

# PPCPs

## Pharmaceuticals and Personal Care Products

### Can Damage Our Environment

### ... And Us

PPCPs are spread through use by people and animals, both pets and farm animals.



Swimming



Bathing



Health



Cleaning



Pets



Farm Animals



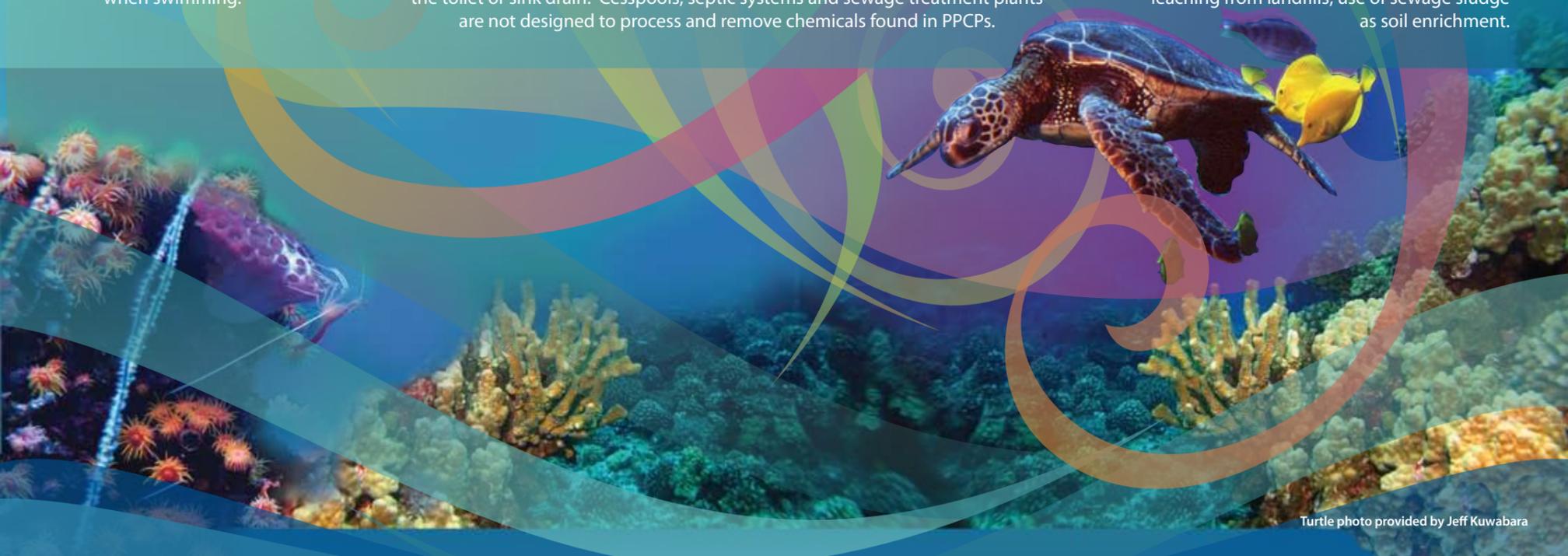
Landfills

PPCPs can be transported into the environment in many ways.

Direct contact with water: Lotions can wash off when swimming.

Through the wastewater or sewage system: All human waste can contain PPCPs that end up in the sewage system, cesspools or septic systems. Some people flush unused drugs down the toilet or sink drain. Cesspools, septic systems and sewage treatment plants are not designed to process and remove chemicals found in PPCPs.

Other ways: Animal waste and carcasses can contain any chemicals/drugs given to them; leaching from landfills; use of sewage sludge as soil enrichment.



Turtle photo provided by Jeff Kuwabara

**Don't dump your unused drugs down the toilet or into the sink.**

Many drugstores and drug companies have a voluntary take back program. Check out your local County hazardous waste disposal department or the Hawai'i Department of Health.

<http://hawaii.gov/health/environmental/waste/p2wastemin/index.html>

The US Fish and Wildlife Service and American Pharmacists Association have partnered on a new outreach program:

<http://www.smarxtdisposal.net/>

# WHAT CAN I DO?

**Limit your use of personal products!**

Check out EPA's website:  
[www.epa.gov/ppcp/](http://www.epa.gov/ppcp/)

**Put on waterproof sunscreen at least 30 minutes prior to entering the water.**

Better yet: use a rashguard to protect your skin.

**Find out what products are considered safe.**

The Environmental Working Group has tested a variety of products:

[www.ewg.org](http://www.ewg.org)

[www.cosmeticdatabase.com](http://www.cosmeticdatabase.com)



Swimming

Bathing

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Landfills

Cosmetics

Over-the-counter  
therapeutic drugs

Car washing soap

Veterinary drugs

Antibiotic- and  
nutriceutical-laced feed

Fragrances

Prescription drugs

Garden chemicals

Insecticides

Vitamins and  
nutritional supplements

Illicit drug labs

Herbicides

Pesticides

Directly Into  
the Water

Sewers and  
Septic Systems

Gutters and  
Storm Drains

Streams

Directly Into  
the Air

Evaporation  
from Water

## Most PPCPs end up in our waters and our air.

Others are absorbed into the soil and taken up by plants.

After entering the water, some PPCPs are transformed into other substances via reactions to UV light. Other PPCPs, such as acetaminophen (a pain reliever) are altered, degraded and ultimately mineralized (conversion to carbon dioxide and water) through physical and chemical means. PPCPs that are used as a spray, such as perfumes, are vaporized into the air.

But other products can end up in the air and inhaled, such as dust from drug enhanced animal feed.

to treat, thus possibly rendering them ineffective.

as antibiotics can cause resistance in the bacteria that they are meant  
in reproduction) in mammals and fish. Exposure to other PPCPs such  
of these compounds can affect normal endocrine function (important  
and the environment isn't known, researchers have found that some  
While the exact overall effect that these compounds have on humans

There are thousands of chemical compounds  
in PPCPs; some can be harmful to human and  
animal health as well as the environment.

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# PPCPs



POLLUTANTS

# PPCPs

Pharmaceuticals and  
Personal Care Products

