in its mix. Clearly, well-pumping is our largest source of greenhouse gas emissions.

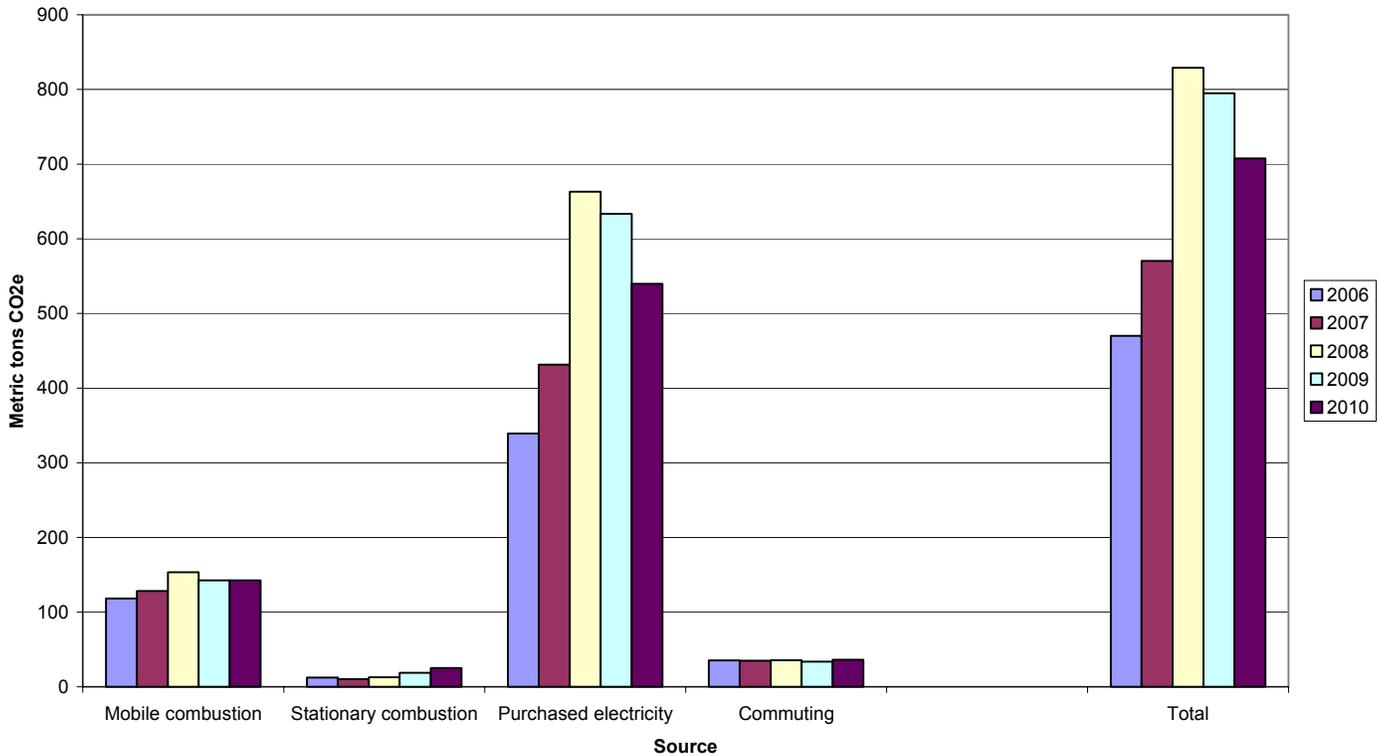
Comparing SLVWD’s Greenhouse Gas Emissions from 2006 - 2010

The four primary sources of the District’s GHG emissions from 2006-2010 are:

- Mobile combustion (District vehicle fleet)
- Stationary combustion (generators and natural gas)
- Purchased electricity (water pumping and building use)
- Commuting (combustion from employee vehicles).

As the chart below shows, the District’s largest overall source of GHG emissions is electricity, which is used mostly to operate its deep-water wells. SLVWD purchases its electricity from PG & E, which includes both fossil-fuel and alternative energy sources in its mix. Clearly, electricity used for booster pumps and well-pumping is SLVWD’s largest source of GHG emissions.

SLVWD greenhouse gas emissions by source, 2006 - 2010



Mobile Combustion – vehicle fleet

Note that mobile combustion from SLVWD’s vehicle fleet increased with the addition of the Felton system in 2008. This was primarily due to increased driving to service the Felton area. In 2009 and 2010, SLVWD replaced several old vehicles with more fuel-efficient ones, which caused GHGs to drop slightly.

Stationary combustion

SLVWD’s emissions from stationary combustion are generated by natural gas and fuels to run generators. Stationary combustion emissions have increased from 10 to 25 mt CO₂e, from 2006 - 2010. The increase reflects increasing accuracy in tracking stationary combustion emissions since SLVWD first started collecting the information.

Purchased electricity

SLVWD’s GHG emissions from purchased electricity increased significantly from 2006 – 2008, decreased slightly in 2009. The large majority of SLVWD’s electricity powers groundwater pumping and booster pumps. Since 2006 was a wet year, groundwater pumping started relatively late in the season, and demand for water was low. 2007 was a very dry year, so groundwater pumping started relatively early in the season, and demand for water was high. 2008 was also a dry year, but not as dry as 2007. SLVWD records show that kilowatt hours (kwh) of electricity used remained flat from 2007 to 2008, even with the acquisition of the Felton water system. Still, GHG emissions still increased in 2008 because of changes in PG & E’s energy portfolio that year.

Mobile combustion from employee commuting

The District is not required to report GHG emissions from employee commuting, but it has done so every year. As Figure 1 shows, emissions remained near 35 mt CO₂e from 2006 to through 2010. Since the District hired only one new employee as a result of the Felton water system acquisition in 2008, GHG emissions from employee commuting did not increase significantly that year.

Summary

With each successive year of reporting, the District has gained valuable new information to assist it in assessing levels and identifying sources of its GHG emissions. Because the District cannot control droughts or influence the choice of energy sources by PG & E, the District is increasing its own use of alternative and renewable sources of electricity. In 2011, the District invested in a substantial solar project, which is expected to significantly reduce both the District's kwh of purchased electricity, and the District's GHG emissions.

How can SLVWD reduce its green house gas emissions?

The SLVWD Board approved a climate change resolution in September 2008 [LINK TO CLIMATE CHANGE RESOLUTION](#) that commits the District to reducing greenhouse gas emissions to 1990 levels by the year 2020.

SLVWD cannot control the weather or droughts. But we can and do encourage water conservation as a way of life. The less water we use, the less energy we consume, and the lower our greenhouse gas emissions.

In 2011, SLVWD installed solar panels at three of its drinking water treatment facilities and one small wastewater treatment plant. The project produces approximately 170,000 kwh/year, or about 28% of the combined electricity used by these facilities [LINK TO 8/5/11 PRESS RELEASE](#).

SLVWD is also working to reduce fuel consumption by its vehicle fleet, phasing out the most fuel intensive vehicles and replacing them with more efficient ones.

How is SLVWD addressing the impacts of climate change?

SLVWD's 2009 Watershed Management Plan [LINK TO CHAPTER 7](#) and 2009 Water Supply Master Plan [LINK TO WATER SUPPLY MASTER PLAN EXECUTIVE SUMMARY](#) both discuss how climate change will affect local water supplies. There are likely to be more dry spells, so that water conservation becomes even more important.

SLVWD continues to work collaboratively with other local water agencies to prepare for climate change impacts on local water supplies [LINK TO 4/23/08 PRESS RELEASE](#).