

PUBLIC WORKS— Did you know...?

JUNE 2009

CITY OF WOODLAND ENEWSLETTER



... that recent studies show that the pharmaceutical drugs we use are found in the rivers and streams? Researchers are now learning how to identify these drugs and to what degree they are affecting not only the fish but our national drinking water supplies.

"Public Works-Revitalize, Reinvest, Renew" Researchers have tested 139 streams and 80% of them had measureable concentrations of prescriptive and non-prescriptive drugs. The following list are some of the more commonly used drugs that have been identified in the streams; caffeine, nicotine, codeine, antibiotics, reproductive hormones, and steroids. So how did all these medications get into the streams? Well that's easy. For many years we were told to flush our medications down the toilet when they had expired or we no longer needed them. Also, our bodies do not use all the medications we consume and the extra dosages pass through our system as waste. All of this medication makes its way to the wastewater treatment plant and is then discharged into the rivers.

Can the wastewater treatment plants remove the medications? To a minor extent yes, however, the treatment plants were not designed for this purpose. Research is still ongoing to find ways of "retrofitting" wastewater treatment plants, so they will be able to remove the pharmaceuticals before they enter the rivers. Current technology shows promise in ozone gas, which in some cases has removed from 90% to 99% of the pharmaceuticals. Just before the water is released into the rivers, the ozone gas process would inject ozone into the water after all other treatment processes have been completed. However, to install these systems at a wastewater treatment plant would be very costly and expensive to operate.

So, what can we do? We can start by taking our old medications to the local landfill, with the rest of the hazardous wastes. Even the landfills have to dispose of them properly. If the landfills were to bury the pharmaceuticals, they would eventually make their way into the ground water and contaminate the underlying aquifers. Most landfills dispose of pharmaceuticals as part of their Hazardous Waste process. The Yolo County landfill accepts pharmaceuticals on the Household Hazardous Waste Drop off Days, which in 2009 are:

June 12 & 13 September 11 & 12 December 11 & 12

July 10 & 11 October 9 & 10 August 7 & 8 November 13 & 14

These pharmaceuticals are then sent to a "lined" landfill, which prevents any contamination with ground water. The pharmaceuticals are then properly buried or the pharmaceuticals will be taken to an incinerator, were they are burned and completely destroyed. In October 2007, Governor Schwarzenegger signed Senate Bill 966 that would begin the process of establishing a state-wide solution for the growing problem of improper disposal of unused or expired pharmaceutical drugs, by creating a program with the California Integrated Waste Management Board. This law requires the California Integrated Waste Management board to develop, in consultation with appropriate agencies, criteria and procedures for the collection and proper disposal of pharmaceutical wastes.