

THE Bridge

Sustainable Conservation partners with agriculture, business and government leaders to find practical ways that the private sector can protect clean air, clean water and healthy ecosystems.

Restoration on Private Lands

We help land-owners be good stewards of the environment by facilitating restoration projects and species protection.

Sustainable Agriculture

We promote the adoption of innovative farming practices so that farmers can protect the environment, boost their bottom lines and keep their land.

Sustainable Business

We stop pollution at the source by working proactively with business and regulatory agencies to solve problems through cooperation, rather than litigation.

LETTER FROM THE Executive Director

Dear Friends,

When I filled up my car last week, I stared in disbelief at the fuel pump: a whopping \$3.15 a gallon. The price of gasoline has risen 38% since January of this year and 74% since 2000. And, experts are predicting higher prices to come, as China, India and other nations need more oil to fuel their energy-intensive growth and as US policymakers resist fuel efficiency and renewables.

The rising global demand for energy shows up in higher prices at local gas stations. It also shows up in greater environmental problems around the globe: air pollution that contributes to asthma and other ailments, greenhouse gas emissions that contribute to global warming, and sprawl-related loss of wildlife habitat.



Sustainable Conservation has been working to address these kinds of environmental problems since our earliest days. For example, our Conservation Tillage project promotes a set of agricultural methods that reduce particulate air pollution and on-farm energy use. Our Methane Digester program converts dairy farms' methane (a potent greenhouse gas released by cow manure) into electricity. Our work within California

Environmental Dialogue develops new ways to provide long-term protection for habitat threatened by growth.

In addition to expanding these programs, we now are directly addressing the root cause of so many environmental problems: fossil fuel use. As you'll read inside this issue of *The Bridge*, Sustainable Conservation is taking a leadership role in the development of biofuels. These renewable, environmentally friendly fuels are derived from plant sugars, starches or oils; cow manure; and other organic substances. Biofuels can replace petroleum-based fuels in vehicles and machinery, requiring few or no engine modifications when blended with traditional fuels. Biofuels pollute less, can be made locally and cost about the same to produce.

Sustainable Conservation is proud to be working toward practical and lasting solutions to the costly human and environmental impacts of fossil fuel dependence. We believe that biofuels are an important part of the global solution. While higher energy prices – gasoline, natural gas and electricity – may sting us individually, and may raise the cost of some goods and services, they provide very strong incentives to switch to biofuels and other renewable fuel sources. So, next time your neighbor complains about the price of gasoline, tell them about biofuels ... and Sustainable Conservation!

Ashley Boren,
Executive Director

Fueling the Future with Renewable Energy

In response to our unceasing reliance on oil, crippling surges in energy costs and mounting concerns about global warming, Sustainable Conservation is part of the movement in California to develop a promising solution with a complement of exciting environmental and economic benefits: biofuels.

These renewable fuels – including biomethane, biodiesel, and ethanol (see “Biofuels 101” sidebar) – are derived from cow manure, vegetable and animal oils, food crops and other organic material. They’re generally no more expensive to produce than petroleum-based fuels, and for many vehicles only minor engine modifications are needed. Biofuels significantly reduce air and water pollution, and could greatly enhance California’s economic health by creating a new energy industry right here at home.

Sustainable Conservation has made significant progress over the last year in advancing biofuels as an alternative to petroleum in California, promoting its compelling environmental, economic and energy benefits. There’s still a tremendous amount of work to be done. In the coming months, we will continue to build productive partnerships with business, agricultural and government leaders to overcome the key technical, market and regulatory hurdles needed to make biofuels a reality in California and beyond.



Highlights of Sustainable Conservation’s Pioneering Work

As part of the US Environmental Protection Agency’s (USEPA) National Clean Diesel Campaign, we received a \$100,000 grant this year to demonstrate special blends of California-grown biodiesel in farm equipment can produce immediate and cost-effective reductions in a number of harmful pollutants, especially nitrogen oxide (NOx). The USEPA grant is a vital next step in garnering support for biodiesel from a number of key stakeholders in the state who have been cautious about widespread adoption of the fuel because of its potentially harmful NOx byproducts. Sustainable Conservation is conducting our demonstration project at the Red Rock Ranch and neighboring farms in the San Joaquin Valley. The valley is home to the dirtiest air in the country – and many residents, including minorities and children, suffer from adverse health effects associated with fossil fuel emissions.

While much recent attention on biodiesel has been paid to its creation from used cooking oil, we are using this innovative project to show that special biodiesel crops such as canola and sunflower can be grown locally. The aim is to avoid outsourcing the raising of traditional biodiesel crops such as soybeans to the Midwest, which will add to local farmers’ bottom lines and fuel California’s economy. In addition, we are partnering with local farmers to create a self-sustaining system for growing seed crops, extracting seed oils, and producing biodiesel right on their farms – or transporting to centralized fueling stations for wider use.

In collaboration with a diverse group of environmental, transportation and dairy organizations, we recently released a groundbreaking report on the promise of cow power, or biomethane. “Biomethane from Dairy Waste: A Sourcebook for the Production and Use of Renewable Natural Gas in California” details effective and economical technologies for converting the methane generated from cow manure into natural gas to power automobiles. It also provides recommendations for applications and markets for

the fuel. Having been featured on National Public Radio, as well as in the Fresno Bee and other local and national news outlets, the report will undoubtedly serve as a go-to guide as California increases its biomethane capabilities.

The state is home to over 1.7 million cows that produce 13 billion pounds of manure each year, which if not managed properly, can result in serious groundwater contamination and natural releases of potent greenhouse gases.

Allen Dusault, Director of our Sustainable Agriculture program, states, “As natural gas prices continue to rise, biomethane fuel is becoming cost-competitive with natural gas and diesel, and is much cheaper than hydrogen. Switching to biomethane improves air quality, reduces greenhouse gas emissions, improves water quality and strengthens rural economies.”

The biomethane report falls on the heels of Sustainable Conservation’s work promoting the use of methane digesters, proven and simple technology used to capture methane from manure to produce electricity, on dairy farms across California. As a result of the hard work with our dairy partners this year, 12 digesters are now operating or under construction, which help divert more than 400,000 tons of manure from 36,000 cows. The electricity generated from the digesters offsets \$1.6 million in energy costs to dairy farmers who use the renewable energy to fuel day-to-day operations. The digesters also generate enough electricity to run 2,000 homes.

With a number of agricultural and technology partners, Sustainable Conservation is researching how California can not only grow but increase yields of high-sugar crops such as sugar beets and sugar cane in a sustainable manner to produce ethanol – a renewable fuel that burns cleaner than gasoline or diesel. Raising our own ethanol crops here at home could boost the state’s economy while reducing our oil-dependence.

“Switching to biomethane improves air quality, reduces greenhouse gas emissions, improves water quality and strengthens rural economies.”

Allen Dusault, Director of Sustainable Agriculture program – Sustainable Conservation

Biofuels 101

BIOGAS & RENEWABLE ELECTRICITY

Did you know? Harnessing the methane from approximately 20% of California’s cows could power all of the existing fleets of natural-gas-powered vehicles in the state.



Source: Primarily cow manure. Can also be derived from decomposing plant matter and landfill waste.

Replaces: Biomethane replaces compressed natural gas or diesel. Renewable electricity replaces electricity from fossil fuels, natural gas, hydropower and nuclear power.

Use: Biomethane powers cars, trucks, buses and fleet vehicles. Renewable electricity powers homes and industrial facilities, including heating and cooling systems, appliances, and lighting.

BIODIESEL

Did you know? Biodiesel blended with petroleum-based diesel can reduce emissions of carbon dioxide – a chief greenhouse gas – by up to 80%. It’s also non-toxic and completely biodegradable.



Source: Soybean, sunflower, safflower and canola oil. Can also be produced from used cooking grease.

Replaces: Diesel.

Use: Powers automobiles, including cars, trucks, buses and fleet vehicles.

ETHANOL

Did you know? California is the leading consumer of ethanol in the US, using over 900 million gallons annually. But, we don’t grow any crops to produce this renewable fuel.



Source: Sugar beets, sugar cane and other high-sugar crops.

Replaces: Gasoline.

Use: Powers automobiles, including cars, trucks, buses and fleet vehicles.

Milestones

Getting our
Newsletter
by E-mail

If you prefer to
receive our
newsletter by
e-mail, please send
a message to
suscon@suscon.org
with "Newsletter"
in the subject line.
You will receive
subsequent issues
as an e-mail
attachment. You
can also download
our newsletter from
our website at
www.suscon.org.

Sustainable Conservation Stewardship Council Releases Key Manure Management Guide

The National Dairy Environmental Stewardship Council, a coalition of national dairy waste management experts led by Sustainable Conservation, recently released a comprehensive guide to help dairy farmers across the nation turn manure into profit while protecting the environment. "Cost-Effective and Environmentally Beneficial Dairy Manure Management Practices" details ways dairies can capture the agricultural and economic value of manure nutrients while reducing the impact of manure on air quality, water quality and global warming. Visit our Dairies webpage to read the report: www.suscon.org/dairies.

Collaborative Workgroup Publishes Critical Development Recommendations

As a founding member of California Environmental Dialogue (CED) – a policy collaborative of California business, environmental and government agency leaders – Sustainable Conservation is proud to announce CED's completion of its most recent policy statement titled, "Economic Growth & Habitat Protection". In it, CED puts forth seven recommendations for the healthy development of communities. The core strategy is to guide growth to appropriate areas while protecting natural areas, working landscapes and wildlife habitat. To download a copy of the document, or for more information about CED, visit the organization's website at www.cedlink.org.



Auto Recycling Project Hits TV

In July, KGO-TV (ABC, San Francisco, Channel 7) aired a compelling story about Sustainable Conservation's Auto Recycling Program, reaching approximately 125,000 people throughout the Bay Area. The three-minute segment showcased Sustainable Conservation, our staff and the partnership we are part of to improve the business practices of auto recyclers and health of the San Francisco Bay. You can watch the clip from our website: www.suscon.org.

