

Smog creeps into Sequoia

Park, combined with Kings Canyon, has system's dirtiest air.

By Mark Grossi, The Fresno Bee

Thursday, June 24, 2004

Sequoia and Kings Canyon National Parks rank as the smoggiest outdoor sanctuaries in America, often suffering poorer air quality than Los Angeles, the National Parks Conservation Association announced today.

The parks owe the distinction to the murky San Joaquin Valley, where vehicles and industry create most of the pollution that floats into Sequoia and Kings Canyon.

More than 1.5 million people annually visit the parks to see such sights as the largest tree in the world and the deepest canyon in the country. People must learn to expect dirty air as well, said conservation association officials.

"When I take my children to Sequoia, I have to check the air quality before we do anything," said association field representative Laura Whitehouse, who lives in Fresno. "All three of my children are asthmatic."

Another of Central California's outdoor jewels, Yosemite National Park, was fifth worst for smog or ozone, which was one of three pollution categories evaluated. Besides ozone, the association and two other advocacy groups, Appalachian Voices and Our Children's Earth, ranked park pollution based on haze and acid rain, sleet and snow. Sequoia and Kings Canyon and Yosemite appeared in the top 10 of all three categories.

Sequoia's combined rankings made it the fifth overall, behind Great Smoky Mountains (Tennessee and North Carolina), Mammoth Cave (Kentucky), Shenandoah (Virginia) and Acadia (Maine) national parks. Yosemite did not show up in the overall top five.

The rankings, contained in the report "Code Red: America's Five Most Polluted National Parks," showed the Great Smoky park worst for acid precipitation and second worst for haze and ozone. The park has 9 million visitors annually.

The report called for state and federal governments to enforce pollution laws as well as pass new legislation to support cleaner vehicles. The conservation association issued a similar report with similar goals two years ago.

The report, released today, said the air has shown little improvement in seven of 13 parks involved in extensive air monitoring.

That's no surprise to Annie Esperanza, National Park Service air specialist at Sequoia and Kings Canyon. She said the parks had 72 unhealthy air days last year.

"We're easily the worst for ozone," she said. "We post signs in the visitor centers telling people what the air quality is each day. We send a daily e-mail to employees about the air."

Ozone, a warm-weather pollutant, can trigger asthma and other lung problems in people, but it also harms trees and plants. Officials said long-needle pines, such as the Jeffrey and the ponderosa, weaken and turn yellow in spots.

Giant sequoia seedlings also show some damage, though officials say they have not yet seen problems with mature giant sequoias, which can be more than 2,000 years old.

Compared to cities, mountain areas tend to remain at higher ozone levels in the evenings, Esperanza said. Oddly, some of the same vehicle emissions that help build daytime ozone also reduce it after dark. But with little traffic at night, mountain pollution doesn't drop very much.

"What a contradiction," Esperanza said. "You expect to get pristine air. But you need to be aware of the pollution here."

PARK POLLUTION

Worst for ozone

1. Sequoia and Kings Canyon
2. Great Smoky Mountains
3. Acadia
4. Shenandoah
5. Tie: Mammoth Cave and Yosemite

Worst overall air pollution

1. Great Smoky Mountains
2. Mammoth Cave
3. Shenandoah
4. Acadia
5. Sequoia and Kings Canyon

Homebuyers near town's edge asked to sign farm-nuisance disclosure

Merced Sun-Star

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STOCKTON - As suburban development grows closer to farms, complaints about the smells, the noise and the dust typical to agriculture production tend to go up. So San Joaquin County is requiring home buyers to sign a disclosure saying they understand that farming practices such as late-night harvesting and crop dusting are part of living in the country, and should not be the subject of nuisance complaints.

The decision, made in Tuesday's San Joaquin County Board of Supervisors meeting, strengthened the county's right-to-farm law.

The amendments to the 1986 ordinance also established a grievance committee to settle nuisance complaints.

Farmers hoped the change would help stop complaints from non-farming neighbors.

"It's not city rules anymore," said Paul Sanguinetti, a crop farmer who won a lawsuit in November brought against him by an east Stockton couple who complained he was a nuisance.

The committee would resolve complaints about what can be considered acceptable farming practices, said Environmental Health Department Program Manager Al Olsen.

Proposed dairy raising neighbors' temperatures Tulare County commissioners field complaints

By David Castellon, staff writer

Tulare Advance-Register, Thursday, June 24, 2004

A proposal to build a 5,600-head dairy north of Visalia is raising dust among some potential neighbors who don't want to see it built.

Tulare County planning commissioners heard some of those neighbors voice their concerns about the proposed Mineral King Dairy during their meeting Wednesday morning.

Five residents of the area near Road 108 between Avenue 328 and Avenue 360 -- including a couple who own a small dairy that would butt up against the 1,648-acre dairy -- came to voice their opposition to the project beyond what they've already said in letters to the commissioners.

The Planning Commission also has a petition signed by people who live and work around the proposed dairy site, about three miles north of Visalia's city limit, and some new subdivisions including Shannon Ranch.

Their concerns about the proposed dairy include:

Cattle drawing more flies to the area where the bugs already are a major problem

The amount of groundwater a large dairy operation would use along with effects of waste and runoff generated by so many cows and bulls

Whether Road 108 can handle the additional traffic from tanker trucks and other vehicles involved in a large dairy operation

The amount of dust generated by such a large herd, work vehicles and heavy equipment

The dust issue was a consistent point in letters to the commission.

"The amount of dust generated on a dairy this size will far surpass what we now experience on a daily basis. The nature of the dust created in this way is a health hazard we would like to avoid," Pamela H. Gist, a resident of Road 108, said in a letter.

"We like living in the country and expect a certain amount of farm-related dust, but to purposely allow so much more in this one area seems to go beyond reason," the letter continues.

Chan Wilcox wrote that dust from an existing, nearby dairy already exacerbates his walnut farm's spider mite problems, and "additional traffic would only make a bad situation worse."

Jay and Agnes Te Velde of Visalia, who want to convert their farmland into the dairy, could not be reached to respond.

The average dairy in Tulare County has about 1,000 head of cattle. Although the Mineral King Dairy wouldn't be the biggest dairy in the county, it is a common size for new dairies.

"You don't get proposals these days for mom-and-pop dairies," said Mohammad Khorsand, a project planner for the county's Resource Management Agency.

They're not economical considering the high costs of buying the land, cows and other expenses for a start-up dairy, Khorsand said.

His agency's Project Review Division will recommend to the Planning Commission whether to approve the dairy during its Aug. 11 meeting. Before that, a final environmental impact report on the proposed dairy will be released, probably in early to mid-July, Khorsand said.

Commissioners may vote on the dairy proposal during the August meeting, but Khorsand said whichever side loses could appeal the decision to the Board of Supervisors, which has the final say on the project.

Council members discuss refinery fate

By Erin Waldner, Californian staff writer

Bakersfield Californian, Thursday, June 24, 2004

Bakersfield City Council members expressed concern Wednesday night about higher fuel prices and the loss of jobs if the Shell Bakersfield Refinery shuts down as planned.

Aamir Farid, the general manager of Shell's Bay Valley Complex, which includes the Bakersfield refinery and another refinery in Martinez, gave a brief overview at the City Council meeting of the company's decision to close the refinery on Rosedale Highway. He then took questions and listened to comments from the council.

"Those jobs are very significant to us," said Councilman Mike Maggard.

Maggard asked Farid if the city could do anything to facilitate the sale of the refinery so those jobs, which number around 250, could stay in Bakersfield.

"I don't have a good, specific answer for you," Farid said.

Farid informed the council that 48 percent of the refinery's employees have accepted transfers to other Shell locations. The other 52 percent, he said, have chosen to leave Shell and stay in Bakersfield.

The refinery's last scheduled day of operation is Sept. 30. Farid said Shell will start slowing down production sometime after Labor Day.

The refinery should be dismantled by the summer of 2006, while cleanup work will continue until at least 2010, according to Farid.

Furthermore, Farid said Shell is working with the city and county on future land use of the site.

Bakersfield City Manager Alan Tandy said later in the meeting that the land the refinery sits on is "key" to the city, which has proposed building the Westside Parkway along the north side of the Kern River.

Farid told the council that while Shell is moving toward a Sept. 30 closure date, the company remains committed to entertaining any credible offers to purchase the refinery. He said none have been forthcoming.

To date, Shell has received 23 inquiries about the refinery, according to Farid. Of those, five companies or individuals have signed confidentiality agreements, which allow them to take a closer look at the refinery's books and operations.

If the refinery closes, Farid said the company will continue to supply its Shell-branded customers with gasoline and diesel.

"You say you're going to have diesel available -- at what cost to the consumer?" Councilman Harold Hanson asked.

Maggard asked Farid how much of the fuel the refinery processes stays in the Bakersfield area. Farid estimated 40 to 50 percent.

Maggard then asked, isn't it likely gas and diesel prices will increase if that fuel has to be transported to Bakersfield after the refinery closes?

Farid said he does not speculate on prices.

District urges residents to 'Spare the Air' today

Bakersfield Californian, Thursday, June 24, 2004

Air quality officials have declared that today is a "Spare the Air" day, and they urge all residents to curtail outdoor activities to protect their health.

Spare the Air conditions are declared whenever the Air Quality Index is likely to exceed 150, considered unhealthy for everyone. At these levels, ground level ozone pollution can harm healthy lung tissue and aggravate asthma and other breathing problems.

The San Joaquin Valley Air Pollution Control District urges residents to avoid outdoor exertion in the middle of the day. Children and the elderly, in particular, are advised to avoid all outdoor activities. Residents also are urged to help reduce the smog problem by driving less and using public transportation if possible, avoid using gas-powered lawn equipment and off-road vehicles, and use water-based paints and solvents instead of oil-based varieties.

For more information, visit www.valleyair.org, or call 326-6900.

New treatment to prevent asthma is only skin-deep

MARILYN CHASE, The Wall Street Journal

Published in the S.F. Chronicle, Thursday, June 24, 2004

SACRAMENTO, Calif. -- The week after he was born, Ryan Ishibashi was a "mass of rash," his mother remembers. As he nestled in her arms, she thought he was cuddling. He was actually itching from a common skin disease called eczema. Sometimes he tore his skin until it bled.

The bigger risk is still to come for Ryan, who is now 21 months old. Half of kids with eczema develop asthma by age 6. Ryan's doctor puts his risk at 70 percent or 80 percent because of his family history. Both his mother, LaVerne Ishibashi, and his older sister have allergies and asthma.

In the long search for the cause of asthma -- a fast-growing disease that affects some nine million American children under 18 -- scientists have variously blamed pollution, exposure to irritants in food and even excessive hygiene. But a new theory focuses on the kind of rashes Ryan has had as a baby. It suggests that infant eczema is the trigger of an allergic chain reaction that can lead to a childhood full of wheezing.

Doctors are now testing the theory in a six-year study led by the National Jewish Hospital and Research Center in Denver. Hundreds of babies at 20 sites nationwide are being treated with a cream called Elidel that suppresses the immune system. Block the eczema, the thinking goes, and you block the march to asthma.

The study is unusual because the patients are so young -- 3 months to 18 months. "Parents aren't sitting around thinking, 'Do I want to do a study with my little infant?' " says Mark Boguniewicz, the National Jewish Hospital researcher leading the study. "It's the most challenging study most of us have ever been involved in."

Some specialists doubt the treatment will work. Not everyone who develops asthma started out with eczema as a baby. John Warner, a professor of child health at the University of Southampton in England, says the cream might quell the itching of rashes but probably isn't powerful enough to put a halt to the entire immune-system process that causes asthma. Dr. Warner was involved in a European study that tested the popular antihistamine Zyrtec in 1- and 2-year-olds as a way of preventing asthma. It failed to show superiority over a placebo overall, although a subset of patients with grass pollen and dust mite allergies did seem to benefit.

Novartis AG, the big Swiss drug company and maker of the Elidel cream, is sponsoring the new study. Elidel is currently approved by the Food and Drug Administration to treat eczema in adults and children 2 years and older. It recorded sales of \$80 million in the first quarter of 2004.

If Elidel wins FDA approval someday as a preventive measure against asthma, the potential market is big. The proportion of infants with eczema ranges from 17 percent in the U.S. to as high as 24 percent in Japan. The drug costs at least \$165 retail for a 100-gram tube and is usually covered by insurance. However, it isn't known what side effects Elidel might cause in babies. As an immune suppressant, doctors say it might interfere with the body's development of a strong defense against infections.

More than 20 million Americans have asthma, a chronic inflammation of the lungs that causes airways to constrict. Prevalence has nearly doubled in the last two decades for reasons that remain mysterious but may include urbanization and air pollution. Allergens such as grasses, pollen and vehicle exhaust as well as infections, exercise and cold air can set off asthma attacks.

The symptoms can range from mild to catastrophic. During an asthma attack, the tubules in the lungs clamp down and oxygen can't reach the bloodstream. In extreme cases it becomes impossible to breathe: About 5,000 Americans die of asthma each year.

For parents, the distress of watching a child fight for air and the constant vigilance required to manage asthma take a heavy toll. Long-term treatment with steroids taken orally carries many risks, including immune suppression and osteoporosis. Inhaled steroids are less dangerous but can cause temporary slowing of growth. Asthma costs the U.S. about \$13 billion a year in health-care costs, according to Datamonitor, a market research firm.

Doctors have found little to stop asthma from developing, although it helps to clean the environment of allergy-causing agents such as household dust, mold and pet fur. Researchers continue to probe the "hygiene hypothesis," which holds that modern homes are too clean, leaving kids with underdeveloped immune systems that overreact later. Breastfeeding, new baby formulas, and small doses of allergens are under study as preventatives.

The Elidel study represents another approach to asthma: trying to attack the immune system's overreaction at its origin. Elidel inhibits a molecule called calcineurin, which is a key early activator of the allergic response. Doctors hope this will keep in check the antibody IgE, which is found at high levels in 80 percent of kids with eczema. IgE is seen as a master switch that turns on inflammation-producing immune cells. According to the new theory, these cells at first cluster around the skin, producing eczema in infants, and later migrate to the lymph nodes and lungs, where they cause asthma. That could explain why asthmatics tend to have high IgE levels.

Evidence to support this theory came from some wheezing mice in the lab of Jonathan Spergel, an assistant professor of pediatrics at the University of Pennsylvania and the Children's Hospital of Philadelphia. Dr. Spergel, who is a consultant to Novartis, induced eczema by smearing egg white protein -- a common cause of allergies -- onto the skin of young lab mice. The mice

developed eczema. Next he gave these mice and healthy control animals a whiff of egg-white protein through their airways. Mice without eczema breathed normally. "But mice who had had pre-exposure to the skin would wheeze," he says. "The mouse work really showed things went from the skin to the lungs." Through skin irritation, he says, "we were inducing asthma."

When scientists tried other parts of the body instead of the skin, they couldn't induce asthma. "So the hypothesis is there's something special about the skin," says Thomas Hultsch, who heads dermatology research at Novartis. "The skin is the portal."

Dr. Spergel's experiment excited Dr. Boguniewicz, who specializes in pediatric allergies at National Jewish Hospital. He decided to do a study to see if people respond as mice do. Treating from infancy until age 5 or 6, the average age for asthma diagnosis, meant a long and expensive study. Dr. Boguniewicz says he sought National Institutes of Health funding but was advised that because of the cost he should seek corporate sponsorship. Novartis stepped up.

In the trial, 1,100 infants who have eczema have been randomly assigned to take either Elidel or a placebo, which contains the base cream without active ingredient. Neither doctors nor patients know who is receiving which. Parents are instructed to apply the study drug on the child at the first sign of eczema. If the rash lasts longer than three days, they can then turn to steroid creams, which are a proven remedy for eczema.

After three years, researchers will "unblind" the study to see which volunteers got Elidel and which got the placebo. After that, all participants will receive Elidel until the six years are up.

The main goal of the study is to show whether children taking Elidel end up developing fewer cases of asthma. Even if that turns out to be a disappointment, researchers are hoping the results will demonstrate that Elidel, a nonsteroidal drug, is a safe alternative to steroid creams for the youngest infants. Atrophy or thinning of the skin is a major steroid side effect. Elidel generally causes few major side effects in older children and adults, although a small number of people may get herpes skin infections, warts or swollen lymph glands.

Elidel's safety in infants under age 2 has yet to be fully demonstrated. In theory, since the drug suppresses protective immunity it could leave infants vulnerable to infections such as chicken pox. "Any time you change the immune response of the skin, you have to be concerned," says Alfred Lane, chairman of dermatology and professor of pediatrics at Stanford University School of Medicine. He is one of the researchers in the study. Novartis says past tests on 900 infants showed only minor side effects.

For Shannon Beaupre of San Diego, three months in the study has produced no miracles for her 9-month-old son Gavin. The study drug -- she doesn't know if it's Elidel or placebo -- hasn't worked to end his eczema episodes, which always require steroids. Still, she plans to stick with the study. "Asthma scares me," she says.

After her baby developed eczema, Tracy Sherry of Bailey, Colo., saw an ad in the Denver Post and drove an hour to National Jewish Medical and Research Center. A former pediatric nurse, Mrs. Sherry had cared for children with asthma, cancer and AIDS, and she believed in clinical trials. Her faith in research grew during her own bout with a brain tumor. An experimental immune therapy has held cancer at bay for eight years. The study seemed a good option for her son Brian, now 14 months old.

"You get six years of excellent care and follow-up. You can't go wrong. If we can avoid getting asthma, that would be very exciting," says Mrs. Sherry.

LaVerne Ishibashi, Ryan's mother, was more cautious at first, fearing her son would get a placebo. A dermatologist had let Ryan sample Elidel and the improvement to his skin was noticeable. (Although the FDA hasn't approved Elidel for infants under 2, doctors can prescribe any FDA-approved drug for nonapproved uses -- a practice known as "off-label" prescribing.) Mrs. Ishibashi, a social worker, didn't want Ryan to "go backwards" but she wanted to help other children at risk for asthma, so she entered Ryan in the study in March of this year when he was 18 months old.

Now her daily drill is to examine Ryan's skin and follow the study protocol. If he looks normal, she applies a moisturizer. If a rash breaks out, she squeezes a dab of the study drug from an unmarked yellow tube. If his rash persists for more than three days, she applies a steroid cream. She records all of this on a Palm handheld device supplied by Novartis.

One recent Friday, Mrs. Ishibashi was sitting in the office of Ryan's doctor. While she was waiting, she took the Palm from her purse and did her daily diary entry. On the screen, the outline of a child's body appeared. With a stylus she touched the torso, identifying it as a place where Ryan had a rash. She graded it as mild and reported that she applied the study cream. The diary entry took about 45 seconds, even with Ryan poking a curious finger at the screen. Later at home, she placed the Palm in a device that sends the data through phone lines to Novartis.

Mrs. Ishibashi hopes Ryan won't have to endure the experiences of his 12-year-old sister, Megan, who also had eczema as a baby and has suffered from asthma since the age of 3. Megan has had to cut short slumber parties and visits to friends' homes with pets or mold. Mrs. Ishibashi cleans constantly and charts the seasons by Megan's respiratory distress. "Who needs the weather channel?" she asks. "I know when molds are here."

Earlier this year, Ryan developed a "gurgly" cough that frightened his mother. If he was diagnosed with asthma, he'd be out of the prevention study. But a doctor decided the cough wasn't the result of asthma.

Although Mrs. Ishibashi doesn't know what drug Ryan is getting, she has a hunch. "I like whatever medicine we're getting. He's comfortable," she says.

At Risk

Chance of developing asthma by age 8:

Babies with severe eczema 63 percent

Babies with mild eczema 20 percent

All babies 8 percent

Source: "Atopic dermatitis and the atopic march" in Journal of Allergy and Clinical Immunology (December 2003), citing earlier Swedish studies.

Professor discusses bad air

The Modesto Bee, Thursday, July 24, 2004

"Why We Are Losing the Air Quality War in the San Joaquin Valley" is the title of a talk by Thomas Cahill, professor of atmospheric sciences, set to run from 10 to 11 a.m. today in Atwater. Cahill, a professor at the University of California at Davis, will speak in the Redwood Conference Room at UC Merced Castle Offices, 4225 N. Hospital Road, Atwater. California has worked for 35 years to clean up its air, and the results in the South Coast basin have been stunning, according to Cahill. However, air quality in the San Joaquin Valley is almost unchanged. According to the U.S. Environmental Protection Agency, the valley is among the most polluted areas of the nation. Cahill will examine the three major pollutants that violate state and federal standards: summer ozone in the valley, ozone and haze in the national parks, and winter fine particles in the valley.

Managing forests will allow us to breathe easier

By Thomas Cahill

[Fresno Bee commentary, Wednesday, June 23, 2004](#)

The American Lung Association recently released its "State of the Air" report on air quality. Once again, California has more cities on the worst-polluted list than any other state, with Fresno the second worst county in terms of ozone pollution. For the first time, the American Lung Association added a new air quality measurement to its existing standards, tracking particle pollution in addition to ozone levels. Fresno again scores poorly.

Our forests affect both measurements. When trees grow, they absorb carbon dioxide that they convert into cellulose and oxygen, helping clean the air. But when fires destroy forests, they have a tremendous negative impact on air quality.

This hasn't always been the case.

Just 150 years ago, forest fires burned so differently, their smoke would not violate today's air quality standards. Fires burned low to the ground, and smoke was generally contained in the forest.

Compare that with images of the Southern California fires last fall that devastated forestland: towering flames and huge, dark plumes billowing through the sky.

Unnatural shift

Why the change? Because our forests have become unnaturally crowded. Since humans have been putting out forest fires for a hundred years, we now have an overabundance of fuel that causes the kind of fires that used to burn quietly on the forest floor to explode into intense conflagrations. Overcrowding is why rather than face the thousand or so fires that historically burned in the Sierra each summer, yet left a healthy forest standing, Californians today brace for a handful of fires that can wreak environmental havoc.

The Southern California fires burned hot, feasting on dead, dry fuel. The winds that fanned flames also blew tremendous amounts of particulate matter -- dust, sulfates, nitrates, salts and more -- into the air, mixing with smoke in dense clouds. The U.S. Forest Service estimates that for every acre burned, catastrophic fires release 52 pounds of particulate matter.

Forest fires also increase ozone levels. Pine trees store nitrates in their needles for photosynthesis. When forest fires "crown," or leap through the tree tops, needles ignite and those nitrates are released -- not into the ground where they could help restore the forest, but into the air, where downwind they combine with organic matter and hot temperatures to form ozone.

Foul air

The plumes that rise above catastrophic fires can have far-reaching and devastating effects. The Yellowstone fires of 1988 put about as much carbon in the air per day as the Kuwaiti oil field fires of 1991. Smoke from California wildfires has fouled the air for weeks at a time and affected visibility as far away as the Grand Canyon. California's air, in turn, has been turned hazy by fires in Siberia. Of course, more than air quality suffers in catastrophic wildfires -- watersheds and ecosystems can take centuries to recover.

If we don't learn from our experiences, California's air and forests will suffer yet again. Forests surrounding Lake Tahoe are crowded and under siege from bark beetles in much the same way as the San Bernardino National Forest. Lake Tahoe basin forests, which have had all fires suppressed for a century, now can't sustain their tree density, particularly in inevitable drought years.

Historically in the Lake Tahoe basin, lightning and fires set by the native Washoe people until the early 1800s resulted in flames burning about 25 acres every day from May through October. Only 2% of forest fires reached tree crowns, mountain winds cleaned out the basin each afternoon, and cool night air would keep smoke near the ground and over the lake. While each morning there would have been a light smoke haze over the lake, at concentrations below present EPA standards, the smoke was not carried over day to day.

It's time to clear the air by actively managing overly dense forests. But it will be costly -- prohibitively so unless the government enlists the power of the private sector to remove dead and diseased trees and foster the characteristics of the historical forest. Allowing companies to sell some harvested wood can generate the funding needed to restore our forests to their normal, fire-resistant health.

'Matter of time'

Otherwise, it is only a matter of time before dark plumes rise above our forests, fouling our air, filling our lungs and giving the American Lung Association staggering numbers to report.

Thomas A. Cahill is a professor emeritus of atmospheric sciences and physics, and director of the University of California, Davis, DELTA Group (Detection and Evaluation of Long-range Transport of Aerosols).