

Exxon Valdez: What did we learn?

Decades after the tanker spill, the technology for cleaning up is basically the same

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Tons of Exxon Valdez oil still afflicts the beaches of Prince William Sound, just under the surface — more persistent than the lessons learned from a disaster that killed 250,000 seabirds and 3,000 sea otters.

The magnitude and danger unraveled in the hours, days — even years — afterward as oil spread across the water with winds, current and tide.

And yet, two decades after 10,000 workers, 1,000 boats and 100 aircraft labored without major success to mop up the spill in Alaska, the weapons available for today's fight in the Gulf of Mexico remain virtually the same.

That, despite lawmakers' vows that it would never happen again.

Crude oil from the misdirected Exxon tanker killed wildlife, sickened cleanup workers and absorbed \$2 billion in cleanup monies, and it doesn't even rate among the top 30 spills worldwide.

Congress passed the Oil Pollution Act of 1990 even before the Prince William Sound cleanup was declared over.

It mandated among other things a multiagency federal effort to research better ways to clean up oil spills.

Yet the taxpayer money dedicated to new cleanup tools after 1989 was never adequate. The research task may have been too tall. Since 1990, the agency that spent the most on "oil spill research" — the Interior Department's Minerals Management Service — has doled out a tenth of a penny for every dollar it collected in royalties from oil companies for their offshore drilling rights, according to a Houston Chronicle analysis of agency budget documents.

Funds go to wave pool

MMS kept its oil spill research budget at roughly \$6 million a year for two decades — for a total of \$129 million — while royalties came in during the same period totaling \$107 billion, records show. U.S. Coast Guard spending dwindled from \$7 million in 1992 to just \$600,000 last year.

Two other agencies, the EPA and the National Oceanic and Atmospheric Administration, spent less, according to congressional reports. Overall federal spending fell far below a planned \$28 million a year, and the multiagency task force filed its last research plan 13 years ago.

MMS spokesman Nicholas Pardi said in an e-mail that two thirds of the agency's money supports a 667-foot-long New Jersey wave pool which is “fully booked” for testing cleanup equipment.

'Backwoods' technology

Without advancements in technology, hope must rest on what California Congresswoman Lynn Woolsey dubs a “backwoods” list of cleanup approaches: Skimmers and barges, booms, igniters for burning, dispersants, biological agents, a variety of beach scrubbing methods and patience while nature absorbs the stain.

“The basic tool kit hasn't changed dramatically, or at all,” said Jeff Short, a former NOAA scientist now with the environmental group Oceana.

Craig Rassinier of Houston led the initial attack on the Exxon Valdez spill and is soberly watching BP officials tackle a massive leak from the uncontrolled oil well off the Louisiana coast. The former Exxon official, like other experts, understands the considerable limitations of the 38 skimmers, including a dozen oceangoing vessels, assigned to the Gulf spill.

“Once it gets out of the bottle, you are not putting it back in, and you are playing chase,” he said. “I can plan for a certain point, I just can't go beyond that. No matter what I want to do, I can't get there.”

Nearly every spill cleanup expert and veteran interviewed for this story volunteered or ultimately admitted a persistent caveat. It is the other lesson learned from Exxon Valdez, besides the one that says preventing oil spills is the only sure course.

It is that sopping up enough oil to satisfy public expectations is impossible once more than a million gallons are in the water. Success is collecting more than 10 or 20 percent of the goo, studies show. Half is unheard of.

Frank Larossi, the Houston-based president of Exxon shipping back in 1989, had little to offer to BP: "I don't have any advice to give them," said the retired maritime executive widely criticized during the Exxon Valdez cleanup. "I don't think there's a solution."

BP itself painted a nightmare scenario in a cleanup plan updated last year for federal regulators. Required to describe a "worst case discharge," BP imagined a blowout near the Deepwater Horizon spewing 50 times more oil each day.

"Is a bigger one of some sort coming?" asked Rex Redfern, of Tomball, who retired in January 2003 as Conoco's program director for spill preparedness and response. "It's when, not if. It's probably going to be a tanker spill."

Legislation fell short

Last year, legislation to increase federal spending on better oil cleanup research and to reorganize the effort died in the U.S. House of Representative's Science and Technology Committee — the victim of other priorities.

"The energy behind it just floated away, shame on me and shame on us," said Woolsey, the California Democrat who co-sponsored the bill after a slow response to a relatively small spill in San Francisco Bay in 2007. "I didn't push."

The law she tried to amend, OPA 90, did have some positive outcomes.

Cleanup equipment is more abundant because the law forced all major oil handlers to place under contract a certain capacity of cleanup resources. That inspired a manufacturing boom. But the law didn't mandate newer techniques or better skimmers and boom, just more of them with more capacity.

Like being 'in a gas tank'

Among those concerned is Dan Lawn, a former Alaska environmental regulator, who remembers the optimism that infected industry executives

prior to and during the first days of the Exxon Valdez spill, and the derision he faced when he questioned it.

At 3 a.m. on March 24, 1989, Lawn became the first state government official to board the Exxon Valdez, stepping over a mound of oil onto a rope ladder, from a harbor pilot boat floating on two feet of crude. He recalls a powerful odor like being “imbedded in a gas tank” and how awkward it was greeting Capt. Joe Hazelwood on the bridge.

Retired from the Alaska Department of Environmental Conservation, Lawn believes complacency about cleanup capacities undermined readiness in the Gulf of Mexico as it did in Alaska before Exxon Valdez. He cited flaws in the system set up by OPA 90 to determine how much equipment oil handlers must have ready for a spill.

Companies like BP must contract for certain amounts of equipment that can arrive in time to fight a spill. But federal standards require a theoretical capacity, not proven ability to perform.

West Coast states, particularly Alaska, passed tougher laws requiring more equipment with better performance standards. Today there are 108 skimmers and nearly 50 miles of boom in Valdez Harbor, making it one of the best-equipped harbors in the world.

By contrast, fewer skimmers and less boom capacity were on the pre-spill inventories for a total of 14 locations covering the Gulf of Mexico from Texas to Florida. That's according to websites for BP's two primary contractors, Marine Spill Response Corporation and the National Response Corporation.

When cleanup started, only seven big offshore skimmers were available in the Gulf, so five were imported from the East Coast, said Coast Guard Capt. Ed Stanton, incident commander for the Louisiana Coast. BP's preparedness plan was approved last year by federal regulators, but crews still needed more boom, he said.

Since Exxon Valdez, skimmers have seen incremental improvements in scooping volume and maintenance. Newer Norwegian booms move faster through the water before losing effectiveness and can withstand higher waves. But the basic physics remains the same.

A few pluses

Luck has favored the Gulf cleanup. The Southern Louisiana crude oil is less viscous than the thicker Alaskan crude oil, evaporating more quickly and dispersing more easily. The shorelines of the Gulf are farther from the spill source than was the Exxon Valdez.

Burning and dispersants were used early in the Gulf of Mexico, and dispersants are being applied to the underwater source of the spill, presumably to greater effect.

BP's burning of oil on the water is a tricky process by which crude must be concentrated behind fireproof booms before it is ignited.

Both techniques — burning and dispersants — were easier to employ in the Gulf than in Prince William Sound because they have become less controversial. But wind and waves have halted skimming for half of the cleanup days, and there have been only 13 burns, Stanton said.

Could researchers someday provide better tools? Redfern, the former Conoco executive, said he doesn't know.

"We let the market develop new technologies for us, and none came up," he said. "That still doesn't change the fact the current technology is not very good."

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