

Oil, gas seeps fouling Santa Barbara Channel : Panel of experts weighs in on possible solutions

JEREMY FOSTER, NEWS-PRESS STAFF WRITER

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When Dr. Bruce Luyendyk, professor of marine geophysics at UCSB, showed a current aerial view of the Santa Barbara Channel at a recent town hall meeting, the audience was surprised to see its beaches looking anything but pristine.

Along the channel was contamination caused by seeps -- areas where oil and gas deposits rise up through rock fractures beneath the seabed -- which appeared as black oblong shapes in the coastal waters.

One of the consequences of seeps is an iridescent sheen on the water, wherever a thin film of oil is present. Oil also washes up along the shorelines as tar balls.

About 100 people showed up for the public forum "Oil in the Channel: Contentious Solutions" on Saturday afternoon at the Santa Barbara Museum of Natural History. Moderated by award-winning filmmaker Mike DeGruy, the discussion was led by a panel of experts who weighed in on what -- if anything -- should be done about the seeps. Opinions were diverse, and the discussion spirited.

Dr. Luyendyk, one of a handful of researchers at UCSB studying Coal Oil Point seeps, gave a brief presentation on the history of seeps and their impact on the environment.

He traced the discovery of seeps, all the way back to 5000 B.C., to the Chumash Indians, who used tar from seeps to waterproof canoes, baskets and water bottles, and to make tools and jewelry. In 1792, British explorer George Vancouver was one of the first to log oil slicks in the Santa Barbara Channel. His and other explorers' discoveries led to the first offshore oil production in the U.S., along the coastline of Summerland, in 1896.

In 1941, oil seeps were first documented in Coal Oil Point. Soon after, studies of these fissures in the ocean floor began rolling out of academia.



Mike DeGruy speaks to the crowd at the Natural History Museum during Saturday's public forum, "Oil in the Channel: Contentious Solutions."
ROBBY BARTHELMESS/NEWS-PRESS PHOTOS

What scientists have learned since, Dr. Luyendyk said, is that seeps -- not offshore oil spills -- are responsible for most of the oil mucking up the beaches along the Santa Barbara Channel.

For example, he added, seeps off Coal Oil Point near UCSB put an average of 4,200 gallons of oil into the ocean every day.

To put that number in perspective, Dr. Luyendyk noted that in a span of "five or six years" the amount of oil that comes out of these seeps equals "an Exxon Valdez oil tanker spill," the disaster that dumped 10.8 million gallons of oil into the Gulf of Alaska in 1989.

And oil is not the only thing seeping from the seabed. Natural gas bubbles up from the same fissures -- approximately 100,000 cubic meters per day.

"That translates into about 3 million cubic feet a day," Dr. Luyendyk said. "Your typical household uses 250 cubic feet of gas a day."

Bruce Allen, a physicist, was on hand representing a local group called SOS (Stop Oil Seeps) California, whose chief concern is the seepage from the ocean floor and the pollution it creates in the environment.

For an environmental group, his organization advocates an unorthodox way to deal with the seeps.

The orthodox way, some would say, is getting oil rigs out of the ocean.

"There is significant evidence oil extraction can reduce oil seepage," he said, referring to a 1999 UCSB study that found links between offshore oil production and decreased seepage.

Dr. Allen alluded to research suggesting that offshore oil spills are responsible for less contamination than natural oil seepage, and encouraged people to be more open-minded to the idea of extracting oil from the ocean as part of an effort to reduce oil contamination of the environment.

"The public is unaware of the magnitude of natural seep pollution," he said. "They don't garner the same attention major oil spills do and that's something we want to educate the public about."

"There's a potential synergy we can take advantage of. We can reduce dependence on foreign oil, reduce tanker traffic, expand on alternative energy and clean up the environment."

Expanding oil production through offshore drilling, he said, would generate \$1.6 billion a year for California, and \$330 million a year for Santa Barbara County alone.

"In three and a half years we could afford to build a solar thermal farm and provide electricity for every resident in the county of Santa Barbara," he said, "and to provide (every resident) in four years a \$10,000 credit to buy a hybrid vehicle."

Michael Chiacos, energy program senior associate for the Santa Barbara-based Community Environmental Council, brought a different perspective to the discussion.

"We need not invest in energy of the past," he said, "which any oil executive will tell you we're going to run out of. We need to stop hunting and gathering for the little pockets of oil and gas and begin harvesting wind, solar, geothermal energy."

Mr. Chiacos said mounting more oil platforms in the ocean is a "supply-focused" strategy. And the supply of oil, he said, will eventually run out. "We can't drill our way out of this problem," he insisted.

"I'd like to propose the main source of oil that we have in our county is actually beneath our feet, not in the ground but in our conversation and efficiency," Mr. Chiacos continued. "Europeans use half the petroleum that Americans use on a regular basis. And we know what a great county Italy or France is."

Characterizing his position on how to deal with the oil seeps as neutral, Dr. John Day, a planner with the Santa Barbara County Energy Division, warned of comparing natural oil seepage to oil spills.

"Oil seeps have relatively little impact, and spills can be absolutely devastating," he said.

Dr. Day argued that natural oil and gas from seeps are released gradually, allowing the currents and natural mixing to dilute their concentrations.

The impact of a major spill, however, can blanket the sea surface of a large area with fresh oil, he noted. Unlike oil and gas seepages, large oil spills kill large numbers of animals including sea birds and marine mammals, he added.

Mr. Chiacos added: "A solar panel on your roof is not going to cause a great deal of harm, whereas if you have a spill off the channel, as we saw in 1969, it can have devastating impacts on our environment."

Dr. Day also questioned the idea that increasing oil extraction is linked to decreased seepage. He acknowledged that seepage rates near Platform Holly,

an offshore rig in the Santa Barbara Channel operated by Venoco Oil Company, have declined significantly since 1973, but said supporting a hypothesis and proving one are two different things.

"You can't say anywhere you drill you're going to reduce seepage," Dr. Day said. "It depends on the location of area being drilled, how many faults it has and how fractured it is. Just because in one case you have a reduction in one area doesn't mean you can extrapolate from that a categorical rule," he said.

Despite those arguments, Dr. Allen said new technology was making oil extraction environmentally safer. He also reiterated his point that the money raised from oil extraction expansion would give us the financial means to wean ourselves off fossil fuels and move toward Mr. Chiaco's society of conservation and alternative energy.

Dr. Day remained skeptical.

"The Energy Division is concerned about doing adequate environmental review. My analysis on oil seeps and oil spills is that there is that there is a greater risk from oil spills," he said. "And it's up to the community to decide whether that risk is worth it."

e-mail: jfoster@newspress.com