

## BAY AREA

### Don't dump old medicine in toilet Sewage plants' operators ask public to change habit

- [Jane Kay, Chronicle Environment Writer](#)

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The Tylenol, antibiotics, ibuprofen and Prozac that people toss into the toilet or down the drain may be flowing straight to the bay and contaminating fish, warn local sewage treatment officials who want to stop it.

Sewage plant operators who have curtailed everything from industrial waste to household chemicals and pesticides and mercury from dental offices are now trying to reduce pharmaceuticals from homes by offering a safer disposal method for unwanted pills.

The out-of-sight, out-of-mind flush recommended for years doesn't work, say representatives for the 40 agencies that operate sewage plants around San Francisco Bay.

The plants are designed to treat human waste and other biodegradable organic materials -- not the medicines and chemicals in consumer products that make it through treatment and remain in the effluent that spills into the bay or ocean, and in the sludge that is used for landfill cover, incinerated or placed in farmland.

"Some of the pharmaceuticals are definitely making it through sewage treatment plants," said Phil Bobel, manager of the environmental compliance division for the city of Palo Alto and a spokesman for the agencywide Bay Area Pollution Prevention Group.

Studies of fish in waterways near Denver, in Lake Mead and in London's Thames River have found changes in their reproductive systems that apparently are linked to pharmaceuticals that can disrupt the endocrine systems, sewer officials say.

While studies continue on the effects of the drugs on marine life and human health, Bobel said, "There's something simple we can do now to cut down on this stuff. ... Unfortunately, the advice of the past was, 'Dump it down the toilet.' Now we're trying to turn it around: 'Don't dump it down the toilet.' "

The group has organized 30 Bay Area events -- called Safe Medicine Disposal Days -- where people may take unwanted pills, starting Friday and continuing through May 21.

Banners at BART stations in Fremont, Berkeley, 12th Street Oakland, Civic Center San Francisco and Daly City advertise the events. Walgreen's drugstores, some of which are accepting unwanted pills, are distributing flyers. Alta Bates Summit Medical Center in Oakland

and other hospitals are passing out information with prescriptions. Newspaper ads and SamTrans buses will carry the message.

The Bay Area events will accept all pharmaceuticals. In the future, sewage treatment districts will develop drop-off programs similar to those for hazardous and electronic waste. Most plants recommend that consumers put pills in the garbage until there are proper drop-off plans.

The Los Angeles County Sanitation Districts started a "No Drugs Down the Drain" program in March during National Poison Prevention Week. They accept pharmaceuticals except for controlled substances at hazardous-waste drop-off points. If people can't make it to the drop-off points, they ask for disposal in the garbage.

There is no evidence to show that the levels in effluent have any effect on human health. In fact, scientists are just beginning to look at the effects of pharmaceuticals on fish and other aquatic life. No such studies have been done in California.

Some of the best testing for pharmaceuticals in California's effluent comes from Los Angeles and Orange counties.

In surveys last year of effluent treated by the high-quality tertiary method, Southern California officials found detectable levels of ibuprofen; fluoxetine, the generic name for Prozac; and the antibiotics erythromycin, trimethoprim and sulfamethoxazole.

Tests also found low levels of the anti-arthritis drug diclofenac; the mosquito repellent DEET; the anti-cholesterol drug gemfibrozil; triclosan, an antibacterial agent in soap; and anti-seizure drugs.

A big question is how much of the medicines in effluent come from human excretion and how much are from direct disposal.

Ann Heil, supervising engineer for Los Angeles County Sanitation Districts, said she worked up data on the top 10 pharmaceuticals sold in the United States and figured out that about 90 percent of the individual drugs are used up in the body while 10 percent of them are excreted. In other California monitoring studies, the San Francisco Estuary Institute in Oakland published results of monitoring in the bay and delta in 2003 in which researchers detected Tylenol, or acetaminophen, DEET and the sunscreen octyl methoxy cinnamate, as well as plasticizers, fire retardants and herbicides.

"There have been studies throughout the world that have found pharmaceuticals turning up in creeks, rivers and bays," said Jen Jackson, pollution prevention coordinator at East Bay Municipal Utility District who's been working to get people to the throwaway event.

"We're trying to be proactive."

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## Drug disposal

For more information on the Safe Medicine Disposal Days this month, go to [www.baywise.org](http://www.baywise.org).

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Page B - 1

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