

# Department of Fish and Game

*Special Feature News Release*

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## **The Number One Source of Water Pollution May be a Surprise**

While it may not get the same kind of news coverage as a big oil tanker spill, the number one source of water pollution in California is run-off. Whether it's called road run-off, urban run-off, agricultural run-off, or manufacturing run-off, it all flows from streets and highways, yards and driveways, parks and golf courses, gardens, farms, factories - just about anywhere you find human activity - into California waters.

It only takes a little pollution to affect an aquatic ecosystem, destroy a habitat, and kill wildlife.

What's wrong with a little water running from a lawn into the street, down the gutter and into the storm drain? It's not just water from that one lawn. Combine that action with each car that is washed, each driveway that is sprayed off, and the water really begins to flow. That water carries with it every pesticide, herbicide, or fertilizer used to make lawns healthy and attractive. It carries detergents and oils from the driveways and streets. It carries the debris and waste that gather in the storm drain. It carries bacteria and infectious organisms from pet waste, and arsenic and cadmium left on road surfaces by normal tire wear. And that fluid doesn't go to the sewer or a water treatment plant; it goes straight to the nearest creek, river, estuary, bay, or ocean. Almost every storm drain system in the state bypasses treatment facilities. Once in the river or stream, the pollution kills the micro-organisms and micro-invertebrates that form the base of the natural food web, beginning a ripple effect that ultimately hurts fish, wildlife and humans. As the water makes its way to the oceans, water quality is affected, resulting in increasing numbers of days that beaches are closed every year due to unhealthy water conditions.

Some of the runoff is intentional; most of it is preventable. The U.S. Environmental Protection Agency (EPA) estimates that American households generate 193 million gallons of used oil annually, some of which is improperly disposed. The EPA estimates that households improperly dump the equivalent of 17 Exxon Valdez oil spills, every year!

According to the National Research Council, human activities and carelessness cause approximately 29 million gallons of petroleum to pollute North America's ocean waters every year. Nearly 26.3 million gallons of that oil comes from urban run-off, fuel dumping by commercial airplane pilots, emissions from small boats and personal watercraft and polluted rivers. By comparison, pipeline and oil tanker mishaps spill about 2.7 million gallons in our waters.

For those doing their own vehicle maintenance, it's likely some oil, grease, radiator fluid, or other substance has spilled and eventually washed into the nearest storm drain. Some people dump used automotive fluids into storm drains intentionally. Poorly-maintained vehicles leak these fluids onto every roadway they travel. That's why our streets and highways are slick after the first rain of the season. Each rain event carries that "slick" into a nearby waterway,

contaminating the water and injuring entire ecosystems.

What about those "biodegradable" products? Biodegradable actually relates to the ability of a treatment plant to break down the product - not its ability to biodegrade in the natural environment. With increased water usage, diversions, and dams, dilution of pollution is not a solution. In order for an ounce of "biodegradable" detergent to be safe for fish, it needs to be diluted by 17,857 ounces of water. One ounce of household bleach requires 312,000 ounces of water to be safe for fish.

So, what can the average Californian do to protect California waters, fish and wildlife?

! Reduce the use of fertilizers, pesticides and herbicides. If using any of these in conjunction with an automatic sprinkler system, set the water to run in multiple short cycles. Most lawns require an average of two inches of water per week during the growing season. If it takes sprinklers an hour to give a lawn two inches of water, set the sprinkler control to run each set of valves for one half hour, then repeat the program (or cycle). Set the second half-hour of watering to begin at least an hour after the first one ended. This gives the water on each section of lawn time to percolate into the ground while the rest of the lawn gets watered.

! Pet-owners should always collect animal waste from yards and streets, and dispose of it in the family trash receptacle. Indoor-only cat owners should dispose of used litter and feces in plastic bags, tied or sealed and placed in the trash. This has become important as studies of a decline in California sea otter populations indicate *Toxoplasma gondii* - a parasite found only in cats - may be one of several potential culprits. Coliform bacteria in animal (and human) waste can also harm aquatic life.

! Keep garbage and trash contained, so it can't enter storm drains. Even green waste such as leaves and plant cuttings should be disposed of by either composting or placing in the proper container for your local waste agency's collection. If those options aren't possible, place them in the garbage can, where they will go to a landfill, rather than into a creek or lake. In the fall, prevent street flooding by checking storm drains; remove leaves and other debris that may clog them during rainstorms.

! Do not dump anything into storm drains. Used motor oil, paints and other household chemicals should be disposed of by following the requirements of the local waste disposal company.

When witnessing anyone allowing oil, paint, or chemicals (anything but water) to enter a storm drain, please report the incident to the Department of Fish and Game, by calling 888-DFG-CALTIP (888-334-2258).

The public can find more information on the **Department of Fish and Game** homepage [www.dfg.ca.gov](http://www.dfg.ca.gov) or from these other Web sites:

**California Resources Agency:** [www/resources.ca.gov/watershedtaskforce](http://www/resources.ca.gov/watershedtaskforce)

**Stormwater Pollution Prevention Tips for Gardeners:**

[www.ci.berkeley.ca.us/PW/Storm/gardener.html](http://www.ci.berkeley.ca.us/PW/Storm/gardener.html)

**American Oceans Campaign:** [www.americoceans.org/runoff/epa-doc.htm](http://www.americoceans.org/runoff/epa-doc.htm)

**Sonoma County Dept. of Health Services - Storm Drain Pollution:**

[www.sonoma-county.org/health/eh/stormh2o.htm](http://www.sonoma-county.org/health/eh/stormh2o.htm)

**California Integrated Waste Management Board:** [www.ciwmb.ca.gov/HHW/](http://www.ciwmb.ca.gov/HHW/)

**Los Angeles County Stormwater Quality:** [ladpw.org/wmd/NPDES/permit\\_lite.cfm](http://ladpw.org/wmd/NPDES/permit_lite.cfm)

**US EPA - Polluted Runoff:** [www.epa.gov/owow/nps/facts/point7.htm](http://www.epa.gov/owow/nps/facts/point7.htm)

**Monterey Bay National Marine Sanctuary:**

[bonita.mbnms.nos.noaa.gov/resourcepro/urban.html](http://bonita.mbnms.nos.noaa.gov/resourcepro/urban.html)

**Port of San Diego:** [www.portofsandiego.org/sandiego\\_environment/storm\\_water.asp](http://www.portofsandiego.org/sandiego_environment/storm_water.asp)

**El Dorado County Environmental Management Dept.:**

[www.co.el-dorado.ca.us/emd/solidwaste/storm.html](http://www.co.el-dorado.ca.us/emd/solidwaste/storm.html)

**Surfrider Foundation:** [www.surfrider.org](http://www.surfrider.org)

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