

Developer promises a better way

Rosedale Ranch plan even has early support from Sierra Club

By JAMES BURGER, Californian staff writer
Bakersfield Californian, Sun., July 3, 2005

Keith Gardiner has been talking about adding a city with more people than Shafter to northwest Bakersfield for two years.

He calls it Rosedale Ranch.

The project, and an evaluation of how it could impact the environment, goes before the Bakersfield Planning Commission on Thursday.

Planner Marc Gauthier said Rosedale Ranch is the right kind of development for Bakersfield.

But it faces Bakersfield's classic growth problems -- it consumes more than 1,600 acres of farmland, increases traffic on already burdened city streets and may contribute to air pollution.

Rosedale Ranch could bring around 15,000 to 18,000 new people into Bakersfield's extreme northwest corner.

Gardiner said he can build the community right -- make it a unique place with a singular plan and vision to it.

"I'm not a developer. I'm a farmer," he said. "We just happen to farm a piece of ground that we feel passionate about. When it changes we want to make sure it changes right."

Gardiner has a firm idea about what good change -- good development -- looks like.

He's hoping it's enough to sway the commission on Thursday, and later the Bakersfield City Council, to give him the chance to build his vision.

"I'd like to have a lake community because it's hotter than hell in Bakersfield," he said.

Gardiner plans for walking trails, tree-lined streets, lofts and apartments over downstairs shops and stores. He'd like to put a park within a quarter mile of every house.

Other things in the plan:

- 6,500 homes.
- One middle school and three elementary schools.
- 17 to 18 acres of lakes.
- A 230-acre regional business park with light manufacturing and warehouse businesses.
- 13,000 jobs.
- A 150-acre town center -- with shopping and groceries.

The light industrial -- located right across 7th Standard Road from Shafter's International Trade and Transportation Center -- is critical to turning the Rosedale Ranch project from sprawl to a small, self-supporting city.

If there are jobs in the community, Gardiner reasons, people won't have to drive all the way into the core of Bakersfield to work -- clogging city streets and air in the process.

"I don't like sprawl. I wouldn't do the project if I thought it was sprawl," he said.

Gauthier says the Rosedale Ranch plan promises to deliver a better community than Bakersfield's close-packed tracts of single-family homes hidden behind block walls.

"We are doing the same old thing all across town," he said. "This could be different. This is a kind of sprawl, but it's the right kind of sprawl."

The critical tool Gardiner has that others don't is a huge amount of land -- land enough to fit all the pieces of a city inside and still make the deal profitable, Gauthier said.

Gardiner would be building almost three square miles of community.

Even the Sierra Club sees the benefit of that -- if the development is done the way Gardiner is promising.

Club spokesman Gordon Nipp has led a crusade against Bakersfield's expanding growth, saying it contributes to traffic congestion, air pollution and ag land conversion.

He likes Gardiner's plan to put jobs near homes and offset the impacts of air pollution.

"They are trying to be progressive, at least from what I can see," he said. "It's just that there are a number of community issues that need to be addressed."

Those issues are air quality, traffic and the elimination of agricultural land.

Gardiner is promising to pay to clean up enough old farm engines and polluting cars to offset the new pollution from his homes and businesses.

"If that really is true -- if they don't mess around with the numbers -- we are certainly in support of that," Nipp said.

The jobs at Rosedale Ranch will help alleviate some -- but not all -- of the traffic impacts.

Miles away, where there are already choke points in Bakersfield's traffic system, things will get worse, Gauthier said.

And Rosedale Ranch takes farm land out of production.

Gardiner, who has been farming the land for years, said it's the economics of farming -- not development -- that is taking land out of production.

Farmers can make more selling their land than they can working it.

"Farmers don't get pension plans. They don't retire at 55 and get 100 percent of their annual salaries," he said. "If farming is so great, why is every farmer that has a developer knocking at their door scrambling to sign?"

Bakersfield is growing, Gauthier said, and that means farm land is going to disappear.

Oh, say can you see ... particulate matter? Holiday air polluted After sundown on July 4th may be most polluted hours of year; respiratory sufferers watch out

By JOE MULLIN, Californian staff writer
Bakersfield Californian, Sun., July 3, 2005

The first few hours of darkness on the night of the Fourth of July are a time of great excitement and celebration, especially for kids.

But they also may be the most polluted few hours of the year. Data collected by the San Joaquin Valley Air Pollution Control District show a spike in particulate pollution just after sundown in Bakersfield and other valley cities.

Officials say people with respiratory illnesses should take it easy during that time.

At 9 p.m. on Independence Day 2004, particulate air pollution in Bakersfield was more than 12 times the Environmental Protection Agency's daily average standard for clean air.

Particulates are tiny soot particles -- a fraction of the width of a human hair -- that can damage the lungs, reducing breathing capacity and aggravating asthma and bronchitis.

Since the rest of the day had healthy air measurements, July Fourth as a whole was not considered an unhealthy air day.

Visalia and Modesto saw similarly timed spikes, although the totals were still far below Bakersfield's. Tracy, where fireworks are banned, showed no spike.

The temporary rise in pollution won't do any long-term damage and local air pollution officials say they don't intend to try to regulate fireworks.

But it's cause for concern for people with respiratory problems, especially children.

Those few hours of increased pollution levels aren't a good time for strenuous activity, officials said. They said people with respiratory problems should consider staying inside.

"It's not a good time to be out jogging or playing football," said Brenda Turner, spokeswoman for the air pollution control district. "This is probably the highest spike that we'd see all year."

On a very short-term basis, only a severe fire or other catastrophe could produce the levels of pollution recorded on the Fourth.

A worker at a fireworks distributor called the report an overreaction, but acknowledged those sensitive to air quality might have a problem.

"If you've got asthma, you shouldn't sit around a campfire at night, either," said Charles Dotson, a volunteer worker for California Fireworks. "I just don't believe that one night of celebrating is worth being concerned over."

1998 law drove out many local gas stations

By Lynn Doan, Staff Writer

Visalia Time-Delta, Sat., July 2, 2005

When Bob Hill's family got into the business of gas 34 years ago, fuel-storage facilities were largely unregulated.

"We didn't even need permits; we just dug a hole and put [the gas] in," said Hill, who is now vice president of Franzen-Hill Corporation, a construction company for fuel-storage facilities in Tulare.

But things have changed a bit since then.

Not only have fueling facilities in Tulare County come under strict regulations by the federal government, but they must also meet requirements by the state and other agencies like the San Joaquin Valley Air Pollution Control District.

One such federal regulation in 1998 led to what Hill describes as "the busiest three years of his time in the business."

The federal law passed almost two decades ago required that by December 1998, all fuel tanks and lines be double-walled and connected to leak detectors - an upgrade that cost most Tulare County gas station owners between \$100,000 to \$250,000.

And the smaller stations took the largest blow, gas officials said.

"For the smaller, less well-financed, barely-getting-by places, that just wasn't worth it, so they closed," said Norm Crum, president of Valley Pacific Petroleum Services, which sells fuel to stations in Tulare County. "The perception is that gas station operators are making a ton of money, but that's just not true. A lot are working very hard and are barely getting by."

Joel Martin, a Tulare County inspection supervisor, said that between April 1998 and March 1999, the number of gas stations dropped by 195, from 384 to 279. And the number of gas tanks dropped from 953 to 667, a drop of 286, he said.

"That was the most dramatic period," said Martin, who was an inspector for the county at the time. "There were businesses that elected to pull their tanks rather than spend the expense to upgrade their tanks."

Gas stations continued to close down after the December 1998 deadline because station owners unable to meet the new requirements had until March 1999 to tear down their tanks - under the condition that they remove any fuel, Martin said.

Julien Oil Company, a gas jobber in Visalia, was one of the more than 300 fuel-storing facilities that shelled out \$200,000 to replace its tanks.

"They keep coming up with new laws and new regulations, and they're all costly; there's nothing cheap about them," said Shelly Gill, vice president and treasurer of the company. "We just deal with it because that's what you've got to do to stay in business."

Gill said the state provided some relief, but not enough for some of her client stations, who were forced to temporarily shut down until they could comply with the law.

Kevin Duyst, co-owner of the 76 gas station on Lover's Lane and Noble Avenue, said he had to rebuild the station's gas tanks when he first purchased it in 1987, so the deadline didn't affect him. But Duyst said other small station owners he knew didn't fare as well.

"These little mom-and-pop stations that are on busy corners had no way to stay in the game," he said. "It didn't matter whether they could afford spending the money if they couldn't get it back."

Since 1998, Martin said, the number of gas stations and tanks in Tulare County have "stabilized." The county is currently home to 260 gas stations and 699 underground gas storage tanks, he said.

In the throes of the hot 100s

It's a little behind schedule, but the heat has hit Fresno.

By Anne Dudley Ellis

The Fresno Bee, Sat., July 2, 2005

The heat has arrived, making folks like Michelle Xiong cranky.

Xiong stepped out of the cool of the E Street post office, clutching a jumbo-size drink, heat from the black asphalt parking lot rising to make her point.

"It makes you mad when you are trying to do anything - cooking, cleaning, lots of stuff," Xiong said.

Her cousin Johnny Xiong agreed: "It irritates you. You can't concentrate right."

The Xionsgs have lived in Fresno all their lives, but those first 100-plus-degree days of the summer still take some getting used to. Fresno hit the century mark for the first time this year on Thursday, with a high of 101. Friday's high was worse: 104, with 102 expected today. It's typically 95 degrees this time of the year, according to the National Weather Service.

The reason for the surge above 100?

"It's the typical summertime pattern," said National Weather Service meteorologist Jeff Myers. "A ridge of high pressure over the area ushers in some warmer temperatures."

Sunday should be 99 degrees with a high of 98 expected on Monday, the Fourth of July.

The area's hottest temperatures coincided with a power outage in Clovis Thursday night, knocking out electricity for about 12,000 PG&E customers for one to five hours. A substation near Fowler and Bullard avenues overheated, PG&E spokeswoman Liz Gomez said, causing the loss of power. Workers are trying to determine whether overuse played a part. With the onslaught of high temperatures and the heavy use of air conditioning, Gomez reminded residents to hold off on using heavy appliances until after 7 p.m. and to set the thermostat at 78 degrees or higher, health permitting.

The hot weather also exacerbates the area's dirty air and was part of the reason that Friday was the first Spare the Air day of the year.

That means the air was unhealthy enough that the San Joaquin Valley Air Pollution Control District notified participating businesses and companies and encouraged residents to cut back on smog-producing activities, like driving and using gas-powered lawn mowers.

Air district spokeswoman Janelle Schneider said bad air is caused by emissions - not hot weather - but high temperatures, lack of wind and stagnant air don't help.

"They don't allow the pollution to disperse. It gets locked in," Schneider said.

Fresno County averages 40 Spare the Air days a year, although last year it had just 11, with the first not coming until Aug. 9.

The central San Joaquin Valley, which generally leads the nation in daylong smog violations, has had 13 bad air days this year, Schneider said. Valley air has not been bad enough yet for the district to issue a health advisory, when schools are warned to keep kids inside at recess and everyone is encouraged to limit exertion and time outdoors.

Hot temperatures, hazy air: County gets its first Spare the Air, triple digits

By Martha Martinez, Sentinel Reporter
Hanford Sentinel, Fri., July 1, 2005

HANFORD - It's unpredictable. Last year it didn't happen until mid-August. This year, it happened today - the season's first Spare the Air day.

Six different counties - Kings, Tulare, Fresno, Madera, Merced and the Valley portion of Kern counties - were declared to have unhealthy air conditions.

In a typical summer, 20 to 40 Spare the Air days are declared throughout the San Joaquin Valley. Spare the Air season runs from June through September.

Public information representative at the San Joaquin Valley Air Pollution District, Janelle Schneider, said that the date is about normal for having a first Spare the Air day.

Just because the first Spare the Air day started earlier this year than last year doesn't mean there will be more throughout the season than last, Schneider said.

Different climate factors affect the air quality so there is no way of predicting how many Spare the Air days will be declared over the season, she said.

"Last year was an unusually low year," Schneider said of the 10-day Spare the Air days declared last summer. All of those days were declared in August and September.

High temperatures in the Valley don't seem to be helping the situation much. Today's high temperature forecast for Hanford is 102 degrees.

Not much of a cooling trend can be expected throughout the holiday weekend. Saturday's highs in the Central Valley are expected to be from 96 to 103 degrees and Sunday's from 93 to 100 degrees. Highs in Valley locales could reach as high as 101 on Monday. The National Weather Service Web site has Hanford's high temperatures listed in the upper 90s until Wednesday, when triple-digit temperatures are again predicted.

Residents in the declared areas should limit their outdoor activities. For the most part Valley residents have been helpful in doing so.

"Valley residents have been very cooperative during past Spare the Air days in curtailing their activities that contribute to air pollution," said Jaime Holt, the air district's public information administrator. "We are confident that they'll continue to do that this Spare the Air season."

For more information on Spare the Air and air quality, visit the district's Web site at www.valleyair.org.

Spare the Air Tips

- Share a ride, take public transportation, walk or ride a bike instead of driving.
- Link your trips (do all your errands at one time).
- Postpone the use of gas-powered lawn equipment.
- Use an electric briquette igniter instead of lighter fluid.
- Use water-based paints and solvents instead of oil-based products.
- Take your lunch to work to avoid driving.

Anger and fear over asbestos contamination in wealthy Sacramento suburb

By Brian Melley, Associated Press Writer

In the Fresno Bee, Sat., July 2, 2005

EL DORADO HILLS, Calif. (AP) - A huge cloud of construction dust blowing across the field where his son played Little League signaled to Lance McMahan it was time to get out of this fast-growing suburb above Sacramento.

Watching from a lawn chair as bulldozers reshaped a nearby hillside into another setting for high-priced homes, McMahan knew that the ground getting torn up and carried by the wind over the baseball diamond contained natural veins of asbestos.

"That was like the last straw," said McMahan, recalling the day six years ago when he decided his family's health was more important than staying in their foothills home of five years.

The U.S. Environmental Protection Agency recently confirmed the fears of McMahan and many other people in El Dorado Hills, but also created a dust-up over property values and the pace of development in this wealthy community of 31,000 residents, where the median home price in May was \$566,000.

In tests completed last October, the agency found elevated levels of a naturally occurring but particularly dangerous type of asbestos fiber at playing fields, a popular bike trail and a playground for toddlers. But the agency hasn't been able to quantify the risk to residents. "It's bad, we just don't know how bad," said Jere Johnson, EPA's assessment manager for the site.

While the findings have led some to consider leaving, most folks are staying put for now. Some are angry at EPA for singling out their community without explaining the chances of getting cancer from inhaling invisible airborne asbestos fibers, which has led to finger-pointing and charges of fear-mongering.

"We're not concerned about it," said Tom Ellenburg, who lives in a neighborhood near where the testing was done. "We don't sit around and breathe asbestos dust. We could go out in the street and dig around in it and sniff it up, but we don't do that."

Danger from asbestos has lurked over communities worldwide for generations, largely as a byproduct of mining or industry. It was once widely used in many household products, including home insulation.

If inhaled, the needle-like asbestos fibers can cause life-threatening asbestosis, lung cancer and mesothelioma, an incurable cancer of the chest lining.

Asbestos is found in 44 of California's 58 counties, usually in serpentine, the state rock. In its natural form it's considered harmless unless disturbed.

But the situation in El Dorado Hills is considered a greater threat by EPA because a more toxic form of asbestos, tremolite, is present and can be found close to the surface or even exposed.

Because it can take 20 to 40 years to develop an asbestos-related ailment, children are at a higher risk of exposure during their lifetime. In El Dorado Hills, a community planned a little more than a quarter century ago, that fact has been greeted with gallows humor.

Middle-aged residents joke that they needn't worry: they'll be dead before any disease is detected. Even their children have displayed a macabre outlook.

Some seniors sported T-shirts last year bearing the slogan, "I survived Oak Ridge High School asbestos," on the front. The back read, "Or did I?"

Terry Trent, a construction consultant who was the first to draw widespread attention to the problem, offers informal asbestos tours, getting wary looks from homeowners as he combs back tall grass looking for the culprit in the eroded embankments beyond their driveways.

"You can see how flaky this is," he said as a piece of the silvery white fiber corroded in his hand. "This whole hillside is shot through with tremolite."

The hill is above the high school and adjacent to the community center.

The EPA's Superfund unit, charged with cleaning up life-threatening hazardous waste, performed the testing after spending \$1.2 million to clean up asbestos on the grounds of Oak Ridge High School.

In October, contractors in white suits and respirators spent a week simulating child's play to measure exposure. In the name of science, they slid into the bases on the ball field, pedaled and jogged along a popular trail, played basketball and soccer and gardened behind an elementary school.

Compared to areas where no activity took place, cyclists created enough dust to be exposed to up to 43 times more asbestos; baseball stirred up as much as 22 times more asbestos; and soccer kicked up 16 times more asbestos.

While the EPA is confident about its findings, it's working on a way to explain the significance of the numbers.

Dr. Bruce Case an epidemiology, pathology and occupational health professor at McGill University in Montreal who has studied asbestos for 25 years, said the huge exposure levels during exercise are enough to trigger serious concern.

Levels of tremolite measured by the EPA without any activity were similar to those found in the air of active mining towns in Quebec where blasting went on for a century, Case said.

"Anybody who's not worried about it is in complete denial. You can certainly say people are going to die and there are going to be increased cases of cancer," Case said. "I wouldn't live there, I wouldn't want my family to live there."

Before the EPA even released its findings publicly, Jon Morgan, the county's top environmental officer, issued a press release warning residents that the sloppy report "may unnecessarily scare the daylights out of every man, woman and child in El Dorado County."

The EPA fired back, saying Morgan's claims were false, irresponsible and he lacked an understanding of the problem.

Morgan went on a local cable television station to further shoot down the results before they were released. Michael Dennis, owner of Foothills 7 Television, said he ran with the program because the scope of the problem was unknown.

"Let's be reasonable here and get the truth out before we start freaking out," Dennis said. "It was really annoying that (the EPA) kept coming out with information that was scaring the living crap out of people without the science."

Dennis said he felt he achieved his goal when the EPA held its first public meeting in the community in early May. More than 1,000 people showed up, many openly hostile toward the EPA and many not knowing whom to believe.

El Dorado County is working on tougher dust control standards, but already requires developers to water down construction sites and wash tainted soils from truck tires so they don't track asbestos through town.

Some residents, however, complain the county has been slow to act on complaints of dust from construction that usually dissipates before one of the five employees certified to issue a citation can respond.

Marcella McTaggart, the county's air pollution control officer, defended enforcement efforts. In the first half of the month, the department received 13 complaints, stopping work twice until water trucks arrived to douse construction sites.

Despite suggestions from experts such as Case to halt construction, some plans call for a city of 80,000 people in 20 years.

As Vicki Summers, a mother of two, decides how she's going to cope with the intersecting realities of development and asbestos, she's taking several precautions.

She plans to have carpets that can hold asbestos fibers torn out of her house. She no longer runs fans. And she only vacuums when her boys aren't home.

On a recent night, she attended a meeting at the community pavilion, where she entered the building past a sign warning: "Tests have determined that this facility contains naturally occurring asbestos."

During the meeting she scrawled "Should I move?" on a folder and pushed it in front of Gerald Hiatt, an EPA toxicologist.

It's a question on the minds of many residents. Summers wouldn't reveal what Hiatt told her, and the EPA is not publicly advising residents what to do.

When pressed by The Associated Press on a conference call, three EPA officials would not reveal what precautions they would take if they lived in El Dorado Hills.

Would they play baseball or softball on those fields? Would they let their children play there? Would they pedal a bike along the New York Creek trail.

There was silence on the other end of the phone.

Windmills kill birds, generate protests

Altamont Pass is avian death trap

By Terence Chea, Associated Press

In the Modesto Bee Tues., July 5, 2205 and San Diego Union-Tribune, Sat., July 2, 2005

ALTAMONT - When it comes to wind power, few places are more productive, or more deadly to birds, than this gusty stretch of rolling hills 50 miles east of San Francisco.

While demand has risen for greener energy sources, the Altamont Pass has become one of the nation's leading producers of wind power, capable of generating 800 megawatts of pollution-free electricity, enough to power 200,000 homes.

But the Altamont, where more than 5,000 windmills line the hilltops, also has become a death trap for thousands of migrating birds that get chopped up in fast-rotating turbine blades as they fly through or hunt for prey in this mountainous region between the San Francisco Bay area and the San Joaquin Valley.

An estimated 1,700 to 4,700 birds are killed each year in the 50-square-mile Altamont Pass Wind Resource Area, and of those fatalities, between 880 and 1,300 are federally protected raptors, such as burrowing owls, red-tailed hawks and golden eagles, according to a study released last year by the California Energy Commission.

"Altamont is killing more birds of prey than any other wind farm in North America," said Jeff Miller, a wildlife advocate at the Center for Biological Diversity. "Incredible numbers of raptors are being killed there, and it's hard to believe it's not having effects on the populations."

The relentless bird killings have provoked a fight between the windmill operators and environmentalists, who were once reluctant to take on an industry that provides an eco-friendly alternative to fossil fuels blamed for air pollution and global warming.

Wildlife advocates have taken legal action to force the turbine operators to reduce the carnage. They have sued nine companies that run wind farms there and have appealed Alameda County's decisions to renew their operating permits without requiring measures to reduce bird collisions.

A county judge this week allowed the lawsuit to move forward, and the case could go to trial late this year or early next year. The Board of Supervisors is expected to decide next week whether to force the turbine operators to adopt measures to curb bird deaths, such as closing for winter or scrapping the most lethal turbines.

"This industry has always wrapped itself in the mantle of green power and has sought to use the environmental benefits of wind power as an excuse for not doing anything about the environmental harms it causes," said Rick Wiebe, an attorney for the Center for Biological Diversity, one of the plaintiffs.

The windmill owners agree something must be done to protect the birds. FPL Energy, which runs about half the Altamont's turbines, has taken down about 100 of its most deadly windmills and replaced 169 with 31 larger, high-tech towers, said spokesman Steven Stengel.

But Stengel warns that requiring more extreme measures could put the wind farms out of business.

"There's a balancing act here," Stengel said. "We have to be able to reduce the bird mortality and at the same time allow the turbine operators to operate in an economically responsible manner."

Wind has become one of the fastest growing sources of renewable energy, expanding about 20 percent annually over the past five years, according to the American Wind Energy Association. Last year, U.S. wind farms had the capacity to generate 6,740 megawatts of electricity. Another 2,500 megawatts is expected to be added this year.

While that's still less than 1 percent of the nation's electricity supply, the U.S. Energy Department wants wind to make up 5 percent by 2020. And states have passed laws to ramp up use of renewables such as wind, biomass and solar power.

In California, where the federal government has proposed dozens of new wind power projects, regulators want 20 percent of the state's electricity to come from renewables by 2010.

In San Diego's East County, PPM Energy, a wind-energy company, has installed four meteorological towers to determine whether enough wind is available to install wind turbines. The wind tests are expected to last up to three years.

All of the towers were built on land belonging to the federal Bureau of Land Management, which must approve permits for their installation. Two are in McCain Valley, another is on Shockey Truck Trail in Campo and a fourth is on Table Mountain near Jacumba.

Beyond food and drugs, biotech fights pollution

By Paul Elias, Associated Press

In the S.F. Chronicle, Fresno Bee, Merced Sun-Star and other papers
Sun., July 3, 2005

On the site of a former hat factory in Danbury, Conn., a stand of genetically altered cottonwood trees sucks mercury from the contaminated soil.

Across the continent in California, researchers use transgenic Indian mustard plants to soak up dangerously high selenium deposits caused by irrigation of the nation's bread basket.

Still others are engineering trees to retain more carbon and thus combat global warming.

The gene jockeys conducting these exotic experiments envision a future in which plants can be used as an inexpensive, safer and more effective way of disposing of pollution.

"Trees are really made for this ... we just have to trick them to do what we want them to do," said Richard Meagher, whose University of Georgia students went to Danbury in 2003 as part of the most advanced, open-air experiment in the United States involving trees genetically engineered to eat pollution. Biologists for decades have been trying to exploit the genetic mechanisms that let microscopic bugs survive in polluted places where most living things die.

Indeed, the 1980 landmark U.S. Supreme Court case that allowed the so-called "patenting of life" that launched the biotechnology industry centered on bacteria genetically engineered to clean oil spills.

But simply dumping engineered bugs on polluted sites has its dangers and drawbacks. Elements like mercury can't be broken down into harmless bits like oil, so researchers have turned to engineering plants to draw pollutants out of the ground.

Meagher uses genes from *E. coli* that enable the common bacterium to live amid mercury. He's spliced them into a variety of plants in the laboratory, where he says his results are dramatically positive.

But proving genetic engineered plants work outside the lab is the real challenge - and Danbury, which at the turn of the last century reigned as the hat-making capital of the world, was a natural destination for his team.

Animal pelts in the town's many factories were softened in mercury baths, and the resulting waste was dumped outside. Only later did residents understand how mercury attacks the central nervous system. By then, many longtime factory workers had suffered from the "Danbury shakes."

Meagher's team planted about 45 engineered cottonwood trees in a polluted lot. The trees are expected to treat the mercury as a nutrient and draw the toxic element for the soil with their roots.

Some of the mercury is expected to vaporize into the air while most is stored in the tree. After several years of growth, the trees will be cut down and incinerated.

Meagher expects to see results from the Danbury experiment later this year. He figures hundreds of trees per acre would need to be planted to be effective. But if his removal method works, the cost of cleaning an acre of mercury-laced soil will plummet from about \$2 million to \$200,000, Meagher estimates.

Meagher agrees with critics who argue that his solution isn't ideal - but he says the trees beat the current clean-up method of digging out contaminated sites and dumping the tainted soil in toxic dumps.

Meagher said he's also hoping to someday deploy genetic engineered trees in northern India and Bangladesh where arsenic poisoning is rampant. Drinking water throughout the region has been contaminated by soils polluted naturally and by spills and drainage from factories.

Still, some potential allies are wary.

The Sierra Club and others fret that grime-busting plants and their unnatural, industrial-strength cleaning genes will contaminate naturally growing relatives. Promises that researchers are engineering sterility into trees don't calm their concerns.

"I'm a pediatrician and I can tell you birth control doesn't work 100 percent of the time," said Dr. Jim Diamond, the Sierra Club's biotechnology expert. "I don't see it working in trees either."

The criticism sows seeds of public uncertainty and makes it difficult for researchers to fund and apply their work. Meagher is operating on about \$1 million in grants, mostly from the Department of Energy, which is saddled with polluted weapons sites.

Meagher also says he's hindered by political apathy and commercial disinterest. A company he helped launched to bring his technology to market is struggling for financing.

"It's not as sexy as trying to cure cancer or give you an erection," Meagher said.

Nonetheless, scientists are increasingly joining this once obscure branch of biotechnology.

Researchers at Purdue University are engineering trees to retain more carbon in an effort to combat global warming. Applied PhytoGenetics Inc., the biotech company Meagher helped launch, also has planted its modified trees at a polluted site in Alabama.

Another example is the work of University of California-Berkeley researchers who are tweaking the genes of the Indian mustard plant to clean up selenium deposits in the California's Central

Valley. They've planted small plots of their creations near Fresno last year, and say the results are promising.

Selenium is naturally occurring but becomes toxic when high-density pockets form because of water flow. Selenium poisoning can stunt growth and cause brain disorders, among other health risks.

"This is a really good way to bring new resources to solve environmental problems," said Berkeley scientist Danika LeDuc. "But first, we do have to increase public confidence in the technology."

On the Net:

Meagher's lab: <http://www.genetics.uga.edu/rbmlab/>

Sierra Club: <http://www.sierraclub.org/policy/conservation/biotech.asp>

Teachers learn to sweeten science

Fresno State course gives educators tips on inspiring students to be engaged.

By Jim Steinberg

The Fresno Bee, Mon., July 4, 2005

McLane High teacher Jim Simpson and Katherine Vazquez, a teacher-to-be, spent the past two weeks at Fresno State learning how science teachers can inspire kids to be the problem solvers of tomorrow.

It's a daunting task as the United States faces growing competition from other countries in educating badly needed scientists.

The world, once preoccupied with the threat of nuclear annihilation, now faces the slower-moving but potentially catastrophic processes of global warming, rising tides and pollution of water and air. These and other issues will not be solved without scientists, the class of about 60 learned.

The dilemma for American educators is how to make science more accessible and less threatening to middle school and high school students.

Jean Pennycook, a kindergarten through high school science teacher and adjunct faculty member at California State University, Fresno, says teachers need new approaches. Pennycook was co-instructor at Fresno State's "Mission to Earth: Earth Science from the Core to the Edge of the Solar System," which concluded Friday. It was presented by the university's Science and Mathematics Education Center. The two-week, 3-unit course featured professor Stephen Lewis of Fresno State's earth and environmental sciences department as lead instructor and Pennycook as co-instructor.

Professor David M. Andrews, director of the science and math teaching center, employs a joke while trying to come up with ways to overcome American children's aversion to math and science.

"It's not rocket science," he says.

In fact, young people who get over their fears and get to work with math and science may eventually find themselves doing rocket science or working in other emerging fields. But not unless they overcome a national trepidation of numbers, compounds and equations.

Teachers and college students who are working toward teaching credentials "face kids every day who have math and science phobias," Pennycook says.

The Fresno State program for teachers and teaching students suggests methods and ideas for engaging teenagers who otherwise might "turn off" science and mathematics.

Andrews links his teacher-students with the National Aeronautics and Space Administration's Jet Propulsion Laboratory at the California Institute of Technology. He shows teachers how they can connect their students with Web sites for "real-time" data such as ocean temperatures.

The data lead to questions, such as how changes in ocean temperatures relate to the ozone layer, the polar ice caps and weather in general.

Lewis says part of the attraction of the course is that it talks about Earth as one planet in the immense solar system. Science has learned to make more connections between Earth's geology and such questions as "Does Mars have water or life, and did it ever?"

Andrews arranged for Joy Crisp, senior research scientist for the Mars Rover Mission and the search for water on that planet, to talk with the science teaching class.

Crisp's page on the NASA Web site says she has examined Mount Etna in Italy, Mount St. Helens in Washington and Mauna Loa, the Earth's largest volcano, in Hawaii. She is an expert on Olympus Mons, an extinct volcano on Mars three times the height of Mount Everest and larger at its base than New Mexico, the NASA site says.

The origins of Olympus Mons and those of earthly volcanos share certain processes of geology and astrophysics. Andrews' course attempts to equip teachers with such fascinating mental bait to hook middle and high school students on science.

In the science-teachers course, "we develop lesson plans," Lewis says. "Students download data from NASA on ocean levels."

Such technological capacities from within San Joaquin Valley classrooms can make science immediate, relevant and exciting to seventh- through 12th-graders, Andrews says.

Vazquez intends to take information from this course into her classrooms once she begins teaching. She says she has learned from the course, which ran June 20 through Friday, and answered some of her own questions.

"How can I use these ideas in the classroom? By being around teachers, getting their perspectives, coming up with activities from the Internet. We add on to them."

Simpson, the McLane science teacher, took the course to refresh his knowledge about subjects he teaches about earth science, such as oceans, geology and workings of the planet.

Take geology, Simpson says:

"California -- what made it the way it is? If you can't teach geology in California, where can you? You have just about every thing" explored in geology.

Andrews had support for the latest class from the school districts in Caruthers, Fowler, Fresno, Hanford, Porterville, Tulare and Visalia.

Bush Cool to Blair on Climate

The president refuses to bend on Kyoto, saying the premier's backing in Iraq is a separate matter. Global warming is a priority for the G-8.

By John Daniszewski and Ron DePasquale, Special to The Times
Los Angeles Times, Tues., July 5, 2005

LONDON — As world leaders prepared for a major summit, President Bush said Monday that he would not substantially change his stance on global warming to reward British Prime Minister Tony Blair for his support of the war in Iraq.

"I really don't view our relationship as one of quid pro quo," Bush said. "Tony Blair made decisions on what he thought was best for keeping the peace and winning the war on terror, as I did."

Reiterating his opposition to the Kyoto Protocol that mandates targets for cutting greenhouse gas emissions, Bush told Britain's ITV1 channel that he would reject any measures that "look like Kyoto." The United States is the world's largest emitter of carbon dioxide, but Bush has rejected the treaty because its provisions, he said, would "wreck the U.S. economy."

Blair is the host of the Group of 8 summit that begins Wednesday in Gleneagles, Scotland, and he has made the issues of climate change and increasing assistance to Africa the top priorities of the meeting.

The annual gathering attracts protesters denouncing globalization and capitalism, and in recent years, the Iraq war. Demonstrators clashed with police Monday on the streets of Edinburgh, about 40 miles south of the exclusive golf resort where Bush and Blair and the leaders of Canada, France, Germany, Italy, Japan and Russia will meet. Thousands of police were being deployed in the area to cope with an expected onslaught of demonstrators.

In the days leading to the summit, aides to Bush have sought to dispel his international image as a cowboy. His administration has announced plans to double development aid to Africa by 2010, although not in the way Blair and other G-8 leaders had proposed.

Although he rejected any "quid pro quo" on climate change, Bush acknowledged that human activity was at least partly responsible for the apparent warming of the planet in recent years.

And he said that there might be other compromises the United States and other nations could make to reduce the amount of greenhouse gases being produced.

In the past, European leaders have been frustrated that U.S. officials have disputed scientific evidence of accelerated warming and questioned whether the phenomenon posed a real threat to the planet.

Asked in the interview whether climate change was "man-made," Bush replied, "To a certain extent it is, obviously."

"You know, look, there was a debate of Kyoto, and I made the decision — as did a lot of other people in this country, by the way — that the Kyoto treaty didn't suit our needs. In other words, the Kyoto treaty would have wrecked our economy, if I can be blunt."

Bush denied, though, that he was putting U.S. economic interests above the interests of the planet.

"My hope is ... to move beyond the Kyoto debate and to collaborate on new technologies that will enable the United States and other countries to diversify away from fossil fuels so that the air will be cleaner and that we have the economic and national security that comes from less dependence of foreign sources of oil," he said. "To that end, we're investing in a lot of ... research on hydrogen-powered automobiles. I believe we'll be able to burn coal without emitting any greenhouse gases," he said, also citing his support for "more nuclear power."

The Kyoto Protocol took effect in February after ratification by 141 countries — including every industrialized nation except Australia and the United States. It aims to reduce greenhouse gas emissions to about 5% below 1990 levels by 2012.

In addition to economic concerns, Bush has rejected the pact because of objections to the way it divides emissions cutbacks between developed and undeveloped countries. However, American officials say the U.S. is making progress on its own goals for reducing carbon emissions.

British Foreign Minister Jack Straw said U.S. opposition to the Kyoto treaty was long-standing and well known, but remained optimistic that the summit would yield results.

"Each country comes to these negotiations ... with its own national perspective," Straw said at a news conference. But he said it was "remarkable how far sentiment has moved in the period since the prime minister identified aid to Africa and climate change as the key" issues to be addressed.

Lower-ranking government officials involved in the summit planning worked over the weekend, hammering out wording on communiqués covering both climate change and aid to Africa. Michael Jay, a British Foreign Office official, told reporters that the weekend talks had been "pretty

intense" and that Britain remained hopeful that a "consensus agreement on climate change" would be signed at Gleneagles.

The Financial Times reported Monday that the eight countries would adopt a joint "action plan" on climate change, although it would stop short of making specific emission-reduction targets. The statement would also contain language referring to a growing consensus among scientists about the problem, the paper said.

On the subject of helping Africa, the leaders appeared to have reached an agreement to raise assistance and eliminate the debt of the continent's poorest countries.

The official actions were unlikely to satisfy the street protesters who have been gathering in Scotland from around the world in anticipation of the summit.

Protesters in Edinburgh on Monday chanted, "We all live in a terrorist regime" to the tune of the Beatles' song "Yellow Submarine." Drummers and dancers clad in pink and purple led black-hooded anarchists on an unauthorized anti-capitalist march in downtown. By 9 p.m., 60 people had been arrested, mostly on disorderly conduct charges, police said.

Thousands of police recruited from around Britain have converged on Scotland to cope with demonstrators expected to number in the tens of thousands by the first day of the summit.

Police employed crowd-control techniques Monday, surrounding a group of protesters less than an hour into the march and herding them into a narrow side street before cordoning them off.

The marchers kept drumming, dancing and tossing confetti as bemused residents watched from apartments and offices. Some of the estimated 200 protesters tried periodically to ram through the rows of police, but got nowhere.

"We should have a right to protest in a democracy," said Erik, a Danish protester who did not give his last name. "But these [police] don't realize that."

Some protesters chanted obscenities; one man in a black dress and pink wig was waving a purple fan accusing the G-8 countries of promoting "wage slavery." The man, who gave his name as Susan, said, "We are against the capitalist, consumer society, and there are alternatives to that."

John Knowles, a recent graduate of the University of Edinburgh who was caught up in the protests, called it "a joke."

"They paid maybe 150 pounds to fly here, and they organized this through their broadband Internet. So maybe they like capitalism after all," he said of the marchers.

Some downtown businesses were boarded and shut, and police advised those still open to close. Certain roads were closed and patrolled by police on horseback.

Hoping to ward off vandalism by protesters, several bars and restaurants hung signs reading, "We are a family restaurant," and "We are not part of a major chain."

On Scotland's west coast, meanwhile, more than 600 protesters attempted to blockade a nuclear submarine base at Faslane, police said.

The protesters staged a sit-in, demanding that money allocated to defense be redirected to fight poverty in the developing world. Four people were arrested, but the protest was concluded peacefully, a police spokeswoman said.

Gov. Turns Up Heat in Global Warming Fight
In a London opinion piece, Schwarzenegger says California will be a leader, drawing a sharp contrast with the Bush administration's policy.

By Louis Sahagun, Times Staff Writer
Los Angeles Times, Tues., July 5, 2005

On the eve of the Group of 8 summit in Scotland, Gov. Arnold Schwarzenegger urged the United States and other nations to combat global warming and vowed in an opinion piece in London's Independent newspaper to make California a leader in the effort.

Schwarzenegger never mentioned President Bush in the article, but his call for immediate action contrasts sharply with the administration's recommendation of only voluntary steps to limit greenhouse gas emissions on grounds that more aggressive efforts would hurt the American economy.

"The debate is over. We know the science. We see the threat posed by changes in our climate," Schwarzenegger wrote. "And we know the time for action is now."

"I ask citizens and governments everywhere to do their part by conserving energy, reducing the use of fossil fuels, reducing waste and taking every opportunity to work together for a cleaner, healthier tomorrow."

His stance is yet another example of how Schwarzenegger is staking positions at odds with Bush on key issues. Schwarzenegger is a moderate Republican who favors abortion rights, opposes a proposed constitutional ban on gay marriage and believes the federal government is failing to secure the border with Mexico.

In an interview Monday, Terry Tamminen, Schwarzenegger's primary environmental advisor, said the governor's article reprised a speech he gave a month ago before business, political and environmental leaders at the United Nations World Environment Day conference in San Francisco.

There, Schwarzenegger signed an executive order outlining ambitious goals for reducing carbon dioxide emissions by 2010 to less than those produced in 2000. By 2050, the state would reduce the emissions to 80% below 1990 levels.

The 1990 baseline is the level countries pledged to get below as part of the Kyoto Protocol, a pact signed by almost every developed nation except the United States, the world's largest producer of greenhouse gases.

In his article Sunday in the Independent, Schwarzenegger gave examples of how his administration planned to achieve such reductions. They include accelerating the timetable to get more energy from renewable resources such as wind, solar energy, geothermal power and biomass conversion, and aggressively pursuing his proposal to have 1 million solar homes and buildings in California to save energy and reduce pollution.

The governor, who wants to increase the state's total solar output from about 101 megawatts to 3,000 megawatts by 2018, also wrote that he aims to host a series of "conservation summits" for businesses across the state, "spreading the word that pollution reduction is good."

The governor's proposal is only about half as ambitious as the Kyoto targets in the short run. But some climate experts believe that if California reduces emissions by the goals Schwarzenegger has set, it would cut more greenhouse gases than Japan, France or the United Kingdom.

Tamminen insisted that the governor's message was "solely focused on California and what it can do to solve global warming problems. He's not looking to send messages to anyone else."

Nonetheless, others said the article was fraught with political implications by virtue of its timing, with the summit of the Group of 8 leading industrialized nations beginning Wednesday.

Elizabeth Garrett, director of the USC-Caltech Center for the Study of Law and Politics, said Schwarzenegger could be trying to garner support for three measures he has embraced in California's special election in November.

The measures would lengthen the time teachers work before receiving tenure, give the governor greater control over state spending and give the Legislature's redistricting powers to a panel of retired judges.

"The governor's popularity has been declining precipitously among Democrats and independents, whose votes he'll need for his initiatives to win in November," Garrett said.

"Writing this global warming piece is a way to remind Democrats and independents that he holds a position important to them, which diverges from the Republican Party," she said. "In other words, he's saying, 'I'm not the usual Republican.' "

Former Democratic state Sen. Tom Hayden called that "an extreme stretch."

"The G-8 meeting is extremely important for environmentalists, and having Schwarzenegger differ from Bush is important," Hayden said. "But he's been taking this environmental position for a long time. He believed in it before the initiatives."

Barbara O'Connor, director of the Institute for the Study of Politics and Media at Cal State Sacramento, agreed. "I honestly think he believes in certain issues with all his being, and the environment is one of them," O'Connor said.

In his article in the Independent, Schwarzenegger charted a course on global warming distinctly different from that of the Bush administration.

Many people have falsely assumed that you have to choose between protecting the environment and protecting the economy," he wrote. "Nothing could be further from the truth. In California we will do both."

Projects need objective review

Kern asked to change the way consultants are selected to review environmental impacts of development.

[Bakersfield Californian Editorial Mon., July 4, 2005](#)

Kern County supervisors today will consider changing the way the environmental consequences of major development projects are studied.

To some, it may seem to be "no big deal." Believe us. It is a big deal.

Changing the way Kern County selects the consultants who prepare environmental impact reports is a big deal to developers and to those affected by developments.

California environmental laws require the consequences of residential, commercial and industrial projects to be studied.

The increasing size of projects, their potential to foul the air and water, and their consumption of valuable farm land are just some of the reasons the preparation of environmental impact reports have become the focus of court battles.

State law gives government agencies latitude in selecting technical firms to study such consequences as development impacts on traffic, air pollution and water availability.

For years, Kern County has allowed developers to hire the consultants who will study the consequences of their projects.

County staff monitors the consultants' work, ensuring an objective analysis is prepared.

By contrast, the city of Bakersfield selects and hires consultants, requiring developers to reimburse the city for the cost of preparing environmental impact reports.

The difference in the two approaches both allowed under state law is real and perceived.

The public may perceive a consultant hired by a developer to be beholden to the developer and more likely to satisfy the developer's demands, rather than the public's needs.

In reality, the need for county staff to monitor the work of a developer's consultant adds to the county staff's workload and to the developer's cost.

Developers must reimburse the county for oversight costs.

Planning Director Ted James is proposing the county change its procedures by having in EIR consultants hired and selected by county staff.

James contends the "net effect" will be a savings in both county staff time and developer costs, as well as an enhancement of "the public perception that the EIR is objectively prepared."

James and supervisors are applauded for recognizing the need to make this important change to the approval of development projects in Kern County.

Air wars

Valley's building industry exerts itself against new pollution fees.

[Fresno Bee Editorial, Sun., July 3, 2005](#)

When new homes and businesses are constructed, air pollution increases. Mitigating that problem in this fast-growing region is a serious issue, and the Valley's air district is trying to come up with a rule setting fees for such damage to the air. The Valley's building industry has made it clear that won't happen without a fight.

There are reasonable disagreements about the environmental impact of new development and about the fees; those are very complex issues. But the industry's full-scale assault also includes plenty of hyperbole that marginalizes the debate.

The San Joaquin Valley Air Pollution Control District is required -- by its own rules and by state law -- to adopt fees for both nitrogen oxides (a smog-forming gas) and particulate matter. The size and scope of the fees are what's being debated. The fees would be charged on the entire development, and could range up or down depending on other mitigating factors. Developers could, for instance, reduce the fees by incorporating air-friendly features in their projects -- bike lanes, walking trails, bus stops, shade trees. It's possible that some projects could see the fees waived altogether. In any case, the fees are hardly onerous.

Builders make the claim, of course, that added costs will be passed on to homebuyers, who presumably will balk at the higher cost. Bob Keenan, executive vice president of the Building Industry Association of Tulare and Kings Counties, said, "For each additional \$1,000 of cost in a home, 21,348 buyers are priced out of that market."

Set aside the curious precision of that figure -- exactly 21,348 -- and take the math a step further. In the past year in Visalia, Keenan's bailiwick, the median home price increased by about \$80,000. Using his formula, some 1.7 million people were priced out of that market in the past 12 months. Few people in Tulare County's robust market seem to have noticed the decline.

The building industry has some legitimate complaints about the fee formulas, such as estimates for diesel emissions in new residential tracts. Environmentalists have reasonable complaints of their own. But that may all be lost in the overwrought sound and fury that surrounds this issue just now. That would be too bad.

Check overseas for new ideas on cleaner dairies

[Letter to the Fresno Bee, Tues., July 5, 2005:](#)

For some time I have noticed concern about the dairy cows in our region. Perhaps I can help. While staying with friends in Germany three years ago, my husband and I liked to walk to nearby areas. When we passed a two-story small barn in a town close by, we noticed the dairy was very clean and did not emit the usual smells we are familiar with.

When we inquired of our host, he explained that the dairy effluent fell into a tank storage area and into tank trucks, then was transported onto fields to fertilize crops. We were later shown these crop areas.

It seemed such a clean solution to such a huge problem. Perhaps someone could further explore how another country solves its problem.

Mina M. Pratt, Oakhurst

Serious about safety

[Letter to the Fresno Bee, Sun., July 3, 2005](#)

The Board of Trustees at the State Center Community College District is to be commended for their current efforts to deal with the on-going (and serious) problems that exist in the Math-Science Building at Fresno City College.

For years, the faculty and staff who work inside this building have pleaded to the State Center administration for resolution of problems regarding hazardous chemical storage, poor air quality and the like. For its part, the State Center administration did very little to properly address these problems, opting instead for inadequate quick fixes by in-house staff rather than spending the money to do things correctly.

In fact, the district never has had a full-time safety officer, opting instead to have a State Center police lieutenant spend much of his time working on "other duties as assigned," rather than his primary job.

Rather than spending district money on outside consultants and CalOSHA fines, why doesn't the board create a full-time position of safety officer to properly deal with safety matters? This would give the police department back its lieutenant and would show that the administration is finally serious about the safety of students, faculty and staff.

Marvin L. Reyes, Fresno

Too Much Growth Near Plant

[Letter to the Modesto Bee Tues., July 5, 2005](#)

More than 10 years ago, my children attended Shackelford School. There were no complaints of sickening odors then. We rarely smelled any odors unless we were passing directly in front of the tallow company. It was suggested to me by school personnel to get my children away from that school because they would probably have to join a gang to survive. I did. At that time, the area had a lot less gang activity than it does now. Also, a lot less building and congestion.

Officials should never have allowed all the homes to be built in the area. The school should have been closed down years ago. Without all the new homes, the two other schools in the area may have been enough.

People should stop complaining about the tallow company. Complain about all the building going on in an area that is too congested already.

Michelle Green, Modesto