## New law to protect aquatic life in S.F. Bay

By Paul Rogers Mercury News

All commercial ships coming into San Francisco Bay and other California waters will be required to kill exotic plants and animals stowing away in their holds -- even those as tiny as a grain of salt -- under a new law signed Monday by Gov. Arnold Schwarzenegger.

The measure, SB 497 by Sen. Joe Simitian, D-Palo Alto, gives California the most far-reaching rules in the nation aimed at removing non-native clams, crabs, plankton, bacteria such as *E. coli*, and other species from the ballast water of cargo ships, cruise liners and other vessels.

The law will take effect in 2009, applying first to new ships. After that, it will be phased in until all discharges of invasive species, no matter how tiny, are banned from all ships by 2020.

It was one of seven ocean bills Scwharzenegger signed Monday. Others included AB 2485, a measure by Assemblyman John Laird, D-Santa Cruz, that creates a box on state tax forms where Californians can donate money to sea otter research.

While many people think of pollution coming from chemicals, non-native organisms have become among the most harmful contaminants in California waters. Many have no natural predators and crowd out native species for food.

Large ships can suck 5 million or more gallons of water into giant tanks below their decks. That ballast water is used as weight to stabilize the ships in the ocean. When they reach ports thousands of miles away, they release the water, sending tiny clams, mussels, fish and other organisms out into the wild.

California law requires that ships exchange ballast water at least 50 miles offshore. But that only removes about half the species, scientists say, because many remain in the mud at the bottom of the tanks and can end up in local waters while ships are at port.

``We've said it's time to set some real standards and move toward zero discharge,'' Simitian said Monday. ``These are rigorous but attainable."

In San Francisco Bay, there are at least 234 different non-native species.

The Asian clam, for example, has carpeted the bottom of the North Bay. Filtering massive amounts of water, the clam is believed by scientists to have contributed to an 80 percent drop in phytoplankton -- microscopic plants that delta smelt and other bay fish rely on for food.

Some species, such as the Chinese mitten crab, have clogged water pipes and burrowed into levees around the delta, increasing flood risks.

Shipping companies and state agencies are working to develop new technologies -- chemicals, ultraviolet light, heating, even onshore treatment systems -- to kill the tiny stowaways. So far, however, there is no fail-safe system.

``There is a legitimate issue here," said John Berge, vice president of the Pacific Merchant Shipping Association, in San Francisco, which opposed the bill for much of the year before taking a neutral stance. ``But the science hasn't caught up with the problem yet. We're hoping it will."

Simitian and environmentalists say the new law is needed to speed along technological developments. The law increases fines from \$5,000 to \$27,500 for illegally dumping ballast water.

``Most people really don't think about it, but invasive species have a profound effect, especially in San Francisco Bay, which is one of the most invaded places in the world," said Tim Eichenberg, Pacific region director for the Ocean Conservancy, an environmental group in San Francisco.

In a related development, a federal judge in San Francisco on Monday ruled that the U.S. Environmental Protection Agency violated the Clean Water Act when it decided not to regulate ballast water from ships. U.S. District Court Judge Susan Illston, agreeing with environmental groups who had sued the Bush administration, ordered the agency to issue rules by Sept. 30, 2008.

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