

Greenhouse Gas Emissions Reductions

SALC Strategy Goals



What Are Greenhouse Gases?

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. The most common GHGs are carbon dioxide, methane, and nitrous oxide. These three gases are natural byproducts of agricultural production. Butte County has a large agricultural land area. While these lands produce a larger amount of GHG emissions overall, on a per-acre basis Butte County's agricultural lands are one of the lower producers of GHG emissions. Per-acre, Butte County's agricultural lands produce less than one-sixth of the GHG emissions of urban land uses.

How Can We Reduce Greenhouse Gas Emissions?

Butte County SALC Strategy

- ◆ Butte County has identified sustainable agricultural practices that reduce GHG emissions.
- ◆ There are State programs that provide financial incentives to farmers who switch to these sustainable practices.
- ◆ Butte County's SALC Clearinghouse connects farmers with information on these sustainable practices and their matching incentive programs.
- ◆ Butte County wants to protect and conserve local agricultural lands while supporting farmers and ranchers.

Butte County Climate Action Plan

- ◆ Butte County created a Climate Action Plan (CAP) to inventory local GHG emissions and identify how to reduce emissions.
- ◆ The SALC Strategy can help Butte County meet its GHG emissions reduction targets, and possibly exceed those targets.
- ◆ Many sustainable practices that reduce GHG emissions provide agricultural benefits as well, such as improved soil health, more productive crops, and reduced need for nitrogen fertilizer.

Practices suggested in SALC documents may not be appropriate for all agricultural operations. Interested land owners and managers are encouraged to evaluate the practices described in this brochure to determine whether they are feasible and appropriate for their property and operation.

CALIFORNIA CLIMATE INVESTMENTS
Cap and Trade Dollars at Work

BUTTE COUNTY

Sustainable Agricultural Lands Conservation Strategy

Butte County
DEVELOPMENT SERVICES

What Are the Most Common Greenhouse Gases?

Carbon Dioxide

- ◆ *Sources of Agricultural Carbon Dioxide Emissions:*
 - ◇ Residue burning, soil tilling, farm equipment, vehicle use, irrigation pumps
- ◆ *Carbon Dioxide Emissions Reduction Practices:*
 - ◇ Avoid/reduce/compost post-harvest plant matter, reduce/avoid soil tilling, reduce equipment/vehicle use through time management, install solar irrigation pumps



Methane

- ◆ *Sources of Agricultural Methane Emissions:*
 - ◇ Standing water from rice production, normal livestock digestive processes, manure
- ◆ *Methane Emissions Reduction Practices:*
 - ◇ Reduce standing water time during rice production, manage livestock manure, avoid holding manure in lagoons/tanks

Nitrous Oxide

- ◆ *Sources of Agricultural Nitrous Oxide Emissions:*
 - ◇ Synthetic fertilizers/pesticides, animal waste, nitrogen runoff
- ◆ *Nitrous Oxide Emissions Reduction Practices:*
 - ◇ Incorporate natural fertilizers, manage fertilizer application, intercept nitrogen run-off with cover crops or plant borders, restore riparian areas



How Can I Participate In GHG Emissions Reductions Practices?

- ◆ Information about California Air Resource Board's (CARB) rice protocol <https://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>
- ◆ Get started with the Climate Action Reserve and their rice protocol <http://www.climateactionreserve.org/how/>

Butte County Department of Development Services

SALC Strategy

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For More Information...

- ◆ *Butte County Sustainable Agricultural Lands Conservation (SALC) Strategy* <https://www.buttecounty.net/dds/Planning/Grants/SALC.aspx>
- ◆ *SALC Mapper* <http://gis.buttecounty.net/public/index.html?viewer=salc>



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Sustainable Agricultural Lands Conservation Strategy

