SustainableConservation

Newsletter Summer 2002

Summertime Getaways

Years ago, when life seemed less complicated, vacations often meant packing up the station wagon and heading off to enjoy the beauty of the outdoors. Friends and family would reunite, spending time at a beach house or a cabin in the woods.

Not much has changed. Summer is still a time that finds many of us enjoying the natural landscape. Warm weather, holidays, and school vacations give us more opportunities to enjoy the outdoors. From season to season and year to year, however, our environment is changing, not often for the better. Sustainable Conservation is finding solutions to the problems that are altering the world around us.

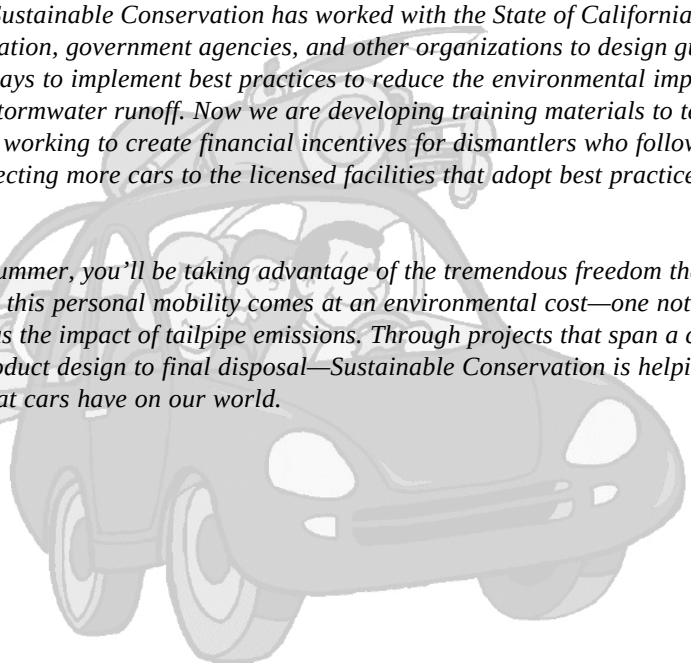
With Sustainable Conservation's facilitation, the Brake Pad Partnership is developing a sophisticated method of understanding how brake pad use affects the environment. Manufacturers, regulators, and environmentalists are working together to create a replicable process that will permit the industry to anticipate and avoid adverse impacts from these essential auto parts.

In February 2001, we launched the Auto Recycling Project, designed to respond to the issue of polluted runoff that is further diminishing our water quality. Auto dismantlers provide a valuable service by keeping hundreds of thousands of vehicles and their accompanying fluids out of overcrowded landfills; however, at some licensed auto dismantling sites in California and at the many unlicensed operations, effective practices are not being used to prevent toxic metals, oils, coolants, and other contaminants from discarded auto parts from entering water bodies as polluted runoff.

For the past year, Sustainable Conservation has worked with the State of California Auto Dismantlers Association, government agencies, and other organizations to design guidelines and suggest ways to implement best practices to reduce the environmental impacts of dismantling sites' stormwater runoff. Now we are developing training materials to teach these practices and working to create financial incentives for dismantlers who follow them, including directing more cars to the licensed facilities that adopt best practice recommendations.

As you travel this summer, you'll be taking advantage of the tremendous freedom that cars allow. But enjoying this personal mobility comes at an environmental cost—one not as widely recognized as the impact of tailpipe emissions. Through projects that span a car's life cycle—from product design to final disposal—Sustainable Conservation is helping to reduce the effect that cars have on our world.

Ashley Boren
Executive Director



Our Mission

Sustainable Conservation advances the stewardship of land and water resources using innovative strategies that actively engage businesses and private landowners in conservation.

New Faces

Lakeesha Gage joined our staff as SusCon's Bookkeeper in February 2002, and Sarah Beth Lardie was hired as Development and Communications Director in April 2002. Welcome, Lakeesha and Sarah Beth!

Our new Summer Associates, Jason Oppenheimer and Velina Peneva, began their service in June. Jason is a candidate for a master's degree in business administration at UC Berkeley, and Velina is a candidate for a master's degree in business administration at Harvard University.

Jason will be researching credit trading, which has the potential to be an added incentive for the methane digester initiative (see article on page 3). Velina will assess the opportunities for SusCon to apply what we are doing with dairies in California to other animal farming operations outside the state.

Have It Emailed!

Just send an email message to suscon@suscon.org with "newsletter" as the subject line. From then on, you'll receive the newsletter as an email attachment.

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New SusCon Chairman

Mr. Russell Siegelman, a Partner at Kleiner Perkins Caufield & Byers, was elected Chairman of Sustainable Conservation's Board of Directors at the May 2002 meeting.

Russell joined KPCB after seven years at Microsoft. At Microsoft he helped launch LAN Manager, Microsoft's first network operating system. Russell worked directly for Bill Gates, for the first half of 1993, during which time he researched the online market and recommended an entry strategy for that market. This led to the formation of the Microsoft Network (MSN), Microsoft's online service. Russell became the first employee of this division and became its General Manager and then Vice President until April 1996. Under his direction, MSN was developed, launched, and reached over 1 million paying members.

Before joining Microsoft, Russell wrote artificial intelligence applications for the financial services industry at Applied Expert Systems (a Cambridge, Massachusetts startup) and was also an engineering consultant.

Russell has been actively involved with Sustainable Conservation since 1997, and he joined the Board of Directors in 2001. "Sustainable Conservation is meeting a critical need, bringing groups together to formulate new solutions. By pairing business strategies with environmental priorities we can have tremendous impact. I'm looking forward to being a part of our next decade of growth."

Welcome Back

Tina Quinn grew up hiking the Santa Monica Mountains in Southern California. After several years of experience in commercial real estate, she decided to dedicate her efforts to the preservation of the dwindling open spaces in Los Angeles. This led to work with various land trusts in the area, including the Santa Monica Mountains Restoration Trust. In 1991, Tina, Frank Boren, and Dan Emmett collaborated on various ideas that eventually led to the formation of Sustainable Conservation in 1992, with Tina acting as the first Executive Director. A move to Europe with her family took her away from Sustainable Conservation, but she has returned as an enthusiastic board member.

Currently, she is an industrial property manager and broker in Southern California as well as an active member of various school boards. Tina lives with her husband and three daughters in Southern California, hiking the hills of the Palos Verdes Peninsula.

Important Legislation

Sustainable Conservation is working to educate legislators and the public on the benefits of methane digesters, which turn manure into a renewable energy source. Progressive dairy farmers who use methane digesters can reduce air and water pollution, decrease greenhouse gas emissions, kill pathogens, reduce odors, and create high-quality compost. The electricity digesters produce is generated more cheaply than most other sources of renewable energy. However, despite these environmental benefits, there is still a problem in getting more of these in operation on dairy farms.

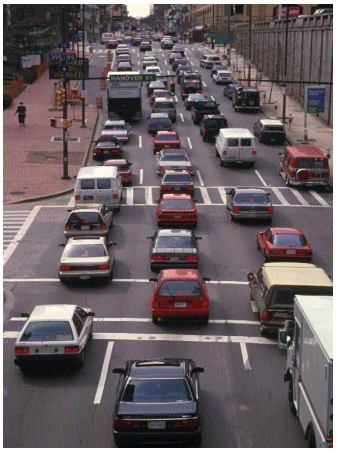
Hooking up a generator running on methane gas to the electric grid to take advantage of "net metering" (running the electric meter in reverse when there is a surplus) is nearly impossible in California. A bill before the legislature, AB 2228, would make this easier. As part of our Dairies Project, we have been encouraging passage of this bill and promoting this technology as part of the solution to one of California's most pressing environmental problems.

Dairies are California's largest agricultural industry, generating over $4.5 billion in revenue annually. Like all human activities, dairy farming has an impact on the environment. Pollution from dairies comes from manure—tons and tons of manure. Statewide, dairy cows create more than 65 billion pounds of manure per year. When the tons of manure produced by California's dairy cows aren't dealt with correctly, it can cause environmental problems including severe air and water pollution. In fact, dairies are one of the most significant sources of air and water pollution in the Central Valley and the Chino Basin of southern California.

Dairies contribute to air pollution by adding tons of ammonia, particulates, reactive organic gases (ROGs), and other pollutants to the air. In fact, dairies appear to be one of the leading sources of ROGs (over 50 tons per day) and ammonia (nearly 300 tons per day) in the Central Valley, according to the California Air Resources Board. These pollutants are linked to high rates of asthma and other diseases.

Nitrate contamination illustrates the problems associated with polluted runoff from dairy farms. Testing of surface water and groundwater around dairies in the Central Valley shows nitrate levels that can exceed federal drinking water standards, a fact recognized in a 1996 water quality report by the California State Water Resources Control Board. Surface water impacts are also substantial. Groundwater and surface pollution from dairy runoff in the Chino Basin is so severe that it has contaminated over two-thirds of the water supply of Orange County residents. Cleaning it up could cost taxpayers a quarter of a billion dollars—or more.

Hitting the Brakes on Uncertainty



When you're on the road, headed to your favorite vacation spot, and sitting in traffic with other holiday travelers, you'll hit your brakes over and over, probably without thinking about what's happening to the car's brake pads. You know that brake pads wear down—it's easy to see (and feel) the difference between a new brake pad and a used one. But what happens to the parts of the brake pad that get worn away?

Even for scientists and engineers, it's difficult to know what happens to these essential car parts. Tracking material as it leaves a moving vehicle requires accounting for numerous variables, and the destination of that material and its possible effect on the environment is unclear.

But in order for brake pad manufacturers to incorporate more environmental thinking into their design process, that's exactly the information they need. Through a collaboration of representatives from the industry, regulatory agencies, stormwater agencies, and environmental organizations, the Brake Pad Partnership is developing a set of tests for brake pad ingredients. Using these tools, scientists, engineers, manufacturers, and others will be able to understand how individual ingredients in brake pads behave as wear debris is released into the environment. By working together, the members of the Partnership agree that they'll come up with information that they can trust. The Brake Pad Partnership has begun developing test procedures, and is using copper and its effects on the South San Francisco Bay as a case study. Once developed, the tests will be adaptable to other ingredients and locations.

Earlier in 2002, the Partnership completed development of a controlled method of producing wear debris. The first round of tests shows that the debris particles are quite small, which suggests that they may become airborne after being worn off. As part of the Partnership's next steps, tests will be conducted to determine how brake pad debris travels in the environment—through the air and in stormwater runoff—and how much of it ends up in the San Francisco Bay.

The Partnership will determine how brake pad wear debris moves around, where it ends up, and, once it reaches its final destination, whether it is in a form that is harmful. No matter what the findings are relative to copper, the Partnership's work will result in a replicable process that the brake pad industry can reuse to test other ingredients. Forecasting environmental problems during the design process and taking steps to avoid them will provide a cost-effective way for the industry to protect the environment.

Traffic Report

- Between 1990 and 2000:
  - California's population grew 60%
  - Vehicle miles traveled increased 100%

(Source: California Air Resources Board and U.S. Dept. of Transportation)

- Between 1990 and 2020:
  - Traffic delays in the San Francisco Bay Area are predicted to increase by 249%

(Source: Metropolitan Transportation Commission, 1999)

- If current trends continue:
  - Driving will increase 55%, costing Californians an additional $4.3 billion in congestion-related costs

(Source: California Dept. of Transportation, *California Motor Vehicle Stock, Travel and Fuel Forecast*, November 2000)

You Can Support Sustainable Conservation!

Sustainable Conservation is committed to building collaborations that work to solve critical environmental problems. Using innovative strategies that engage businesses and private landowners, Sustainable Conservation advances the stewardship of land and water resources.

We welcome inquiries from individuals, foundations, and corporations interested in supporting our efforts. For more information on making a contribution or to learn more about our mission and programs, please contact:

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Sustainable Conservation has been designated a 501(c)3 nonprofit organization by the United States Internal Revenue Service. Your gift is tax-deductible as a charitable contribution.

Dismantling Perceptions

Remember that road trip where your old car finally died, with no possibility of resuscitation? Instead of enjoying a lovely summer day, you waited for a tow truck to take the lifeless heap to an automotive graveyard.

Inoperable cars may be lifeless, but they aren't useless. Every year, over ten million vehicles nationwide, including over one million in California, end up in auto recycling yards instead of overflowing landfills. Auto recyclers parcel out the cars' useful components to do-it-yourselfers and auto body shops. Like any kind of recycling, reusing automotive parts requires seeing possibilities where others see junk.

Launching Sustainable Conservation's Auto Recycling Project required a similar shift in perception. Where others saw a pattern of contentious, tense relationships among auto dismantlers, regulators, and environmentalists, Sustainable Conservation found the ingredients for a successful partnership. By thinking differently and developing new ideas, we're on our way toward decreasing polluted stormwater runoff.

And decreasing runoff from auto recycling is important. If vehicles aren't handled properly during dismantling or parts aren't stored appropriately, fluids like oil, antifreeze, and fuel can contribute to serious water pollution, especially when it rains. Stormwater can flush the contaminants straight into streams, rivers, lakes, and bays without treatment. Several organizations, including the U.S. Environmental Protection Agency, have identified auto dismantling as a significant source of polluted stormwater runoff.

In the face of this serious pollution problem, Sustainable Conservation established the following strategy:

Start talking: In order to change the dynamic among the stakeholders, we brought them together in a neutral setting. Previously, the dismantling industry, regulators, and environmentalists met almost exclusively in courtrooms.

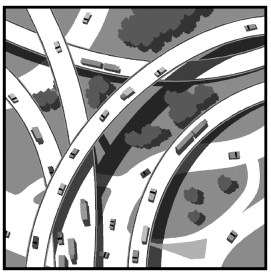
Form consensus: Dismantlers have long felt that regulators, environmental organizations, and even their own consultants provide conflicting information on "environmentally friendly" practices. Sustainable Conservation brought together these key stakeholders to identify effective stormwater management practices.

Spread the word: With these suggested practices in hand, we will produce a training video and fact sheets on how to protect stormwater while dismantling vehicles. While materials on these practices already exist, their audience is usually site owners. Our materials will be written with site workers in mind, using plain, clear language that focuses on the different potential areas of impact at auto recycling yards. These materials will be available, in English and Spanish, by the end of 2002 for national distribution.

Provide incentives: In order to encourage businesses to adopt new or additional ways of handling incoming cars, Sustainable Conservation is exploring ways to give environmentally responsible facilities a competitive advantage. Options include creating a stormwater certification program and providing economic and regulatory benefits to certified businesses.

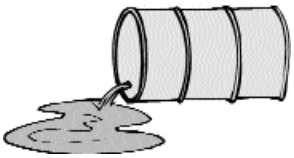
Sustainable Conservation recognizes the tremendous opportunities that can come from working with government and the private sector to solve environmental problems, and the success of our Auto Recycling Project is an example of what can be accomplished. Sustainable Conservation achieves tangible results that can be replicated in other communities across the country. We continue to tackle the very real challenge of advancing the stewardship of our land and water through a blend of science, strategic analysis, stakeholder partnerships, and innovative business strategies in thoughtful ways that achieve results.

Car Facts



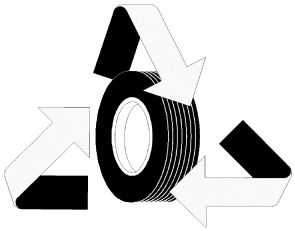
There were an estimated 134 million cars and trucks traversing America's roads in the year 2000.

Source: U.S. Department of Transportation, Federal Highway Administration, 2000



Over half of the hazardous waste manifest (hazardous waste that has been tracked from production to disposal) in California is directly or indirectly related to the production, maintenance, operation, and disposal of the automobile.

Source: California Department of Toxic Substances Control, *Pollution Prevention Report*, 2000



About 75-85% of the content of vehicles by weight is recycled, and approximately 95% of vehicles on the road enter the recycling infrastructure.

Source: United States Council for Automotive Research, "Passenger Vehicles and the Most Recycled Products on Earth," 1998

Only 61% of aluminum cans, 30% of paper products, and 20% of glass products are recycled by household in the U.S.

Source: United States Council for Automotive Research, "Passenger Vehicles and the Most Recycled Products on Earth," 1998

Over 10 million cars nationwide end up in auto recycling facilities, including more than 1 million in California.

Source: Automotive News, *2002 Market Data Book*

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