

I. Why is mercury discharge in our wastewater system important?

Mercury is considered to be a potentially-hazardous material that can be released through the sanitary sewer system. A toxic trace element found in our air, water and soil, mercury is monitored by Colorado Springs Utilities' Industrial Pretreatment Program (IPP), at the Las Vegas Wastewater Treatment Facility, to prevent discharge of the pollutant into our wastewater treatment system and the environment.

As early as the 1950s, it was known that mercury emissions into the environment could have serious side effects on human and animal health. As a pollutant in our water systems, mercury is converted into methyl mercury, a known toxin, by microorganisms, which can be ingested by fish and ultimately by humans who consume fish.

II. How does mercury enter our wastewater system?

Publicly-owned wastewater treatment facilities such as Colorado Springs Utilities, receives wastewater from residential and industrial sources. Mercury is considered a hazardous waste and as such the amounts of allowable mercury in our wastewater system is regulated by state and federal agencies. Mercury can be found in many common and not so common products aside from thermometers. Mercury enters our sanitary sewer system through a number of sources which include:

- Crematories
- Laboratories
- Medical waste incinerators
- Wood burning
- Power plants (coal)
- Dental amalgam
- Hospitals and universities
- Private wastewater treatment plants and sewage
- Household products

Once mercury is discharged into the system, the IPP at the Las Vegas Wastewater Treatment facility monitors the discharges. Pollution prevention within the sanitary sewer system has been a part of Springs Utilities' overall plan to maintain compliance with federal and state regulations for the past 24 years. Federal regulation, 40 CFR Section 403.5 and Colorado Discharge Permit System (CDPS), Permit Number CO0026735, both require Springs Utilities to prohibit the introduction of pollutants that could "pass-through" in the wastewater system. If pollutants, such as mercury, exceeds the allowable permit limits, Colorado Springs Utilities will be fined.

III. How does Springs Utilities monitor mercury?

The Environmental Protection Agency (EPA) is the regulating body for Springs Utilities' IPP. In 1999, the EPA approved a maximum limit 25 parts per trillion (or 25 PPT) or 0.01 pounds per day for mercury, (known as the Maximum Allowable Headworks Loading or MAHL) based on acceptable levels entering the influent of the wastewater treatment

plant, and limits on mercury in the Springs Utilities' Colorado Discharge Permit System. Operation of the Colorado Springs' wastewater treatment systems is governed by a permit issued by the Colorado Health Department. The permit limits the quantity of pollutants that the wastewater system can receive and remove. In 1999, chemists at Springs Utilities used a method that measured mercury at levels of 200 PPT.


Springs Utilities' Laboratory randomly tests wastewater entering the plant four times in one month to develop an average for mercury concentration discharged into Fountain Creek.

In 2001, an improved mercury testing method was published and lapproved by the EPA. The new testing method is 100 times more sensitive than what was used in 1999. Springs Utilities must comply with the new testing requirement which stipulates a limit of 11 PPT by April, 2006

IV. What are the next steps?

IPP will develop a policy and program to reduce mercury discharge in our wastewater system. Through surveys and public outreach, IPP will create a policy that:

- Increases the wastewater treatment plant influent and effluent monitoring process
- Uses more sensitive analytical methods to detect mercury at lower concentrations than in the past
- Develops a mercury control strategy within IPP.

Feb. 2, 2006 Springs Utilities will meet with the Colorado Springs Dental Society and  in an advisory group to review policies and procedures to control mercury.


Begin drafting a policies and procedures manual to control mercury.

July 2006 Implement the mercury control program.

V. Who do I contact for more information?

Contact Industrial Pretreatment Supervisor Bill Giannetto at 668-4497, or Gail Conners, Issues Manager, at 668-8012.

Glossary:

Amalgam:	Silver filling: 49 percent mercury; 35 percent silver; nine percent tin; 6 percent copper; one percent zinc.
Effluent:	Wastewater--treated or untreated--that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters.
Influent:	Water, wastewater, or other liquid flowing into a reservoir, basin, or treatment  plant.
MAHL:	Maximum Allowable Headworks Loading, which is the daily allowable amount of pollutants that can enter the wastewater treatment plant and not overload the system.
Mercury (Hg):	Heavy metal that can accumulate in the environment and is highly toxic if breathed or swallowed.
Pass-through:	Pass through is a term for pollutants entering a wastewater treatment facility which are not efficiently removed, which can be released through our effluent, thus violating the discharge permit limit.
PPT:	Parts per trillion – a unit of measurement used to explain the concentration of contaminants or pollutants, in water, land or air.

