

Los Angeles to give underground sludge storage a shot

BY STACEY SHEPARD, Californian staff writer

Bakersfield Californian, Thursday, Dec. 21, 2006

The city of Los Angeles will try injecting sludge deep into the ground in an attempt to find alternatives to spreading its treated sewage waste on Kern County farmland, the U.S. Environmental Protection Agency announced Wednesday.

The EPA issued an experimental permit to Los Angeles to build three wells, approximately one mile deep, beneath its Terminal Island Treatment Plant in San Pedro.

One well will be used to inject up to 400 tons of sludge per day, according to David Albright, a groundwater manager for the EPA. The other two will hold equipment to monitor the injection well.

Los Angeles sends about 500 tons of sludge per day to Kern County.

The potential benefits of the project include capturing methane gas for future energy use. Methane would be produced as the sludge breaks down from heat and pressure in the low depths of the well.

"The idea of the project is that it's a renewable energy project," Albright said.

The project would pose no risk to drinking water supplies, according to the EPA.

Injection wells are commonly used in gas and oil production. Albright said this is the first attempt he knows of to use the technology to dispose of sewage sludge.

Sludge spreading was banned in Kern County under Measure E in June. However, a judge has ruled the spreading can continue while the ban is challenged in court by the city of Los Angeles and Orange County.

Work on the wells is expected to begin in early 2007.

Official: State did not cave

Rejection of park site not tied to environmentalists

BY JAMES BURGER, Californian staff writer

Bakersfield Californian, Thursday, Dec. 21, 2006

Daphne Greene knows she isn't Kern County's favorite state official right now.

But the deputy director of the state's Off-Highway Motor Vehicle Recreation Division said she did the right thing Tuesday when she ended plans to build a state off-highway park near Round Mountain Road north of Bakersfield.

"This was not an easy decision. All of us want a park in this area," Greene said Wednesday morning. "This is not something I want to do by any means."

She rejected speculation her agency caved under late pressure from environmentalists.

"This did not have anything to do with the environmental community," she said.

If anything, Greene said, she was disappointed that some environmentalists didn't raise their concerns early in the study of the site.

Environmentalists Rich O'Neil and Sierra Club activist Harry Love actually sat on the board that worked to find a site for the park, but eventually came to oppose the Wofford Ranch location.

O'Neil said he raised concerns about habitat, dust and American Indian cultural sites early in the process.

But those only exploded into a public opposition of the project site in October.

Greene said her agency's concerns about the 11,000-acre Wofford Ranch site have lingered for months.

The silt soils there can easily puff into dust and valley fever spores are probably common in the area. There is very little water available to control the dust -- aside from Poso Creek which is a sensitive wetland forest zone.

There is no road access to the site despite years of talks with nearby landowners, Greene said.

And smaller landowners inside the 11,000 acre site aren't willing to sell.

None of these issues are new, said county Supervisor-elect Mike Maggard, who helped champion the project as a Bakersfield councilman.

True, said Greene. The problems have been known for months, she said.

But there are still no solutions.

Maggard said the state needs to answer for why it let the project move forward as far as it did if there were such major concerns about the Wofford Ranch site.

Greene said there was always hope that the problems could be solved or mitigated.

"Everybody was hoping and hoping," she said.

But hope, sometimes, isn't enough.

There had to be a "reality check" before the project got approval and the state spent between \$8.8 million and \$11 million to buy the property and more cash to design and build the park, Greene said.

And a recent soils study showed some shocking evidence that much of the ground on the property was dangerously prone to erosion.

Controlling the problem, Greene said, would take a one-time cost of \$15 million, as well as huge investments on an ongoing basis.

Off-highway leader Dick Taylor said he still wonders what the future will bring, but said he emphasized a positive outlook when he talked with Greene Wednesday morning.

City planner Marc Gauthier said Greene's decision ends the city's involvement in the off-highway project.

The site was not in the city but city officials offered their support after Taylor and off-roaders agreed not to fight with property owners over their historical riding areas on the Kern River bluffs.

Gauthier said the city spent about \$750,000 trying to pull the project together -- including around \$200,000 in staff paychecks and benefits.

Greene said the Off-Highway Motor Vehicle Recreation Division will strive to find a new spot for the park -- and every effort will be made to keep the park in Bakersfield.

But realistically, Greene said, there may not be a site that will work near Bakersfield.

If that's the case, the off-highway park may need to move to a more rural area.

There is no guarantee, she said, that the park will even stay in the Kern County section of the San Joaquin Valley.

On Tuesday, Kern County Supervisor Jon McQuiston said that he hopes the state will move forward.

"I hope they have not lost their will to pursue this," he said. "There is a need for these types of recreation facilities."

Carlos Alcalá: School uses cedars to clear the air

By Carlos Alcalá

Sacramento Bee, Thursday, December 21, 2006

Arden Middle School (as you may have seen) is at a rather toxic intersection -- Arden Way and Watt Avenue -- but the school has already implemented one low-tech approach to keeping kids' lungs clean: trees. Students, parents and staff planted some deodar cedars. Their needles can actually filter out the particles. (Deodar-ant action?) Right now, though, the trees are too small and too few to do much. "They'll be effective 10 years from now," said Tom Cahill, whose research identified the pollution hot spot. When they're big, they will also force pollution up in a chimney effect. "They kind of deflect it," said Peggy Piccardo, principal. Arden students will also get to study the trees' biological cleansing and monitor pollution in their science classes, Piccardo said, a bonus lesson. "We made lemonade from a lot of lemons," she said. More for aesthetic purposes than pollution control, Sacramento County planted some trees -- live oaks -- next to the school, as well. It's part of Watt Avenue beautification but, guess what? They can block pollution, too. County pollution scrubbers (aka oak trees) are also in along Watt by Arcade Fundamental Middle School.

Justice Flows Into a Parched California Valley

Los Angeles Begins to Return Water, Which It Diverted Nearly a Century Ago

By John Pomfret, Staff Writer

Washington Post

Wednesday, December 20, 2006; A04

INDEPENDENCE, Calif. -- Mike Prather whooped as he ambled through the tumbleweed and salt grass for a look. There it was, bubbling and oozing like lava, as it inched down the valley floor.

The object of his search was nothing more or less than water. Water, which has not flowed in the Owens River for 93 years, is now, almost miraculously, there again.

"This is what I expected," Prather, a 60-year-old environmentalist, said as he and his 26-year-old daughter, a graduate student in wildlife management, watched the water seeping into the sand. "It's not a tsunami; it's more like the tide coming in. I am going to remember this moment for the rest of my life."

Water was returned to the Owens River on Dec. 6, when Los Angeles Mayor Antonio Villaraigosa and Inyo County Supervisor Susan Cash symbolically concluded the most celebrated water war in American history.

Almost a century after Los Angeles diverted the Owens River into the city's aqueduct, Villaraigosa and Cash opened a gate and allowed some of that water to return to the river, starting a reclamation effort (62 riparian miles, 30 air miles) rivaled only by the Kissimmee River Restoration Project in the Florida Everglades.

Traveling less than one mile a day, the flow by a recent Friday had reached a spot on the old riverbed just a few miles north of Independence, where Prather found it.

"By restoring the lower Owens River, the city of Los Angeles will do more than right an historic wrong," Villaraigosa said at a ceremony marking the beginning of the project. "In a deeper sense, we will affirm a literal truth: that when it comes to protecting our environment, it is time for all of us to change course."

The story of the Owens River Valley and Los Angeles is one of the great narratives of the West, chronicled in the 1974 Hollywood classic "Chinatown." Starting in 1904, agents for the city of Los Angeles masquerading as businessmen and ranchers snapped up hundreds of thousands of acres in the valley, 230 miles north of the city.

Los Angeles built an aqueduct and in 1913 diverted the Owens River, which is fed by the snowpack on the Sierra Nevada Mountains to the west, to slake its growing thirst. Another boom in the 1960s prompted the city to pump out the valley's ground water; a second aqueduct was completed in 1970. In total, the aqueducts deliver more than 430 million gallons a day to the city - 70 percent of its water needs.

"Los Angeles employed chicanery, subterfuge, spies, bribery, a campaign of divide-and-conquer and a strategy of lies to get the water out," wrote the late Marc Reisner in his 1986 book, "Cadillac Desert." "In the end, it milked the valley bone-dry."

Springs that annually transformed the valley into a rich marshland for migrating birds, bobcats, deer, elk and mountain lions dried up. Salt grass, cottonwoods and willows died off; tumbleweed and salt cedar moved in.

But the fact that the Los Angeles Department of Water and Power (DWP) owned all the land meant that the valley was saved from the city's sprawl. No strip malls or gated communities mar the landscape. To this day, Inyo County's 18,000 residents live on 1.7 percent of the land.

Starting in the 1970s, environmentalists and residents of towns along the valley began suing the DWP to force it to return water to the valley.

In 1997, the DWP reached an agreement with plaintiffs in the case, including environmental groups such as the Sierra Club and the Owens Valley Committee, to re-create a healthy and diverse habitat for fish, waterfowl and shorebirds by mid-2003.

The city also agreed to place more than 300,000 acres of land it leases to ranchers under a strict management program. And it agreed to mimic the seasonal flooding of the grasslands, which would again turn chunks of the valley floor into fecund marshland, with scheduled releases of water from the aqueducts.

But the DWP dithered. Finally, on July 26, 2005, Inyo County Superior Court Judge Lee E. Cooper vowed that "no excuses will be expected" and ordered the second aqueduct shut down unless Los Angeles began returning water to the valley.

Under current plans, the Owens River will run only two feet deep. But that is enough water to allow some habitats to regenerate, and the seasonal water surges will push seeds even farther out along the riverbanks.

Although the judge's decision forced Los Angeles to act, other developments also made it possible. The city's water conservation efforts have been some of the most successful in the nation; over the past 20 years, while Los Angeles has added 750,000 homes, its water consumption has remained the same. Its water commission used to be dominated by urban boosters, but with time, environmentalists invaded its ranks.

Finally, the DWP itself has changed. "It used to be all engineers," said Prather, "but now they have biologists and wildlife managers."

The Owens River was not the only court defeat handed to the DWP. In the 1990s, a court forced Los Angeles to begin returning water to Mono Lake, a once-pristine ecosystem north of Owens Valley. Over the years, the lake's water table dropped 41 feet because of the city's unquenchable thirst. But in recent years, the water level has risen 10 feet.

On a separate track, lawsuits also went after the DWP because diverting the Owens River had dried up Owens Lake, causing one of the most serious dust pollution problems in the nation -- routinely 30 times higher than federal limits. The U.S. Geological Survey called the lake "possibly the greatest or most intense human-disturbed dust source on Earth."

In a court deal in 1999, Los Angeles agreed to mitigate the dust by flooding, spreading gravel or seeding the lake bed. The DWP installed "bubblers," industrial-size sprinklers, to dampen it. So far, it has spent \$400 million mitigating the dust, and particulate matter has dropped by 60 percent. In all, more than 30 square miles of the lake will be irrigated. And once water reaches the lake by way of the reopened riverbed, it will be used to further limit the lake bed's dust.

The wetting of Owens Lake has had another fortuitous outcome. It has prompted tens of thousands of birds to return to the region to feast on freshwater shrimp and brine flies. The Owens Valley Committee has documented 39 types of birds, including 26 species of waterfowl, 16 species of birds of prey, 33 species of shorebirds, five species of owls and a coyote living on ducks on an island in the middle of the lake, Prather said.

"Nature is pretty forgiving if you give it a chance," he said as he watched a black-and-white American avocet pick through the mud. "In five years, this valley will be completely transformed."

Childhood lessons are taken to heart: Sharing cars is fun

By Kiley Russell

Contra Costa Times, Thursday, December 21, 2006

For more than six years, Scott Benbow and his family have put off buying a car.

Living as they do in San Francisco's Castro neighborhood, just minutes from a well-traveled Muni line, it perhaps is no surprise that the Benbows and their 2-year-old son can navigate through most days without a personal vehicle.

But what about weekly trips to the grocery store, weekend excursions to Wine Country or evenings out -- activities that can be difficult without wheels?

For these things the Benbows, along with a growing number of environmentally conscious urbanites, plunk down from \$10 to \$30 every month to enlist the services of a car share company.

"Our primary mode (of transportation) is walking or Muni," Benbow said, "with City CarShare being the next most frequent."

Three alternative automobile rental companies, City CarShare, Zipcar and Flexcar, have gained footholds in the region over the past several years, making the Bay Area the world's most crowded car share market, said Daniel Shifrin, regional vice president of Zipcar.

For an hourly or daily rental charge -- and in some cases a monthly membership fee and a per-mile charge -- customers can use cars, SUVs and pickups that they neither own nor bear the responsibility to maintain or insure.

The programs are well designed for urban commuters who only need to drive a couple days a week or for people who only need a car to run errands or take occasional road trips.

Vehicles are reserved over the phone or on the companies' Web sites, and members, armed with key cards, simply stroll down to the nearest car and hop in. The cars are parked in neighborhoods and public lots all over San Francisco and the East Bay, including the BART stations of Rockridge, West Oakland, North Berkeley, Ashby, Lake Merritt and MacArthur.

The Bay Area region's first entrant, City CarShare, was founded by a group of social activists hoping to reduce air pollution, traffic congestion and other social ills by encouraging people to abandon car ownership in favor of car sharing.

The nonprofit company rolled out a fleet of green Volkswagen Beetles in 2001. It has since added Mini Coopers, Toyota hybrids and light trucks to its inventory, and now more than 6,000 members share 165 vehicles in San Francisco, Oakland and Berkeley.

"We are helping to save somewhere around 20,000 vehicle miles driven on Bay Area roads each day. Two-thirds of our members either sell a car or ... don't buy a car," said City CarShare CEO Rick Hutchinson. "That has a pretty important environmental impact."

Several studies and surveys seem to bear this out.

In the United States, from 12 percent to 68 percent of car sharers postpone or avoid buying a car. Also, every car sharing vehicle on the road accounts for six to 23 cars taken off the personally owned vehicle roster in this country and Canada, according to an April paper published by UC Berkeley's Partnership for Advanced Transit and Highways, a research group.

Reduced ownership leads to from 8 percent to 80 percent fewer vehicle miles traveled per car sharer, according to the paper, "Car sharing in North America," based on a survey of 26 of the 28 companies in the United States and Canada in 2005.

"I think many people were skeptical," said lead author Susan Shaheen, who studies transportation and the environment. "But objective study after objective study started to document ... vehicle miles traveled reductions and the (reduction) in the number of personal vehicles sold."

Still, data from the companies is varied and inconsistent -- apparent in the wide range of statistics -- and often derived from limited samples, so it is difficult to accurately quantify car sharing's effects, she said.

Also, many studies were done with "early adopters," people who were the first to jump on the car sharing bandwagon.

"Early adopters might be more environmental, so perhaps they don't drive the car as much because they're concerned about putting miles on the road," Shaheen said.

The industry is quick to point out that people can save money by car sharing, which for most people is probably the most powerful motivation to limit driving.

People pay from \$700 to \$1,000 a month on average to own and operate a car, according to AAA.

Shaheen's research shows that, depending on location, people using a car sharing service will save money by keeping mileage within the range of 6,000 to 10,000 miles per year.

Zipcar member Victoria Everman of San Francisco has never owned a car. She was drawn by the company's eco-friendly reputation, but the money she saved by avoiding a car purchase sealed the deal.

"I'm 22. I don't make much money and I can't afford a car," Everman said, "especially in this city."

She spends no more than \$100 a month to use Zipcar once or twice a week to run errands round the city.

"I always rent one on Saturday morning," Everman said. "I go to the farmers market and Rainbow Grocery. I literally zip all around the city and get a whole bunch of stuff done."

Add convenience and good customer service, and even those without deep environmental convictions can be lured into the car sharing fold. Also, the industry is starting to woo universities and corporations, and, of course, the next challenge is to adapt the car sharing model for the nation's vast, autocratic suburbs.

"In an environment where you buy pizza by the slice and music by the song, surely cars by the hour isn't that far of a stretch," said Flexcar CEO Mark Norman.

Car sharing by the numbers

- 17: Number of U.S. car sharing companies
- 2,558: Combined U.S. fleet of car sharing vehicles
- 101,000: Car sharing members in the United States
- 347,910: Worldwide car sharing members
- 11,696: Worldwide car sharing vehicles
- 81.7: Percentage of U.S. car sharing market that is made up of neighborhood residential customers
- 12.3: Percentage of market made up of business customers
- 4.6: Percentage of market made up of college customers (age 21 and older)
- 1.3: Percentage of market made up of low-income customers
- 0.1: Percentage of market made up of commuters

Source: California Partnership for Advanced Transit and Highways, UC Berkeley

Groups complain Mirant consent decree doesn't ensure compliance

ALEX DOMINGUEZ, Associated Press

Contra Costa Times, Wednesday, December 19, 2006

BALTIMORE - A consent decree between power plant operator Mirant and Maryland does not go far enough to ensure air pollution standards are met, attorneys for an environmental group plan to argue in court Thursday.

The consent decree involving the Chalk Point Plant in Prince George's County calls for Atlanta-based Mirant to use cleaner burning natural gas instead of oil during summer months and to take steps to reduce emissions during the winter months when oil is burned at two of the four plants at the site, said Eric Schaeffer, director of the Washington-based Environmental Integrity Project, a nonprofit public interest group that works on enforcement issues.

The agreement also includes some exceptions allowing for the burning of natural gas in the winter to offset oil used in the summer. A brief filed by the group and other plaintiffs argues that the \$1,000 a day fine for not burning natural gas is cheaper than the increased cost of using natural gas and state policy says action does not have to be taken unless the violations exceed 10 percent of operating time in a quarter.

"We think this consent decree will not assure compliance with the standards," Schaeffer said.

Attorneys for the plaintiffs plan to argue before U.S. District Judge Frederick Motz at a hearing Thursday that the suit should be allowed to proceed. Motz will hear arguments on a motion to dismiss the suit.

Felicia Browder, a spokeswoman at Mirant's Atlanta headquarters, said the company does not comment on pending litigation.

The Environmental Integrity Project had announced it planned to sue Mirant, prompting the consent decree involving two of the four plants. The other two power plants at Chalk Point burn coal.

The Environmental Integrity Project plans to file suit against Mirant along with the Chesapeake Climate Action Network, the Patuxent Riverkeeper and the Environment Maryland Research and Policy Center.

The hearing is the latest in a series of court battles between environmental groups and Mirant, which emerged from bankruptcy in January.

In June, Mirant's coal-fired power plant on the Virginia side of the Potomac River received federal clearance to increase production to near capacity, nine months after it was shut down because of environmental concerns.

The plant serves Pepco customers in the District of Columbia and Maryland, dozens of federal agencies, the Blue Plains Advanced Wastewater Treatment Plant and the U.S. Naval Research Laboratory.

The decision prompted outrage from Alexandria officials. However, Energy Secretary Samuel Bodman and other federal officials have said the plant must be allowed to operate because it is vital to the region's power grid and essential to national security.

The U.S. Environmental Protection Agency said it will allow the Potomac River Generating Station to boost production as long as it does not exceed federal air quality standards, officials with the agency said. Atlanta-based Mirant had been running the plant at reduced capacity since it voluntarily halted production for about a month last August.

Mirant shares closed down two cents Wednesday afternoon at \$31.75 on the New York Stock Exchange.

EU expands pollution rules for airlines

The EU's decision on aircraft emissions could result in higher fares on flights to Europe.
In the L.A. Times, Thursday, December 21, 2006

BRUSSELS - Airlines that fly within the European Union will have to trade pollution allowances beginning in 2011, the European Commission said Wednesday, which could see travelers pay

more for popular short-break trips.

Expanded rules covering all airlines that fly into the EU will take effect the next year, a move that would hit U.S. airlines on their lucrative transatlantic routes. It also angered U.S. officials. The U.S. mission to the EU warned that the "non-consensual" inclusion of foreign airlines could break international aviation laws and "will undermine rather than support international efforts" to limit carbon dioxide emissions from aircraft.

European airlines are generally in favor of the plan, since EU officials had warned them that refusing to back an emissions trading program would result in an aviation tax.

"EU emissions from international air transport are increasing faster than from any other sector," the commission said. "This growth threatens to undermine the EU's progress in cutting overall greenhouse gas emissions."

The plan could add between 1.80 euros and 9 euros (about \$2.40 to \$11.80) to a typical return flight within Europe with higher price hikes for long-haul trips. The commission claimed these would be "significantly lower" than fuel price increases that are passed on to travelers.

Bowing to pressure from trade partners, the EU's executive arm will give all flights to and from EU airports another year to join the program.

All airlines, those based in the EU or elsewhere, will have to trade carbon dioxide allowances beginning in 2012 for all flights to and from European airports, it said.

This will break international aviation law, said U.S. spokesman Robert Gianfranceschi. "The inclusion of non-EU airlines on a non-consensual basis runs counter to EU member states' legal obligations under the Chicago convention on international civil aviation and their bilateral air transport agreements, including with the U.S.," he said.

The EU's refusal to wait for the International Civil Aviation Organization to set up a global program "will prove unworkable," he said, calling on EU governments - who must approve the plan - to insist that it not be implemented without international backing.

But EU Environment Commissioner Stavros Dimas insisted that the plan was in line with international law, adding that he did not believe that U.S. airlines would win a challenge to it. He called on their "moral obligation" to fight climate change.

"We need to act globally. We need to have the United States on board," Dimas told reporters. "It's a global problem. It needs a global solution."

He said Europe had to push ahead because international efforts were moving too slowly.

The program gives airlines a financial incentive to reduce emissions because they can sell allowances that they don't use. But if they fail to convert to low-carbon technology or increase their flights, they will be forced to buy additional allowances to release more carbon dioxide.

The EU said aircraft emissions make up 3% of total greenhouse gas emissions - higher than any other industry - but are increasing as cheap flights multiply and would likely double by 2020.

A jet flying from London to New York and back generates about the same level of emissions as the average person in the EU does by heating their home for a year, the commission said.

Emissions will be capped at the average from 2004 to 2006, it said. Some allowances will be auctioned by national governments but most will be given away.

Airlines can trade carbon permits with other fuel-hungry industries, increasing competition for a finite number of permits.

Environmentalists said the plan was too weak, citing a report from the British think tank, the Institute for Public Policy Research, that said airlines could make up to \$5.26 billion in profit because they would get emissions allowances for free and pass on the costs in higher fares.

Europe Acts to Penalize Jet Pollution

By James Kanter

N. Y. Times, Thursday, December 21, 2006

PARIS, Dec. 20 - In the face of stiff opposition from the airline industry, the European Union moved forward Wednesday with plans to impose extra charges on foreign and domestic carriers that pollute too much.

"We are showing our determination to fight climate change," said Europe's environment commissioner, Stavros Dimas, who announced the proposal Wednesday in Brussels. "This is one way to persuade other countries to come along with us."

The rules, which would be legally binding, would apply to all flights within the bloc starting in 2011. Foreign carriers landing and taking off from busy airports like those in Frankfurt, London and Paris would be obliged to join the system the following year. If enacted, the measure could drive up costs for airlines, potentially leading to higher airfares for travelers.

The proposal draws from the principles of an established system that Europe now uses to help combat global warming and meet emissions goals set forth under the Kyoto Protocol.

Under that plan, which has so far exempted airlines, governments set goals for the carbon dioxide emissions of producers of power, cement, fuels, pulp and paper. If they exceed those goals, companies must purchase allocations, or credits. Many airlines, supported by the United States government, are seeking to blunt the European plans, calling them expensive and unworkable. They want the International Civil Aviation Organization, a United Nations agency, to draw up any rules for emissions trading so that all countries comply.

Giovanni Bisignani, director general of the International Air Transport Association, a group that includes most of the world's airlines, said Wednesday that he would continue to seek changes before the plan was approved by European Union governments and the European Parliament, a process that is likely to take years.

"We are concerned about the legal implications of applying the scheme outside Europe from 2012," Mr. Bisignani said. "We must have a global approach for a global problem."

Mr. Dimas maintained that his plans were legal, and he encouraged governments and airlines to speed efforts to reach a global accord to cap emissions, rather than block European efforts.

Peter Lockley, a policy analyst at the Aviation Environment Federation in London, praised Mr. Dimas for "standing up to pressure from the U.S. and certain sections of the aviation industry" by including all flights landing at and taking off from European airports.

But Mr. Lockley criticized plans to give airlines most of their pollution credits free, rather than through more extensive auctions. Mr. Lockley also said that airlines, like other heavy polluters in Europe, should be required to reduce their emissions from 1990 levels, rather than from present levels.

Officials from the International Air Transport Association acknowledged that they had already won concessions from Europe in recent weeks, including a delay in specific plans to regulate nitrogen oxide, another pollutant emitted by aircraft engines.

British Airways said the planned legislation would “now treat aviation more similarly to other industries.” But Lufthansa, a German carrier, sharply criticized the plan, saying that more rapid action to streamline air traffic control and reduce flight detours and holding patterns would be far more effective at cutting emissions.

The proposals “would tie up resources and capital by bureaucracy,” Lufthansa said, warning that “important investments in environmentally friendly technologies would have to be postponed.” Lufthansa is more dependent for overall sales than British Airways on flights that take off and land in the European Union.

The international air transport group said that Europe’s proposal could still cost airlines globally up to 2.9 billion euros (\$3.8 billion) a year to buy allowances starting in 2012, when the rules are expected to cover all flights in and out of the union.

But European officials said that airlines should be able to pass much of the extra costs on to passengers, who would face increases in ticket prices of \$2 to \$12 for a trip within the European Union over the next decade. Officials said a return flight to New York might cost an additional \$10 to more than \$50, depending on how much individual airlines would have to pay for extra carbon allowances.

The Cautious U.S. Boom in Oil Shale

By Clifford Krause

N.Y. Times, Thursday, December 21, 2006

GRAND JUNCTION, Colo. - Oil shale has never made an American company more than a nickel or two; quite a few, in fact, have lost countless millions over the last century trying to cook oil out of the rock. R. Glenn Vawter, who has worked as an executive for many of the losers, knows all that only too well.

Shell’s Mahogany field in western Colorado, where the company is testing plans to heat shale underground for two or three years to recover the oil.

Oil shale’s many starts and stops have driven Mr. Vawter’s career but have also unsettled his family life, forcing 37 moves during one 25-year spell early in his career.

But Mr. Vawter is still a true believer. His rock garden is adorned with huge shale boulders weighing over a hundred pounds, which he has lugged from job to job. His house is filled with shale bookends and shale paperweights engraved with names of companies he has worked for, including one that he had to shut down, laying himself off, during the last shale bust, in the 1980s.

Some may think Mr. Vawter a glutton for punishment. But suddenly at age 68, Mr. Vawter and his holy grail are back. Last month, the Bush administration opened up five large parcels of land in the Piceance Creek Basin in Colorado for oil shale research and development projects, and Mr. Vawter has bounded out of retirement to manage the efforts of EGL Resources, which will begin pilot tests early in 2007.

Government estimates of recoverable shale oil in Colorado, Utah and Wyoming put the reserves at 800 billion barrels - more than triple the proven oil reserves of Saudi Arabia. So aside from Mr. Vawter, now many in Washington have their eyes on a big prize, not in small part for the promise it might hold to ease national security concerns. “It could literally shake the world,” Senator Pete V. Domenici, a Republican from New Mexico, told a recent Senate hearing.

But there are plenty of good reasons no one has ever come up with a profitable, environmentally acceptable method for extracting oil from shale. Not only were the previous efforts too expensive and too energy-intensive to compete with conventional oil resources, they also laid waste to the land, produced lots of air pollution and threatened scarce groundwater in one of the driest regions of the country.

So it is no surprise that Shell, Chevron and Mr. Vawter's EGL Resources, the three companies that won the 160-acre leases, say they are going to go slow with their experiments before they begin considering commercial production of synthetic fuel. The initial outlays are small, in the millions or tens of millions.

They are all looking over each others shoulders, wondering if any of their new techniques, aimed at overcoming the previous obstacles, can hit the jackpot. Each is refining its own method, but they say they are cautiously optimistic that they can succeed where so many others have failed.

"The resource scale is enormous," said Donald L. Paul, vice president and chief technical officer at Chevron. "We believe there are opportunities for it to become commercial. Otherwise, we wouldn't do the R&D."

Despite the fresh starts, skeptics abound.

"The jury is still out whether oil shale can make it," said James T. Bartis, an energy policy expert at the RAND Corporation, an independent research firm. "Right now we have no idea what one of these plants will look like. There are no designs on the books, no one has given detailed estimates on the pollution, the footprint, the ecological impact or even for that matter, the economic value to any company that is to build one of these plants. So there is a lot of uncertainty."

The three companies are rejecting old mining techniques that failed in the past in favor of experiments that heat the shale underground. The idea is to melt the organic material into a form of oil and gas and then pump it to the surface for refining into fuel.

The companies hope that approach - known as in situ, or on site - will be more efficient and produce fewer carbon dioxide emissions than previous efforts, although some of their experts acknowledge that a method still must be developed to capture and store carbon emissions to ensure that shale oil does not become a large producer of greenhouse gases.

"I didn't think I would live long enough to see a rebirth of oil shale development in our country," Mr. Vawter said. "It feels great."

Given the modest size of the experiments planned so far, shale oil will not be arriving anytime soon, until at least the 2020s. But this is still the biggest push for shale oil since the Carter administration handed out hundreds of millions of dollars in tax breaks and other subsidies to shale developers a few years after the 1973-74 Arab oil embargo drove up prices and inspired one of the first of several failed drives to achieve the post-embargo dream of American energy independence.

The Los Alamos National Laboratory, the Energy Department operation best known for its development of the atomic bomb during World War II, also worked on shale mining technologies in the 1970s and is also jumping back into the oil shale research business in partnership with Chevron.

Los Alamos scientists are applying modeling and monitoring technologies developed from carbon sequestration experiments and underground testing of nuclear weapons, storage of nuclear waste and cleaning of nuclear weapon components.

For any underground technique to work, scientists say they must find a way to prevent the leaching of shale remnants into groundwater. Even small releases of toxic substances like arsenic and selenium could cause great harm to the Colorado River drainage basin, a lifeline for the entire Southwest.

The Los Alamos scientists said they would also try to find ways to safely and efficiently handle hazardous gases and explosives that might be used by Chevron to break down kerogen, the fossilized material in shale that can be converted into oil.

EGL says it is ready to commit at least \$30 million to its 10-year experimental effort, and the larger companies are expected to pony up considerably more money. Shell says it hopes to decide whether to begin commercial production by the end of this decade.

Shale holds much promise for American companies, because it is abundant and most of it is found in the United States. A RAND Corporation study says that the bounty could fuel American cars and homes for more than 400 years, if shale could meet a quarter of the current American demand, which is about 20 million barrels a day.

"It gets to the national security question," said Duncan W. McBranch, a senior scientist at the Los Alamos National Laboratory who is working with Chevron. "What if you didn't have to rely on the Middle East or other volatile parts of the world for energy?"

Such visions of synthetic shale fuel have been around a long time, at least since before World War I, when the Taft administration decided that shale was so potentially important for fueling the nation's growing Navy that it created the Naval Oil Shale reserve.

Dozens of oil shale companies were formed and went bust during and after both World Wars. At various times from the early 1950s through the mid-1980s many of the largest oil companies invested up to \$2 billion on various experimental techniques in the American Rockies but hardly a drop of oil was ever sold.

Ruins of old mines and drills and water pumps from long-forgotten projects litter the western Colorado mountain valleys. One entire housing development Exxon began building to house 25,000 people is now a retirement community.

Exxon and the Tosco Corporation invested the most money - more than half a billion dollars - in their joint Colony shale mining plant, now abandoned, a few miles north of Parachute, Colo. Twenty years later Mr. Vawter and about 20 Tosco colleagues and their wives tried to hold a reunion at the old Colony site, but Exxon Mobil denied them entrance for liability reasons at the site the company still owns.

"We felt put out, so we went as close as we could get outside the locked gate of the property," said Mr. Vawter as he drove through a canyon near the old Colony site recently. "We hired a caterer to take us on a wagon ride and a cookout and sat around telling old stories."

This time Mr. Vawter is starting well behind Shell, which has never completely given up hope in shale since the last bust. From tests going back to the early 1980s in Houston and on their own Mahogany test field in Colorado, Shell researchers have come up with a more complex but seemingly ingenious in situ approach.

On the new lease, Shell plans to drill vertical holes 2,000 feet into the shale and heat the rock below ground with electric heaters. The shale will be slow-cooked at about 650 degrees Fahrenheit for two to three years with the hope of producing a far higher-quality oil and gas product than the faster cooking techniques of the 1980s.

To protect groundwater, Shell is testing a "freeze wall" in which ice walls will be created by circulating refrigerant liquids through a closed system of pipes.

"We're getting close and closer to a financial investment decision, hopefully by 2010," John D. Hofmeister, president of Shell Oil, told the National Press Club in Washington in October. "We hope that the technology works."

Chevron's approach is still a work in progress. One possible method would use injection wells to circulate hot carbon-dioxide-rich gases through the fractured shale formation. For efficiency purposes, the heated gases from initial chemical reactions would be reused repeatedly to help process new shale.

Chevron is hoping to aim at smaller portions of shale than Shell to minimize the environmental footprint, and use shale formations themselves as walls to avert seepage into groundwater through monitoring techniques developed at Los Alamos.

"We are going to be smarter this time," said Robert Lestz, Chevron's oil shale technology manager. "If you are using yesterday's technologies you can expect yesterday's results. Using today's technology, you should expect totally different results."

The EGL method, the simplest of the three, is roughly akin to a boiler putting 700 degree Fahrenheit steam or other hot fluids through an intricate radiator system dug underneath the shale formation. Pipes will pump to the surface the vapors and liquid hydrocarbons that are emitted from the rock.

To alleviate the underground water problem, the company plans perimeter wells to pump water continuously out of the area.

"We're just beginning and of course you have to reflect upon what happened the last time," Mr. Vawter said. "That so many good people have broken their picks on this is

In the Garden

With Warmer Weather, Different Decisions to Make

By Anne Raver

N.Y. Times, Thursday, December 21, 2006

IT'S not that I don't like 60-degree days and eating fresh spinach right out of my garden in December. But the extended growing season is one of the signs of global warming. It goes hand in hand with polar bears dying in the Arctic as the sea ice shrinks.

For the gardener, there are benefits and there are drawbacks.

In central Maryland, warmer winters allow me to grow Southern magnolias and apricot trees, but more insects are wintering over, and weeds, like poison ivy and ragweed, seem far more aggressive. It didn't surprise me to see that my garden has jumped a zone, from 7 to 8, according to a hardiness zone map based on lowest winter temperatures in the past 15 years, just published by the National Arbor Day Foundation (arborday.org/media/zones.cfm).

The Agriculture Department's Research Service is also revising its hardiness zone map, based on temperatures over the past 30 years, so stay tuned.

Cameron P. Wake, a research associate professor at the Climate Change Research Center at the University of New Hampshire, said that winter temperatures in the Northeast have increased an average of 4.3 degrees over the last 30 years.

That may not seem like very much, Mr. Wake said. But picture Boston experiencing a winter climate more like Philadelphia's; or Philadelphia having winters more typical of Washington.

All kinds of plants are changing their patterns. According to research by David W. Wolfe, a professor of horticulture at Cornell University, lilacs are blooming an average of four days earlier than they were in the 1960s; apple trees and grapevines are blooming about eight days earlier.

That can have a downside. Earlier spring warming does not rule out sudden drops in temperature. If the trees are blooming earlier and there is a cold spell, there is a risk of frost damage to flowers and to developing fruit.

Apple trees need a winter chilling period of at least 30 consecutive days with temperatures below 40 degrees, Mr. Wolfe said. And winter thaws that interrupt that chilling period inhibit fruit production.

As the warming trend continues, gardeners and farmers are changing the varieties of vegetables and fruits that they grow.

Prudence Wickham Heston, a partner in Wickham's Fruit Farm in Cutchogue, N.Y., described crops that once would not have survived on the farm. Her family is growing peach and apricot trees down near the Peconic Bay, which holds warmth in the fall and stays cool in the spring, producing ideal conditions for these crops. They have also planted kiwi vines, which would have been unheard of in Grandfather John Wickham's day, when people used to drive across the frozen bay to Southampton.

But Tom Wickham, Ms. Heston's uncle, worries that the mild winters will bring more insects and disease.

"Apple scab will over-winter in dead leaves and twigs, but a really cold winter, of about zero degrees, will suppress it," Mr. Wickham said. "We used to have winters well below zero, but we haven't had that for a long time."

Warmer temperatures have also benefited Long Island's grape growers, who are starting to plant syrahs, which need more heat to develop flavor, said Louisa Thomas Hargrave, a former vintner who is the director of the Center for Wine, Food and Culture at Stony Brook University. Grape growers worry, however, about another aspect of global warming: earlier and more intense hurricanes that could wipe out a crop.

"When Gloria hit in 1985, it came loaded with spray from the sea, and all that salt was deposited on the leaves," said Charles Massoud, who with his wife, Ursula, owns Paumanok, a 75-acre vineyard in Aquebogue, N.Y. Luckily, the Massouds were able to harvest their grapes the day before the storm struck, on Sept. 27.

As for the weeds in our lives, they are growing bigger and faster, and producing more seeds, as temperatures rise.

"Japanese honeysuckle and English ivy seem to be responding very well to CO2 and warmer temperatures," said Lewis Ziska, a weed scientist based at the Agriculture Department's office in Beltsville, Md.

And they are more resistant to herbicides, he said. Canada thistle, for example, grown in a chamber of elevated carbon dioxide, was not killed until sprayed with three times the regular dose of herbicide.

And each ragweed plant “can produce 10 times the amount of pollen, just because of climate change and CO2,” he said, making the pollen counts much higher.

So what does all this mean for the gardener?

Obviously, we can have some fun pushing the envelope. But on the more serious side, we need to be setting rain barrels under our roofs to harvest the increasing number of torrential downpours.

“More of our water is getting squeezed into high-precipitation events,” Mr. Wolfe said, meaning a rainfall of more than two inches within 48 hours. “That increases the danger of drought, because there is less water in between.”

So get out the drip lines and connect them to those barrels, to water during hot, dry spells.

There are all kinds of tricks of the trade, like planting spinach and lettuce in the shade, and choosing more heat-tolerant varieties, to offset higher temperatures.

Composting is ever more important, not only to return organic material to the soil, but to keep it from landfills and incinerators, which increase the methane and CO2 pouring into the atmosphere.

In fact, every time we till the soil, or dig it up, we are releasing more CO2. Microbes need air to break down carbon, and by tilling, or digging, they are getting just that, and the result is CO2.

So avoid the urge to dig and till. Make those raised beds so friable - with plenty of compost - that you can just make holes and drop the plants into them. I can make a row for seeds with my fingertip.

Planting cover crops like winter rye, buckwheat and clover can also slow the release of carbon, by sequestering it in plant roots. Bare soil can be covered with a blanket of chopped leaves. Limiting the use of chemical fertilizer, which is produced by the burning of fossil fuel, is helpful. And remember, the use of too much chemical fertilizer overloads the soil with nitrogen, which gives off nitrous oxide, another greenhouse gas.

If a lawn is too big for a people-powered reel mower, it can be shrunk down by planting ground covers and trees, which will take more carbon dioxide out of the air.

The same principle applies to roofs and terraces: more plants absorb more carbon dioxide.

And why not get rid of the leaf blower and the gasoline-powered lawn mower? According to the California Air Resources Board, operating a lawn mower for an hour creates about as much pollution as driving a car from Washington to New York City.

Of course, gardens alone can't save the polar bears, or all the other species that could vanish. Only a radical reduction in the burning of fossil fuels can do that.

Bush: Nuke pact with India bolsters strategic relations Some fear agreement will create nuclear weapons race in Asia

By Deb Riechmann, Associated Press

Tri-Valley Herald, Tuesday, December 19, 2006

WASHINGTON - President Bush signed legislation on Monday to let America share its nuclear know-how and fuel with India even though New Delhi refuses to sign the Nuclear Non-proliferation Treaty.

"By helping India expand its use of safe nuclear energy, this bill lays the foundation for a new strategic partnership between our two nations that will help ease India's demands for fossil fuels and ease pressure on global markets," Bush said in a bill-signing ceremony at the White House.

The bill carves out an exemption in U.S. law to allow civilian nuclear trade with India in exchange for Indian safeguards and inspections at its 14 civilian nuclear plants. Eight military plants, however, would remain off-limits to the inspections.

Critics worry the agreement could spark a nuclear arms race in Asia by boosting India's atomic arsenal. They also argue that the measure undermines international efforts to prevent states like Iran and North Korea from acquiring nuclear weapons. In Beijing on Monday, North Korea defiantly declared itself a nuclear power at the start of the first full international arms talks since its atomic test in July and threatened to increase its arsenal if its demands were not met.

The White House said it was willing to make an exception for India, the world's largest democracy, because it had protected its nuclear technology and not been a proliferator.

"India has conducted its civilian nuclear energy program in a safe and responsible way for decades," Bush said. "Now, in return for access to American technology, India has agreed to open its civilian nuclear power program to international inspection."

The administration also argued it was a good deal because while India's military plants that work with nuclear material would not be subjected to inspections, there would be international oversight for the civilian program, which has been secret since India entered the nuclear age in 1974.

"After 30 years outside the system, India will now operate its civilian nuclear energy program under internationally accepted guidelines and the world is going to be safer as a result," the president said.

The Bush administration said the pact deepens ties with a democratic Asia power, but was not designed as a counterweight to the rising power of China. "We don't have a policy that would build up a relationship with India to contain China," Undersecretary of State Nicholas Burns told reporters before the bill signing.

Bush said the law would make it possible for India, the world's fifth-largest consumer of energy, to reduce emissions and improve its environment. India, whose demand for electricity is expected to double by 2015, currently produced nearly 70 percent of its electricity by burning coal, which produces air pollution and greenhouse gases.

The deal also could be a boon for American companies that have been barred from selling reactors and material to India where the economy has more than doubled in size since 1991.

In New Delhi, Prime Minister Manmohan Singh defended the nuclear deal, rejecting strong opposition from critics that it would lead to the dismantling of India's atomic weapons. He said he had some concerns about the legislation, but that they would be dealt with during technical negotiations on an overall U.S.-India cooperation agreement.

"The United States has assured us that the bill would enable it to meet its commitments" made in agreements struck in July 2005 and in March by Bush and Singh.

Singh said India would not accept new conditions and its nuclear weapons program would not be subject to interference of any kind because the agreement with the United States dealt with civil nuclear cooperation.

Earlier, opposition leader L. K. Advani of the Bharatiya Janata Party said India should not accept the U.S. legislation, saying that the deal would prevent India from conducting nuclear tests in the future. India conducted its first nuclear test in 1974 and followed it up with a series of nuclear tests in 1998.

"The primary objective is to cap, roll back and ultimately eliminate its (India's) nuclear weapons capability," Advani warned.

Before civil nuclear trade can begin, several hurdles remain. American and Indian officials need to work out a separate technical nuclear cooperation agreement, expected to be finished next year. The two countries must now obtain an exception for India in the rules of the Nuclear Suppliers Group, an assembly of nations that export nuclear material. Indian officials must also negotiate a safeguard agreement with the IAEA.

[Modesto Bee, Commentary, Thursday, December 21, 2006](#)

Valley residents are last, best hope against urban sprawl

BY ERIC CAINE

Three opposing forces are on a collision course to determine the future of valley residents. One has in the past proven irresistible, the other increasingly viable, and the third, in a surprise turnabout, is growing feebler almost by the day.

The three forces, in order of potency, are urban sprawl, conservation and agriculture.

The surprise is the growing weakness of agriculture, despite its central role in the valley economy.

No one needs to be reminded of the irresistible power of urban growth and sprawl. If the ever-more-present housing tracts, big box stores and strip centers aren't evidence enough, there's always the looming specter of Los Angeles, at once the grandeur, the horror and the mirror-on-the-wall future of California.

Even though it dominates the valley's economic environment, agriculture appears to have a bleak future. Given the ascendant value of farmland that can be converted to urban and residential uses, and encroachment from homes, automobiles, businesses and schools, the rising cost and increasing scarcity of water, and an ever-more-complex lexicon of environmental rules and regulations, farmers hardly can be blamed for selling out. And most of them are aware that many major players in the global game of agribusiness already have ceded victory to foreign food products, despite the lessons we should have learned from our dependence on foreign oil.

Long the weak sisters in the valley's dynamic of political power, conservation and the environment are gaining in force and momentum. Recent legal rulings about the quality and quantity of water in the San Joaquin and Sacramento rivers are only precursors to closer regulation and more equitable distribution of public resources.

For far too long in the valley, air, land and water have been viewed as tokens in a free-market game of short-term profit. Ironically, as the housing market continues to spur urban sprawl, former Bay Area and coastal residents relocating to the valley will bring with them a heightened awareness and concern for environmental issues that could make rampant growth far more difficult than in the past.

As valley residents become more familiar with their rights to determine quality of life, their views of heretofore demonized legislation such as the Endangered Species Act and the Clean Water Act will change for the better. Nonetheless, even an enlightened citizenry will find it difficult, if not impossible, to avoid the fate of Los Angeles.

While valley leaders toss around warm and fuzzy notions of regional planning, valley residents should realize one stark fact: Nothing will change without the establishment of urban boundaries, and no one yet has shown the kind of courage it will take to mark specific sections of land off-limits.

Nonetheless, public opinion, once formed, can become an immovable factor in determining our future landscape. If and when valley residents decide on a balance between urban and open

areas, where agriculture remains a major factor in the local economy, they may yet make their escape from the seemingly irresistible forces of a Los Angeles future.

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