



**City of Phoenix**  
**WATER SERVICES DEPARTMENT**

**Q&A**  
**THMS**  
(Trihalomethanes in Drinking Water)  
2-27-13

**1. What are Trihalomethanes (THMs)?**

THMs are formed when chlorine added to our tap water for disinfection purposes reacts with naturally occurring organic materials in our source waters.

**2. Is Phoenix complying with regulatory standards?**

Yes. The city of Phoenix has and is complying with all THM maximum contaminant level (MCL) requirements. Phoenix does not determine those standards, but is required to test for them and comply with them by the Environmental Protection Agency (EPA). Phoenix Water Services takes all regulatory standards very seriously because our job is to help protect the health of our customers.

**3. How is compliance determined?**

Compliance with the THM MCLs as determined by the EPA was based on a system wide running annual average, not individual results; however, the EPA issued new drinking water rules that changed the MCL for THMs to a locational running annual average for monitoring starting in the year 2012. Phoenix reports its compliance results from 22 locations to the EPA each quarter.

**4. What is Phoenix doing to minimize THMs?**

Treatment plant technology and water quality improvements totaling about \$300 million have resulted in locational running annual averages well below the MCL for THMs. Phoenix utilizes proactive disinfection management, conducts system-wide assessments of water flow, and conducts process control THM monitoring every two weeks. Phoenix also has identified 500 locations to proactively flush during warm weather to reduce THM formation.

**5. Do THM levels vary throughout the city?**

Yes. THM formation is related to many things that vary in the distribution system such as the temperature of the water, the length of time the water travels in the distribution lines, and how fast the water is used in different areas of the city. But the modifications noted above have resulted in compliance results well below the MCL for THMs.

**6. Should residents be concerned about THM levels?**

The health effects of THMs in humans are not fully known. There is evidence that ingesting large amounts of THMs may cause liver, kidney and intestinal cancer in experimental animals. There may be an increased risk of liver or kidney cancer in humans after 70 years of high THM exposure. Essentially, a resident would have to drink two liters of water that is impacted with high levels of THMs every day for 70 years to reach a level of concern. The potential health impact of high THM levels is based upon long term exposure. For more information about THMs and your water, review the most recent version of the [Phoenix Water Quality Report](#).