

# SAFE DISPOSAL OF UNUSED MEDICATION



## HIGHLIGHTS

**PLEASE DO NOT FLUSH UNUSED MEDICATION DOWN THE TOILET.**

- ***Please follow the US Environmental Protection Agency's and Food and Drug Administration's guidelines***, which are provided below, for safe disposal of unused medication.
- Wastewater treatment plants are not designed to remove pharmaceutical compounds from wastewater.
- In our community, highly treated water from our Mason Farm Wastewater Treatment Plant is released to Morgan Creek on the southeast side of Chapel Hill. Morgan Creek is a tributary of Jordan Lake, a water source for several communities.
- The potential effect of compounds in medication and other personal care products on fish and other wildlife, and possibly on people, is an area of continuing scientific study.

- Unused medication should be properly disposed of to minimize the possibility that it could get into creeks, streams, lakes and rivers.

## Pharmaceutical and Personal Care Products or “PPCPs.”



Medication, cosmetics, fragrances, lotions, sunscreen, medical diagnostic agents, etc. are sometimes called Pharmaceuticals and Personal Care Products or “PPCPs.”

When PPCPs are flushed down a toilet or put in a drain, their chemical components may end up in a stream, creek, river or lake because wastewater treatment plants and septic systems are not designed to remove them.

PPCPs in water are an area of growing scientific interest because they are present in water in very small concentrations, but little is known about their effects on human health.

## Federal guidelines for prescription drug disposal

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The U.S. Environmental Protection Agency’s and Food and Drug Administration’s guidelines for prescription drug disposal are:

- Take unused, unneeded, or expired prescription drugs out of their original containers.
- Mix the prescription drugs with an undesirable substance, like used coffee grounds or kitty litter, and put them in impermeable, non-descript containers such as empty cans or sealable bags to further ensure that the drugs are not diverted or accidentally ingested by children or pets, etc.
- Throw these containers in the trash.
- Flush prescription drugs down the toilet only if the accompanying patient information specifically advises that it is safe to do so.
- *[If available]* Return unused, unneeded, or expired prescription drugs to pharmaceutical take-back programs that allow the public to bring unused drugs to a central location for safe disposal.

## Testing our lake water for pharmaceutical compounds

From 2002 to 2005, the U.S. Geological Survey (USGS) tested water from eight public water supplies in the Triangle region, including our Cane Creek Reservoir and University Lake, for 126 organic chemicals (pharmaceuticals, antibiotics, personal care product compounds, fire retardants, plasticizers and pesticides).



***University Lake (above) and our Cane Creek Reservoir are protected by stringent local development standards for their watersheds.***

Trace amounts (generally less than 0.5 parts per billion) of at least one chemical were detected at all sampling locations in the USGS study of Triangle streams and reservoirs. (One part per billion is like one penny in \$10 million.) While no samples exceeded Federal or State water quality standards, such standards exist for only a few of the chemicals in the study.

Concentrations were generally within the ranges observed in other USGS studies across the nation.

The compounds found in our lakes included the non-prescription pain killer acetaminophen, two fire retardants found shortly after a fire in the spring of 2004 in the University Lake watershed, an herbicide and an anti-microbial disinfectant.

Other than a fire retardant detected at 3.7 parts per billion, concentrations were less than one part per billion.

The USGS released a technical report on the study of Triangle Area water supplies.

A summary of the report can be viewed at <http://pubs.usgs.gov/sir/2007/5054> and the full report is available at <http://pubs.usgs.gov/sir/2007/5054/pdf/SIR2007-5054.pdf>.

If you do not have Internet access, please contact us at 968-4421 and we will be glad to mail you a paper copy of the report.

Based on the favorable results of the USGS study and our testing of water from our lakes, we believe it is not necessary to test our treated drinking water for pharmaceutical compounds or other PPCPs.

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