

Past studies/projects

- The Texas Commission on Environmental Quality sponsored a [Composted Manure Incentive Project](#) from 2000 to 2006. It included training, technical and marketing support, and buyer rebates to make possible the composting and beneficial use of more than half a million tons of dairy manure in the Leon and North Bosque River watersheds. The primary purpose was to reduce excess phosphorus impairing water quality in the North Bosque River and threatening the health of the Leon River.

Approximately 78 percent (over 468,000 cubic yards) of the compost went to beneficial uses outside the North Bosque and Leon watersheds, which resulted in more than 2 million pounds of phosphorus being exported from the two watersheds and approximately 40,000 pounds of phosphorus prevented from entering the two rivers on an annual basis. The export of the manure, and the composting process itself, also greatly reduced the potential for fecal bacteria pollution of both rivers. To accomplish all this, several new private composting facilities had to be developed; this project provided training, technical, and compliance support to assure the composting facilities themselves operated successfully with exemplary water quality controls.

The project also worked to assure that the application of the compost reduced erosion and nonpoint source pollution at the point of use. It provided significant technical support as well as rebates to the Texas Department of Transportation in its beneficial uses of the material for restoration of roadside vegetation in highway construction and repair projects. Other significant users included athletic fields, golf courses, parks, schools, universities, local street and roadside re-vegetation, cropland, a rock quarry reclamation study, and a military base. Several university studies supported by this project provided documentation of the agricultural/horticultural and environmental benefits of these uses.

The project was designed to establish a self-sustaining composting market as an outlet for the area's dairy manure and a long-term solution for some of the area's water quality problems. In a 2011 survey, facilities that had participated in the project reported exporting roughly the same total amount of composted manure annually as the project had documented in 2007, at the peak of the project's compost export activity.

- [Marin Carbon Project](#) is a consortium of independent agricultural institutions in Marin County, CA and includes university researchers, county and federal agencies, nonprofits, and Nicasio native Grass Ranch. The goal is to enhance carbon sequestration in rangeland, agricultural and forest soils. The project started in 2010.

Compost is a valuable commodity in the agricultural community. When applied to soil, it enhances water-holding capacity, provides stable, slow-release nutrients, enhances soil carbon sequestration and increases forage production without harming native plant communities. Within the carbon farming framework, compost application can be part of a smart, comprehensive plan to manage carbon at a whole farm level. In a rangeland setting, it is best to identify sites most appropriate for compost application with a professional land manager and conduct application alongside a holistic or managed grazing regime.

From a climate perspective, compost is a triple win. It increases sequestration (the drawdown of atmospheric carbon into the soil), mitigates emissions from other sources (landfilling, burning or allowing organic materials to rot in ponds or pits, which releases the powerful, short-lived greenhouse gases methane, nitrous oxide and black carbon) and enhances the land's resilience to extreme weather (flooding and drought). Composting can offer an alternative strategy for manure management.

- [COMET Planner](#) – This evaluation tool is designed to provide estimates of the net greenhouse gas reductions for specific agricultural management conservation practices included in the California Department of Food and Agriculture (CDFA) Healthy Soils Program (HSP). The COMET planner includes 30-plus approved NRCS Conservation Practices that are known to increase above- and below ground carbon. It has been updated to include data parameterized at the regional level in all US states. However, it does not include application of Compost as one of the soil health improvement practices. The COMPOST-Planner was created by the California Air Resources Board (CARB) to calculate the soil carbon benefits of compost application.
- [Compost Planner](#) – This tool estimates the net greenhouse gas benefits of specific compost application practices to California cropland and grassland. This tool compliments the COMET Planner. It is based on a quantification methodology developed by the