The U.S. Department of Agriculture (USDA) is much in the news these days, as it implements the massive and always-controversial farm bill, works to improve access to national forests, strives to enhance the U.S. position in international agriculture markets, and wrestles to contain this season's extensive wildfire activity. What is less obvious to many is that the USDA has cultivated within its various agencies a culture that acknowledges the challenges related to climate change and encourages efforts both to adapt growing practices to changing conditions, and shape those practices to reduce unnecessary greenhouse gas emissions. A new report from the University of California, Berkeley shows that the USDA can do even more under its existing legal authority to mitigate climate change.

This is the third in a series of studies produced by Berkeley Law's Center for Law, Energy and the Environment and the Berkeley Energy and Climate Institute analyzing the steps federal agencies can take under existing law to mitigate climate change. Earlier reports have focused on the Department of the Interior and the Federal Energy Regulatory Commission. As was true of the other two reports, this one is co-authored by Romany Webb and me.

The USDA oversees the agricultural and forestry sectors, working to maintain adequate and safe food supplies, support rural economic development, and protect natural resources. Our report identifies over 30 actions that can be taken by the Forest Service, Natural Resources Conservation Service, Farm Service Agency, Office of Rural Development, and other divisions within the USDA to reduce climate impacts. The identified actions include:

• facilitating the use of sustainably-grown trees and other plants in national forests as substitutes for fossil fuels;
• expanding renewable energy development in national forests;
• limiting greenhouse gas emissions from oil and gas projects in national forests;
• promoting the sustainable management of forest and agricultural land to increase carbon sequestration;
• supporting the adoption of climate-friendly agricultural production systems that help to reduce greenhouse gas emissions and increase carbon sequestration;
• encouraging increased consumption of climate-friendly foods whose production results in few
greenhouse gas emissions; and
• advancing renewable energy and energy efficiency projects in rural areas.

If implemented, these actions could significantly reduce atmospheric greenhouse gas levels. The Environmental Protection Agency estimates that the agricultural industry accounts for

over 8% of U.S. greenhouse gas emissions, making it the fifth largest emissions source nationally. On the other hand, the industry could help to reduce overall emissions by using plants and soils to absorb and store carbon from the atmosphere.

One area with significant potential for improvement is the management of forests, which affects both sides of the carbon equation. On one side, forest vegetation can be used instead of fossil fuels to generate electricity and instead of steel for new buildings, reducing carbon dioxide emissions. On the other side, plants can also absorb carbon dioxide already in the atmosphere and store it in biomass and soils.

The USDA's Forest Service could permit increased harvesting of trees and other vegetation in national forests for use in electricity generation and building construction. Any effort to increase the use of vegetation in lieu of other materials must, of course, be sustainable, with tree cover playing a major role in carbon sequestration. Arguably, our forest lands should be expanded. The USDA can do much to facilitate this expansion, having the authority to pay agricultural producers to plant trees and other vegetation on their land.

The USDA can also support producer efforts to reduce their greenhouse gas emissions. Each year, the USDA provides millions of dollars in grants and loans to support agricultural production. It has wide discretion in providing these grants and loans and could, for example, introduce climate considerations into its deliberations and use climate implications as a major element in its funding decisions. This would have important benefits, reducing or eliminating government support for projects that make a significant contribution to climate change and providing additional support for climate-friendly projects.

While no doubt important, government assistance is not the only factor influencing agricultural production. Consumer purchases also have a significant impact on what and how agricultural commodities are produced. The USDA can help consumers to make more climate-friendly purchases by reporting on the greenhouse gas emissions resulting from food production. Somewhat controversially, the report finds that the USDA could consider the greenhouse gas emissions resulting from production when developing nutritional guidelines. Such an approach could result in the adoption of guidelines that recommend increased consumption of low-emission foods and/or identify foods whose consumption should be limited because their production generates substantial emissions.