

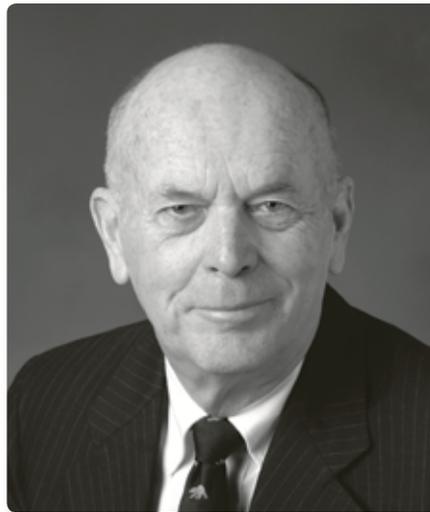
On the Air

New State Air Board Chair Hails from Santa Barbara Problem-Solver, Technology Optimist

In December of 2005, California Governor Arnold Schwarzenegger appointed Dr. Robert F. Sawyer as Chairman of the California Air Resources Board (ARB). Dr. Sawyer was born and raised in Santa Barbara, and graduated from Santa Barbara High School. For the past forty years, Dr. Sawyer has conducted extensive research and taught a range of subjects from air quality science to rocket and jet propulsion at the University of California, Berkeley. He holds a Ph.D. in aerospace science and a Master of Arts degree in aeronautical engineering from Princeton University, and a Master of Science degree in mechanical engineering from Stanford University, and is the author or co-author of more

than 350 technical publications, including two books. Dr. Sawyer earned the Berkeley Citation and the Soichiro Honda Medal from the American Society of Mechanical Engineers and is a fellow of the Society of Automotive Engineers.

ARB is responsible for the control of motor vehicle emissions, consumer product air pollution, and the identification and control of toxic air contaminants in the state. The ARB oversees all air pollution control efforts in California and supports the 35 local districts



Dr Robert F. Sawyer, new Chair of the California Air Resources Board.

(including APCD) that control air pollution from businesses and industry. *On the Air* spoke recently with Dr. Sawyer.

You have a rich and varied background. In fact, you ARE a rocket scientist. Which parts of your experience and training do you think you've drawn on the most in the first months at ARB?

I'd have to say my engineering background. Engineers are trained and educated to be problem-solvers, and we have some problems to solve here. It's not just the application of science, it's the team effort in engineering—working together to come up with a solution. And there's a great team for me to work with at the ARB—I'm very appreciative of the quality of the staff here.

How do you see the ARB's role changing in the next few years?

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Guadalupe Welcomes New School Buses



Guadalupe Union School District Superintendent Hugo Lara (right) and Sandra Scolari, Director of Maintenance, Operations, and Transportation for the Guadalupe District welcome one of two new, lower-emissions school buses purchased with funding from APCD. See article in Business Focus inside.

Summer is Smog Season

To view levels of ground-level ozone (a principal component of smog), updated hourly, see www.OurAir.org.

Inside...

-  **Car Runs on Veggie Oil**
-  **Air Purifiers**
-  **New School Buses for Guadalupe**
-  **Auto Body Shops**
-  **Old Car Buy Back**

New State Air Board Chair (cont'd)

It's already changed quite a bit with the added role of controlling greenhouse gas emissions from cars, as outlined in the Pavley Bill. It's exciting and new territory—and greenhouse gases are air pollutants, so I think this follows naturally from our role in controlling the criteria pollutants.

The Pavley Bill is currently being challenged by the automakers in the courts. How do you see this going?

We are going to fight the good fight through the courts—and whether we win in the specific cases or not, we'll still win by bringing out the issues and putting out a good argument. That's the important thing. More and more, the public is buying into working on this, and the bottom line is, we're making progress.

Several different agencies, including the ARB, are part of the State's Climate Change Action Team. Will ARB be taking a leadership role in implementing some of the actions outlined in the new report from the team, for example greenhouse gas emissions inventories?

We just don't know yet how the responsibilities will be divided up among the various agencies. I'm certainly impressed with the work the climate change registry has already done on greenhouse gas emissions inventories. I believe that these issues are extremely important—and that we'll have a role to play. Just what that role will be will have to wait on some of the discussions going on right now in the legislature.

There are a lot of different vehicle technologies out there now, and under discussion for the future. How do you think this will go? Will we have plug-in gas-electric hybrids, then hydrogen-electric hybrids supporting

the hydrogen highway until the fuel cell vehicles are available? Which vehicle technology will win out in the end?

There are really two answers to this. One is the engineering answer, which is that one technology will turn out to be the best, and we'll go with that. Then there's the realistic policy answer—which is that there may not be one clear winner. We may have lots of choices, and lots of winners. I'm going to go with that answer, because we've certainly seen that in the past few years. I would never have guessed that today you would have one manufacturer promoting E-85 [an ethanol fuel] while another is pushing gas-electric hybrids. And when you think about it, the more variety in the competition, the better. The result is more choices for the consumer.

The issue of goods movement has been getting a lot of attention recently. While we don't have a port in Santa Barbara County, our air is impacted by pollution from container ships traveling through the Santa Barbara Channel, only ten to fifteen miles off our shores. How are we going to get a handle on this?

It's certainly a huge issue. This pollution has grown and will continue to grow—and our authority to regulate ships at sea is very limited. One thing we really want is for these ships to use low-sulfur diesel fuel when they're close to California shores. We don't see any technical barriers to this. The fuel is there, the engines run beautifully on it. It's just the implementation piece. And this will be difficult.

A challenge. What do you see as some of the other challenges coming up for the ARB?

A big challenge is meeting the air quality standards for ozone and particulate matter. Some parts of the state are doing better than others. The South Coast Air Quality Management District area and the San Joaquin Valley especially are having problems continuing to make progress towards cleaner air with the huge growth we've sustained in California. This is the biggest challenge of all: growth. Growth tends to eat up all the gains we make. And mobile sources [cars and trucks] still dominate the emissions. The more people, the more cars. We haven't won this one yet.

In your crystal ball do you see any technology breakthroughs coming up in any particular areas?

I don't think we need any huge breakthroughs. Of course there are some technological barriers and challenges. Getting a cheap source of hydrogen—that's a major one. Overall though, I have to say, I consider myself a technology optimist. We have many technology tools at hand already that we can apply, I don't think we need to wait, or count on any one thing coming through.

For more information on the ARB, visit www.arb.ca.gov.

Air Facts

Do you know...

...if it is possible to breathe a liquid and not drown?

or...

...approximately how much air (in cubic feet) a human being breathes each day?

or...

...where the cleanest air on earth is found?

APCD is providing to Santa Barbara County educators and teachers a quiz deck of cards full of interesting facts about air. Contact Mary Byrd at 961-8833 or byrdm@sbcapcd.org to receive one for your classroom or after school or summer program.

Students Learn about Fuels Teacher Honored with Education Grant

APCD Board Roundup

Following are the highlights of the March and May Board meetings.

March

- Approved \$400,000 for the Marine Diesel Engine Repower Program.
- Adopted a Resolution declaring May as Clean Air Month and May 2nd, 2006 as World Asthma Day.
- Established a Guadalupe Oil Field Air Quality Mitigation Program and approved \$254,520 funding to replace two older school buses with cleaner buses for Guadalupe Union School District.
- Approved \$150,000 in funding for implementation of the Old Car Buy Back program.

May

- Authorized inclusion of domestic partner language in the APCD life insurance policy, and approved two-percent increase in salary for the Air Pollution Control Officer. Reappointed Donald Ward to the APCD Hearing Board.
- Received and filed the Fiscal Year 2004-05 APCD Comprehensive Annual Financial Report and Audit Reports.
- Approved and presented a Resolution of Appreciation to David Romano for his service as an Air Quality Engineer III and Engineering Supervisor.
- Reviewed Fiscal Year 2006-07 Comprehensive Program Summary and Proposed Budget, held a public hearing to accept comments, and scheduled a budget adoption hearing for June 15, 2006. Selected Salud Carbajal, Marty Blum, Russ Hicks, Will Schuyler, and Marty Mariscal to serve on the APCD Hearing Board Nominating Committee during 2006.



Shop teacher Mike Shallenberger talks with his students at La Cumbre Junior High School in Santa Barbara. Last year Shallenberger led a class project converting a diesel Mercedes to run on 100% waste vegetable oil from a local restaurant. Guided by Shallenberger, the students added a second fuel system to the car, with a tank in the trunk for the vegetable oil, a filtering system (see below), and a hot-water circulation system to bring the viscosity of the vegetable oil to the point similar to that of the petroleum diesel the vehicle was

using before. Shallenberger was honored with an education grant from the Teachers Network program of the Santa Barbara County Education Office, through a program supported by APCD. Said one of the students: "Before this project, I never knew that a car could run on vegetable oil. I learned a lot about how cars work, too." Shallenberger's next class project? A solar-powered electric golf cart.

State Updates Report on Air Purifiers

In May, the California Air Resources Board (ARB) updated its report on air purifiers that generate ozone, warning that these devices intentionally emit large amounts of ground-level ozone, an air pollutant that is a principal component of smog, and that is very harmful to breathe. In one study conducted by the U.S. Environmental Protection Agency, one of these devices produced levels of ozone indoors that would represent a stage one smog alert—when local air pollution agencies advise the public to avoid some outdoor activities.

For more information, click on "air purifiers" from our home page at www.OurAir.org, or call us at 961-8800.



Oil storage tank.



Filtering system.



APCD Board Calendar

Board of Directors

- Supervisor Salud Carbajal
First District
Santa Barbara County
- Supervisor Susan Rose
Second District
Santa Barbara County
- Supervisor Brooks Firestone
Third District
Santa Barbara County
- Supervisor Joni Gray
Fourth District
Santa Barbara County
- Supervisor Joe Centeno
Fifth District
Santa Barbara County
- Councilmember Russ Hicks
City of Buellton
- Councilmember Donna Jordan
City of Carpinteria
- Mayor Lupe Alvarez
City of Guadalupe
- Councilmember Will Schuyler,
Vice Chair
City of Lompoc
- Mayor Marty Blum
City of Santa Barbara
- Councilmember Marty Mariscal
City of Santa Maria
- Councilmember Edwin Skytt
City of Solvang
- Councilmember Margaret A. Connell, Chair
City of Goleta

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

June 15
Board of Supervisors'
Hearing Room
105 East Anapamu Street
Santa Barbara, California 93101

August 17
Board of Supervisors'
Hearing Room
105 East Anapamu Street
Santa Barbara, California 93101

October 19
Board of Supervisors'
Hearing Room
105 East Anapamu Street
Santa Barbara, California 93101

December 21
Board of Supervisors'
Hearing Room
105 East Anapamu Street
Santa Barbara, California 93101

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.

APCD Launches Old Car Buy Back Program

APCD launched an Old Car Buy Back Program May 1st, offering \$800 for cars, light-duty trucks, and vans model year 1988 or older that are registered in Santa Barbara County and meet certain requirements.



Cars and trucks are the major source of onshore smog pollution in Santa Barbara County. Older vehicles can pollute 20-30 times more than newer vehicles. These higher-polluting vehicles make up only a small percent of the vehicles on the road, but produce a very large percentage of the vehicle pollution. The APCD program is designed to take these polluting vehicles off the road, using a licensed auto dismantler to permanently destroy cars and trucks voluntarily retired under this program. The program currently has funding to buy back and retire more than 200 vehicles. The vehicle must be operable, and registered in Santa Barbara County (for at least the last two years). Additional requirements apply. For more information, visit www.OurAir.org or call 1-800-717-7624.



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Business Assistance
(805) 961-8868

Daily Air Quality Report
www.sbcapcd.org

Complaints/Public Information
(805) 961-8800

World Wide Web
www.sbcapcd.org

E-Mail
apcd@sbcapcd.org

On the Air is a quarterly newsletter published by the Community Programs Section of the Santa Barbara County Air Pollution Control District. For further information on items in this newsletter, or to be added to our subscription list, please call Bobbie Bratz, 961-8890 or Email bratzb@sbcapcd.org.



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Guadalupe Welcomes New Low-Emission School Buses

Cleaner Diesel Fuel for Guadalupe and Santa Maria High School District

In May, Guadalupe Union School District welcomed two new low-emissions school buses, purchased with the help of funding from the APCD. As part of the project, the new buses—and twenty other buses at the Santa Maria High School District bus yard—will be fueled by ultra low sulfur diesel fuel, which reduces pollution, and makes possible the use of cleaner diesel engines and advanced pollution-control equipment.

“This is such an investment in our school district, in our community, and in our children, who will be breathing cleaner air inside and outside the new buses,” said Hugo Lara, Superintendent of Guadalupe Union School District.

Exhaust emissions from the new Guadalupe buses are about 90 percent cleaner than



(from left) Sandra Scolari, Director of Maintenance, Operations, and Transportation for the Guadalupe Union School District, John Doughty, Lead Mechanic for the Santa Maria Joint Union High School District, and Guadalupe District Superintendent Hugo Lara demonstrate how clean the exhaust pipe is on the back of one of the new school buses – even after it was driven 2500 miles across the country.

the buses they are replacing. Diesel exhaust is considered the number one airborne carcinogen in the state. Older diesel-powered school buses not only pollute outside air—studies have shown that they also significantly pollute the

air inside the school bus with harmful exhaust. Children are more susceptible than adults to harm from air pollution in general. Their lungs and respiratory systems are still developing, and they breathe more times a day than adults.

John Doughty, Lead Mechanic for the Santa Maria Joint Union High School District, remarked, “I know what’s outside gets inside—that the kids are breathing some of that exhaust inside the older buses. I have a granddaughter with asthma, and whenever they’re giving her breathing treatments, I think about the air she’s breathing, and how we have to keep it clean. There’s nothing more important than this.”

One of the first things that struck Doughty when the new buses came in was how clean

their exhaust pipes were—even though they’d just been driven 2500 miles across country. He said, “This is the kind of thing mechanics notice—especially since the exhaust pipes on the other buses are black with soot.” The cleaner diesel fuel currently costs about eight cents a gallon more than the diesel fuel it is replacing; some of the APCD funding will help cover the difference. Doughty has already tested the fuel in his fleet of twenty school buses, and found no problems making the switch.

(continued on back)

Ultra Low Sulfur Diesel Fuel is Coming

All diesel fuel offered for sale at retail outlets in California must be ultra low sulfur diesel fuel by September 1, 2006. This fuel allows for the use of cleaner technology diesel engines, which greatly reduce pollution. The fuel may also make it possible for some diesel-powered cars to meet the same emissions standards as gas-powered cars and trucks in the future.

Low-Emission School Buses (Cont'd)

Sandra Scolari, Director of Maintenance, Operations, and Transportation for the Guadalupe District, said the buses will be transporting students in a few weeks, as soon as the drivers are trained on the new buses. She noted, "The driver who drove one of the buses across the country said it drives beautifully." In the past few years, APCD has funded the replacement of eight school buses in the county with cleaner buses, at the Orcutt, Blochman, Cuyama and Goleta school districts. An additional sixteen buses operated by Cuyama Unified School District, Goleta Union School District, Carpinteria Unified School District and Student Transportation of



One of the older school buses that is being replaced releases a plume of soot when its engine is started (above). It also has to idle for several minutes before its engine shuts off. The new buses don't emit plumes of soot, and don't need to idle before shutoff.

America have been fitted with particulate traps, which reduce the harmful emissions in the

diesel exhaust. Taken together, the school bus projects have cut more than twenty-four tons of nitrogen oxides and particulate matter from diesel school bus exhaust since 2001.

APCD is continuing to work with school districts to reduce diesel exhaust emissions, and has funds available to replace additional school buses and purchase pollution control equipment in the coming year.

To find out more, visit www.OurAir.org, or call 961-8800.

How Auto Body Shops Can Prevent Smog Pollution

The California Department of Toxic Substances Control has fact sheets and videos designed to help auto body shops reduce smog-forming air emissions, reduce and properly manage hazardous waste, and eliminate releases

of contaminated storm water.

See their website at www.dtsc.ca.gov/PollutionPrevention/ABP/index.cfm, or call APCD's Business Assistance Line at (805) 961-8838 and we will send you the materials.

Nominations for the 2006 Green Award are due by June 24.

See information and nomination forms here: www.greendifference.org.

APCD's Business Assistance Program



Our Business Assistance Representatives offer help to businesses over the phone and by email, and we also provide educational site visits to help owners understand and comply with our rules and requirements. The site visits are educational, not regulatory, and are conducted by a business assistance representative, not an APCD inspector. A site visit can help business owners: understand and comply with our permit conditions, rules and record keeping requirements; learn about new regulations that might be coming up; and find out about ways to prevent pollution.

Find out more:

*Visit this page on our website: www.sbcapcd.org/biz/business.htm
Call the Business Assistance Line at 961-8868, Email business@sbcapcd.org.*



APCD Grants for Local Businesses

Close to \$1 Million for Cleaner Engines

Applications for APCD grant funds for cleaner engines are now available. Equipment that is eligible for grants for repowers or retrofits includes:

On-Road Vehicles

Off-Road Vehicles/ Equipment

Agricultural Water Pumps

School Buses

Marine Engines

Other (Forklifts, Locomotives and more)

Contact Information:

Gary Hoffman at (805) 961-8818, gah@sbcapcd.org or

Anthony Fournier at (805) 961-8874, adf@sbcapcd.org.

For more information visit: www.sbcapcd.org/itg/itg.htm.