

On the Air

2004: A Clean-Air Year

2004 is shaping up to be the cleanest year on record for Santa Barbara County's air, with the lowest ozone levels of any year since 1971, the first year APCD monitored the air. Ozone, a principal component of smog, is formed when nitrogen oxides and hydrocarbons react in the presence of sunlight and heat.

In 2004 to date, APCD's monitoring stations have recorded only two days of ozone levels exceeding the state one-hour and federal eight-hour standards, and no days of levels exceeding the federal one-hour ozone standard. In addition, high ozone levels are rarely recorded after October, notes APCD Director Terry Dressler: "You just don't have conditions that are conducive to ozone formation as you get into November, with cooler weather, a lower sun angle, and shorter days."

While this milestone should be celebrated, Dressler notes that in coming years APCD faces challenges in reducing pollution from sources not covered by APCD's rules: "We've worked with the sources of pollution that are controlled by our rules and regulations, and they've reduced their pollution by as much as 80 percent or more. "Now we're facing increasing pollution from large ships traveling off our coast, and from equipment that is exempt from our rules, as well as ongoing pollution from vehicles - all sources not under our direct control." APCD is working with many partners to address pollution from marine shipping, and is using incentive funds to help equipment operators replace polluting equipment.

As for pollution from vehicles, Dressler remarks, "We have made a lot of clean-air gains in recent

years from cleaner cars and cleaner gasoline. We're in danger of losing those gains, as the number of vehicle miles traveled every year is increasing at a higher rate than the population." He continues, "One reason for this is that people are making decisions about their commutes based not on the number of miles they are traveling, but on other factors, including the convenience of the commute, the time it takes to travel the distance, housing prices, and more."

He adds, "We encourage people to make alternative transportation choices. However, considering how planning trends have centered around the automobile,



APCD Director Terry Dressler

it can be difficult for people to make other choices. It's important to remember there are little things we can do as well, such as to combine car trips. In a two-car family, for example, we can try to find ways to avoid making two trips with two cars."

(continued on page two)

Clean-Air Cars: More Today, Many More Tomorrow

It's not unusual anymore to see a gas-electric hybrid car on the road. And no wonder. Since gas prices went up, the fuel-efficient hybrids have been selling like hotcakes, according to Mark Adrian, Sales Manager at Toyota of Santa Maria. He reports a six to eight month wait right now for a 2005 Prius, and he is already taking names of people to call when the hybrid Toyota Highlander Sport Utility Vehicle (SUV) becomes available around June of next year. Toyota is also releasing a Lexus Hybrid model in 2005, billed as the "first luxury

hybrid." Gas-electric hybrids have both a gas engine and an electric motor. They are very fuel efficient and produce little air pollution—generally they are classified as either Super Ultra Low Emission Vehicles (SULEVs) or Partial Zero Emission Vehicles (PZEVs; the closest classification to zero emissions).

As new Prius models come out, drivers are trading in used models, and these have been selling well too, says Adrian. "We've been getting very good prices on the used hybrids. This

was a concern early on – about resale value for the hybrids. But I can tell you that if we have a used hybrid, we're going to sell it very very quickly, and for a good price." The fact that the used hybrids are retaining their value is also reassuring to new car buyers.

Adrian notes that Toyota is planning hybrid versions of other popular vehicle models: "My gut feeling is that within five years you may see as much as 40 percent of what Toyota manufactures will be hybrids."

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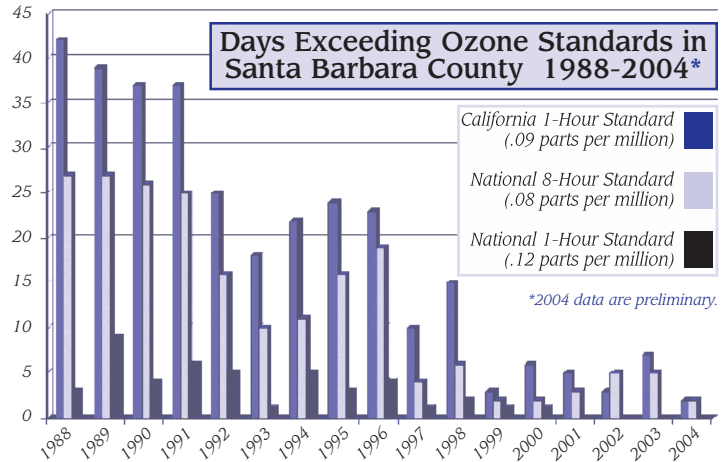
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A Clean-Air Year (cont'd)

While ozone levels have gone down, and Santa Barbara County is currently considered in attainment of federal ozone and particulate matter standards, Dressler points out that the county's air still violates state ozone and particulate matter standards. APCD will also need to work to control toxic air

emissions, particularly those from diesel exhaust, in the next years.

"We have come a long way," says Dressler, "But we cannot take clean air for granted. We do not want to let our guard down now— clean air takes our constant attention and vigilance."



Clean-Air Cars (cont'd)

Jeff Stewart, Sales Manager at Stewart Honda in Santa Maria remarks: "The Civic Hybrids go out the door as fast as they come in." He estimates that hybrid models represent 5-10 percent of the Civics they've sold this year. The Civic Hybrids are also retaining their value, selling for 36 percent of their original purchase price five years from the date of purchase, comparable to the 35 percent of original price for the gasoline-only Civic. The 2005 Accord Hybrid, expected out in December, is being advertised as the world's first V-6 hybrid, with 255 horsepower, rated at 30 (city) and 37 (highway) miles per gallon. These ratings represent a 43 percent increase in fuel efficiency for city driving, and a 23 percent increase for highway driving over the gasoline-only V-6 Accord. The Ford Escape, a hybrid mini-SUV, is already out at dealerships, and as many as twelve additional hybrid models from a range of manufacturers are due to come out in the next two years.

In the longer term, many manufacturers are developing fuel cell vehicles, fueled by hydrogen. Jon Slingerup, President and CEO of Stuart Energy, a company that produces hydrogen from water



Jon Slingerup, President and CEO of Stuart Energy

through an electrolysis process, noted, "The thing to remember about hybrid technology is that it's also preparing the way for fuel cell technology. Many of the advances made in development of hybrids will be important for fuel cell vehicles as well." Slingerup was speaking at a recent event sponsored by the Central Coast Clean Cities Coalition (known as C5). The event featured a display of some prototype and in-use clean-air vehicles at the Hearst Castle Visitors Center, including a Toyota fuel cell vehicle.

Fuel cells produce electric power through chemical reactions in a

process that produces no emissions (although emissions can be produced in the extraction of hydrogen for use in the fuel cell). The only by products of the chemical reactions are water and heat. Slingerup discussed properties of hydrogen, including the fact that it is lighter than air, so when spilled, tends to dissipate up and away, unlike gasoline, which can pool and collect around the scene of a spill. He noted, "Hydrogen is an amazing fuel. You have to treat it with respect. There are safety issues. But I believe it's going to be as safe as any fuel."

He remarked, "One day, when you have the option to buy a fuel cell vehicle, our idea is you'll have a small hydrogen home filler, so you can do some of your filling up at home." He added that fuel

cell vehicle owners might one day even have the option to use the fuel cell in their vehicles to provide electricity for their homes at night, or to plug into the grid to provide power back to the grid and run the electric meter backwards. He emphasized, "There are many initiatives in California and around the world today to use hydrogen to free us from the need to import more and more oil—but we're going to have to start funding the infrastructure."

California has a plan to install a "hydrogen highway" of hydrogen fueling stations around the coast, as part of an effort to take a leadership role in the development and implementation of hydrogen-based technologies. Said Slingerup, "Within five years you're going to see it start to happen, and within seven years, you'll be able to go into a dealership and buy a fuel cell car."

For more information:
<http://hydrogenhighway.ca.gov/>
<http://www.driveclean.ca.gov>
<http://www.fuelcellpartnership.org/>



A solar vehicle developed at Cal Poly San Luis Obispo

Reducing Emissions of Fine Particles

APCD Board Roundup

Following are the highlights of the October Board meeting.

Note: there was no APCD Board meeting in August.

October

- Adopted the schedule of dates and locations for the year 2005 APCD Board meetings.
- Reappointed David Schmarje to the APCD Hearing Board.
- Reviewed the Draft 2004 Clean Air Plan and Supplemental Environmental Impact Report, held a public hearing to accept comments, and directed staff to revise the land use chapter.
- Received a status report on four "significant risk" air pollution sources operating in Santa Barbara County and each facility's progress in reducing risks from air pollution to less-than-significant levels, and directed staff to return in six months with an update.
- Received a status update on APCD's implementation of SB700 permitting requirements and outreach with the agricultural community.
- Received an update on APCD's incentive programs to agriculture, and approved \$200,000 in additional funding for the Agriculture Water Pump Repower Program.

By July of 2005, APCD and other air districts in California are required to identify strategies to reduce emissions of particulate matter to meet state and federal health-based standards, according to State Senate Bill 656, passed in 2003

The term particulate matter (PM) refers to fine particles suspended in the air that can be less than 10 microns in diameter, known as PM10, or less than 2.5 microns in diameter, known as PM 2.5. These particles can vary greatly in shape and chemical composition, and can be made up of different materials, such as aerosols, metals, soot, soil, and dust. Santa Barbara County air meets the federal PM10 standard, and does not meet the state PM10 standard. Additional data are necessary to determine whether our air meets federal and state standards for PM2.5.

APCD is currently identifying key sources of PM in the county. This effort will be assisted by looking at results from previous studies, including data collected during the Children's Health Study, which was funded by the state Air Resources Board

and additional partners. As part of that study, PM monitoring equipment set up in Santa Maria and Lompoc measured total PM levels, and also determined the chemical composition of the particles. Since certain types of activities typically generate certain kinds of PM, data on chemical composition helps to identify PM sources. APCD's monitoring station in Santa Maria has recorded exceedances of the state PM10 standard there, so the data are of particular interest.

Notes Ron Tan, APCD Planning and Technology Supervisor, "Identifying the sources of

PM has to be the first step in a control strategy." He adds, "However, we may find that we don't have regulatory authority over some of the sources." He points out that some data indicate a portion of PM is from sea salt (with a higher percentage in areas along the coast), and road dust represents a significant part of the PM problem.

He remarks, "We also suspect that we're going to see that a fair amount of the PM is from vehicle exhaust, and especially diesel exhaust, based on our own emissions inventory, and on findings by other air districts."



APCD Monitoring Specialist Janice Kettler weighs filters in APCD's monitoring lab to arrive at a determination of the levels of particles less than 10 microns in diameter (PM10). Levels of PM10 are monitored at six stations throughout the county, while levels of particulate matter less than 2.5 microns in diameter (PM2.5) are monitored at stations in Santa Maria and Santa Barbara

Sprawl Can Make You Sick

A RAND Corporation study published in October found that people who live in areas with a high degree of suburban sprawl are more likely to report problems such as high blood pressure, arthritis, headaches and breathing difficulties than people who live in less sprawling areas. The differences between people living in the two types of areas remained even when researchers accounted for differences in age,

economic status, race and the local environment.

Researchers theorized that the health problems could be related to people spending less time walking, and more time sitting in cars in sprawling areas, and the associated higher obesity rates. The study used data from Healthcare for Communities, a survey funded by the Robert Wood Johnson Foundation,

and analyzed information from more than 8,600 people in 38 metropolitan areas across the nation. Regions that had the worst suburban sprawl include: the Riverside-San Bernardino region of California; Atlanta; Winston-Salem, N.C.; West Palm Beach, Fla.; Bridgeport-Danbury-Stamford, Conn.; Knoxville, Tenn.; Rochester, N.Y.; and Detroit. Regions with the least amount of suburban sprawl

include: New York City; San Francisco; Boston; Portland, Ore.; Miami; Denver; Chicago; and Milwaukee.

The study found that people living in areas with the most sprawl could expect about four years less life expectancy than people living in areas with the least sprawl.



APCD Board Calendar

Board of Directors

Supervisor Naomi Schwartz

First District

Santa Barbara County

Supervisor Susan Rose

Second District

Santa Barbara County

Supervisor Gail Marshall

Third District

Santa Barbara County

Supervisor Joni Gray

Fourth District

Santa Barbara County

Supervisor Joe Centeno

Fifth District

Santa Barbara County

Mayor Bill Traylor

City of Buellton

Mayor Dick Weinberg

City of Carpinteria

Mayor Cynthia Brock

City of Goleta

Councilmember Carlos Aguilera

City of Guadalupe

Councilmember DeWayne Holmdahl

City of Lompoc

Councilmember Dan Secord

City of Santa Barbara

Councilmember Marty Mariscal

City of Santa Maria

Mayor David Smyser

City of Solvang

All meetings start at 2 p.m. For final meeting agendas, call the APCD Board Clerk, 961-8853.

December 16

Board of Supervisors

Hearing Room

105 East Anapamu Street

Santa Barbara, CA 93101

January 20

Board of Supervisors

Hearing Room

511 East Lakeside Parkway

Santa Maria, CA 93455

March 17

Board of Supervisors

Hearing Room

511 East Lakeside Parkway

Santa Maria, CA 93455

May 19

Board of Supervisors

Hearing Room

511 East Lakeside Parkway

Santa Maria, CA 93455

Community Advisory Council

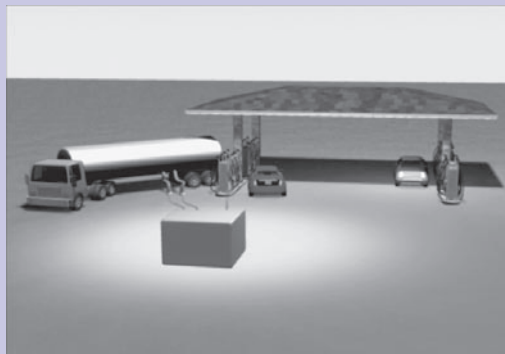
The APCD Community Advisory Council meets the second Wednesday of every month at the Days Motor Inn in Buellton. The public is welcome. For more information, call Linda Beard, 961-8853.

Don't Top Off!

Don't Top Off Your Tank: The Movie

APCD has developed a short video highlighting how important it is not to top off your tank when fueling your vehicle. Produced by Daniel Girard of Heyoka Studios, and funded by a grant from the U.S. Environmental Protection Agency, the nine-minute video explains how the vapor recovery system on the gasoline pump works, and shows what happens when people overfill the tank.

To arrange a presentation, call APCD at 961-8800. For more information, visit: www.sbcapcd.org/edu/dont-top-off.htm.



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Our Vision  Clean Air

Award Winners Show How to Be Green

A recent 2004 Green Award ceremony in September honored environmental role models who have put green ideals into practice in the real world. The award recognizes Santa Barbara County companies and organizations for environmentally progressive efforts above and beyond their primary missions. This year's ceremony highlighted the ways the winners serve as models for others. The award program is sponsored by the Green Award Consortium, made up of APCD, SBCAG Traffic Solutions, the Community Environmental Council, Santa Barbara County Public Works Resource Recovery & Waste Management Division, and Santa Barbara County Water Agency.



Judy Sims, Kindergarten teacher at Monte Vista School

This year for the first time the Award was expanded to include schools, and there were two school winners, models of environmental commitment for elementary school-aged children and college-aged students.

Kindergarten teacher Judy Sims accepted the award for Monte Vista Elementary School in Santa Barbara, remarking "It takes our community to train up teachers and a school system to win this award." Monte Vista won for numerous projects, including a native plant nature trail featuring drought-tolerant landscaping with educational signs and information, a comprehensive school-wide co-mingled recycling program, a weekly farmer's market with organic produce from the school

garden, maintenance practices featuring less toxic cleaning and grounds supplies, and a program encouraging kids to walk, bike or carpool to school. Sims described teaching kindergarteners about the environment, and talked about how important it is for adults to be positive role models for children in this area.

While the Monte Vista program models green practices for elementary schoolers who are just beginning their

educations, the other school winner is a model for college students getting ready to make their own choices as adults. Housing and Residential Services at the University of California, Santa Barbara (UCSB) was selected as a winner for multiple programs, covering a wide range of activities. Said Willie Brown, Executive Director of Housing and Residential Services, "We have young adults at a very impressionable period of their lives, and we feel we need to teach them to take better care of our planet." The programs highlighted by the Green Award include an innovative initiative known as MOVE-OUT that encourages recycling of materials in residences, a composting program in dining halls, numerous measures to conserve water and energy, an alternate transportation program, and a vehicle program employing a fleet of clean-air vehicles using alternate fuels.

Grant House, a Santa Barbara Planning Commissioner, businessman, and community activist, was keynote speaker at the event, and described the winners as shining examples of how to put green ideals into practice: "We are empowered by our honorees. We are



Willie Brown, Executive Director of Housing and Residential Services at UCSB

encouraged by them. Our slightly guilty and too often hypocritical selves are challenged by them. In many varied ways the Green Award recipients are showing us that we too can Be Green."

Introducing Award winner Kanaloa Seafood, J. Michael Holliday of DesignArc, a 2003 Green Award winner, remarked, "All you have to do is stand up and share a vision and it's amazing how it proliferates." Kanaloa Seafood in Santa Barbara recently became the first seafood processor and distributor in North America and Europe to become ISO 14001 certified. ISO 14001 standards, rigorous voluntary environmental standards recognized around the world,

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Business Focus

Green Awards (cont'd)

require a business to set ambitious environmental objectives and develop a plan to achieve the goals. ISO 14001 also requires a certified business focus on pollution prevention, and continuous improvement. Kanaloa Seafood reduced water use by more than 30%, and developed a 100%- recyclable packing material system (that also uses recycled-content material). This is an important innovation in an industry where use of packing material that is not recyclable is the norm.

Great White Dental Lab, a Santa Maria-based dental lab using porcelain kilns, was recognized with a Green Award for its installation of a solar system that supplies more than 100 percent of the facility's electricity needs, supplying power for 264 homes on the weekends. Noted President Jim Spallino, "We have an electric-intensive business. We use a great deal of energy every day—and we can do it with solar." For more on the Great White Dental system, see the Spring 2004 issue of this newsletter, available on our website at www.sbapcd.org.

House summed up the contributions of the Green Award winners in poetic fashion.

"Without theatrics, without clambering for praise, the people and companies and schools honored by this consortium have demonstrated that being Green just makes sense.



Jim Spallino and Jeff Gough of Great White Dental Lab in Santa Maria

It makes business sense
Lowering costs,
Adding value,
Expanding marketing possibilities,
Reducing waste, and
Making more efficient use of labor and material.

It makes environmental sense
Reducing impacts,
Restoring habitats,
Cleaning the air and water, and preserving open space and resources.

It makes community sense
Building health and well-being into our dwellings and structures,
Caring and nurturing folks of all ages and abilities, and Reaching out to those most in need.
And, it makes sense to bring a whole new generation into the Green conversation of Ecology, Economy, and Social Equity."

Funding for Diesel Engines

APCD's Innovative Technologies Group program has funds available to replace diesel engines (on-road or off-road vehicle engines, marine and stationary agriculture engines, and other eligible equipment).

For agriculture, farmers that use 1996 or newer stationary diesel engines with high hours, and ready for overhaul, or have farming operations that use stationary water pump engines to irrigate 1000 or less contiguous acres, may qualify for incentive funds up to the full price of the new engine for stationary water pumps. The farmer must pay for installation costs and must dispose of the old engine.

For details on APCD's diesel engine funding programs, visit www.sbapcd.org/itg/itg.htm, or contact Gary Hoffman at 805-961- 8818 or hoffmang@sbapcd.org, or Anthony Fournier at 805-961- 8874 or fourniera@sbapcd.org.

Agricultural Permits Info Online

Provisions in a new state law known as SB 700 mean that agricultural operations are no longer exempted from obtaining federal, state, and local permits. In the short term, only a very few of the largest agricultural businesses in Santa Barbara County may be required to obtain permits.

For more information on the law, and on agricultural permits, including an emission-calculator tool, see APCD's website at: www.sbapcd.org/biz/sb700_intro.htm.

