

Medications in the Water Supply: Symposium on Policy Options, Sept. 26

By Jim Kendrick

See presentation slides (www.amystephens4hd20.com/RxWater.pdf)

Amy Stephens, District 20 State Representative, moderated this symposium on medications in the water supply that was held at the Rampart Range Campus of Pikes Peak Community College on Sept. 26. It was attended by experts from the pharmaceutical community and representatives of local water and wastewater utilities.

Dick Brown, Executive Director of Colorado Recycles (www.colorado-recycles.org), opened the session. He said he and Pikes Peak Regional Water Authority Executive Director Gary Barber (www.pprwa.org) had received a lot of questions on how to address the discovery of tiny but measurable amounts of medications and mercury in estuaries and water supplies in the Colorado Springs region. They produced a white paper on proper disposal of drugs and medical devices and paraphernalia in April. Their goal was to help prevent environmental damage caused by flushing drugs down toilets or sinks. As the population grows and ages, more and more medications are being introduced into the wastewater system.

Stephens first introduced **Dr. H.C. Liang**, of Tetra Tech RTW in Denver, who gave a presentation on “Prescription Medications in the Watershed.” Liang noted the Associated Press article that was published on March 12 reporting “Low levels of a range of drugs including antibiotics, birth control and anti-convulsants, are present in the drinking water supplies of 24 major cities.” On Sept. 11 AP updated the report saying “trace amounts of pharmaceuticals in drinking water supplies has shown that more Americans are affected by the problem than previously thought—at least 46 million.”

Liang listed the following pharmaceuticals found in Colorado Springs drinking water:

- Valium (diazepam) – anxiety, insomnia
- Methadone – addiction, pain
- Meprobamate – anxiety
- Carbamazepine – epilepsy, bipolar disorder
- Testosterone – natural and synthetic hormone

There were 12 different pharmaceuticals found in Denver drinking water. The drugs of most concern are endocrine disrupting compounds (EDCs), which are hormonally active and can disrupt the endocrine system. Also of concern are pharmaceuticals and personal care products. Typically the drug concentrations are measured in parts per trillion – a half a drop dissolved in an Olympic-sized pool 2 meters by 25 meters by 50 meters.

Liang said that the perceived danger from these discoveries is often based on new abilities to detect their presence instead of on the actual relative concentrations. There currently are no answers to the questions about what is an acceptable concentration for contaminant or what is an acceptable risk? Also, there is currently no data suggesting that ingestion of water contaminated by trace amounts of these chemicals is unsafe for human health.

There was consensus from all of the other experts who also spoke at the symposium that the best way to dispose of unused or out of date pharmaceuticals is to seal them in plastic refrigerator zip-lock bags and put them in landfills. A properly designed and maintained landfill has physical barriers that prevent any contact by the disposed trash with a water supply.

For more information on how to educate yourself on this issue and/or participate in developing strategies to solve the problem see www.AmyStephens4HD20.com or contact her at (303)-866-2924 or Amy.Stephens@earthlink.net .