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South Bay fish kill draws more questions than answers

By Douglas Fischer
Inside Bay Area

Biologists have ruled out pesticides as a cause of die-off that left more than 1,000 striped bass, sturgeon, bat rays and other South Bay fish washed up against the shore in late June and early July, the California Department of Fish and Game said Wednesday.

Scientists increasingly suspect natural events triggered both that fish kill and another in early June that killed 40 leopard sharks.

But those scientists fret that the twin die-offs, even if natural, are a sign of larger changes afoot in the Bay's ecosystem.

"The story is bigger than the fish kill," said Jim Cloern, a research ecologist with the U.S. Geological Survey in Menlo Park who has studied the South Bay for 30 years.

"What we've observed over the last five to 10 years is a series of changes in the Bay ... that suggest the Bay ecosystem is changing very quickly," he added. "If it is, we need to figure out why before we can answer where it's going."

The Bay is not the only place this change is happening. In Oregon, scientists are investigating the steady spread of a "dead zone" that appears to be triggered by global warming and may soon extend north to Washington's Olympic Peninsula.

The zone is caused by low oxygen levels in waters as shallow as 45 feet. The zone's steady growth over the past five years, scientists say, suggests a fundamental shift in atmospheric and ocean circulation patterns in the Pacific Northwest has begun.

The Bay's dilemmas may not be too far removed from such shifts.

The first dead leopard sharks started washing up in late May and early June between the San Mateo and Dumbarton bridges and along the East Bay shore from San Leandro to Hayward.

Two weeks later, about June 29, striped bass, bat rays and other fish started washing up.

Too much fresh water is the likely culprit for death of the leopard sharks that migrate to the Bay every spring to pup, said Fish and Game spokesman Troy Swauger.

High freshwater flows from spring rains and a massive snowpack dropped the Bay's salinity, and the sharks likely could not cope, Swauger said.

For the striped bass and sturgeon, the answer is less clear.

Pollution has been largely ruled out: Fish samples tested clean for pesticides, and no major spills have been reported of a magnitude that would cause such harm. The best guess so far, say biologists, is low oxygen levels for a small period in the South Bay — something uncommon, but not unreasonable.

"It's very likely we will never know," Cloern said.

But taken with other events — an unprecedented red, or poisonous, tide in 2004; the decline of clams and mussels from Bay mud; marine species using the Bay as a nursery in higher numbers — the die-off deserves attention, he added.

"By itself, I don't think it's a large thing. But it is an indicator, and how these things are going to play out we don't know," he said.

"For 20 years, the Bay has looked like one thing.

Now, Cloern added, it suddenly looks very different.

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