# A Water Quality Discussion with TMWA

## Discussion of Drinking Water Quality Issues in the Truckee Meadows - Constituents in Water Regulated and Not Regulated Under Federal Law – And More

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# For the basics – Go to EPA.gov

- EPA sets drinking water standards under the Safe Drinking Water Act (SDWA)
- They have a scientifically rigorous process for determining which chemicals and microorganisms should be regulated and at what levels to protect public health.
- About 90 different contaminants are currently regulated in DW.
- Go to EPA.gov
- Also go to NDEP.nv.gov

# For Nevada – Go to NDEP.gov

**EPA works with its regional offices, states, tribes and its many partners to protect public health through implementing the Safe Drinking Water Act.**

*Nevada Drinking Water Standards (External Links US EPA)*

- Disinfection Byproducts Rule
  - Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBP)
  - Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBP)
- Ground Water Rule
- Lead & Copper Rule
- Total Coliform Rule
- Maximum Contaminant Levels (MCL's)
- National Primary Drinking Water Standards
- Phase I, II and V Organic and Inorganic Rules
- Public Notification Rule
- Radon Rule (proposed)
- State Secondary Drinking Water Standards
- Monitoring Frequency

**Surface Water Treatment Rules** — External Links - US EPA

- Long Term 1 Enhanced Surface Water Treatment Rule
- Filter Backwash Recycling Rule (FBR)
- Interim Enhanced Surface Water Treatment Rule (IESWT)
- Surface Water Treatment Rule (SWT)
- Long Term 2 Enhanced Surface Water Treatment Rule (LT2 rule)

# WQ Department Basic Duty

- We work with NDEP and WCDHD regularly
- Make sure that everything that is required to be monitored and reported – Is.
- Our lab is certified by the State of Nevada
- We have a broad range of capabilities
- We work closely with Operations in managing the delivery of a high quality water
- We work with Customer Service in answering customer questions

# Constituents Not Regulated Under the Federal Safe Drinking Water Act (SDWA) – Including Pharmaceuticals and Personal Care Products (PPCP's)

- The SDWA requires USEPA to develop a Contaminant Candidate List (CCL) every five years to include unregulated contaminants known or suspected to occur in drinking water which may require regulation to protect public health
- CCL3 was the last list of contaminants sampled for and completed that were known or anticipated to occur in public water systems.
- EPA incorporated information from the public, expert input based on the best human health effects data available, and expert review in the CCL3 process.
- 7,500 potential chemical and microbial contaminants including 287 pharmaceutical compounds were considered. The list included pesticides, disinfection byproducts, chemicals used in commerce, waterborne pathogens, pharmaceuticals, and biological toxins.

# Constituents Not Regulated Under the Federal Safe Drinking Water Act (SDWA) - PPCP's

- 116 contaminants were selected based on more detailed evaluation of occurrence and health effects and expert judgment.
- No new regulatory action has been implemented to date

# Fourth Unregulated Contaminant Monitoring Rule

- The fourth Unregulated Contaminant Monitoring Rule (UCMR4) was proposed on December 11, 2015. The proposal outlines monitoring for 30 chemical contaminants between 2018 and 2020.
  - Ten Cyanotoxin Chemical Contaminants
  - Two Metals
  - Eight Pesticides and One Pesticide Manufacturing Product
  - Three Brominated Haloacetic Acid (HAA) Groups
  - Three Alcohols
  - Three Semi-volatile Chemicals
  - USEPA did not include any PPCP's on the latest CCL.
  - If USEPA determines that there is a public health risk, even if it is not on the CCL, it has the authority to regulate any contaminant.

# Constituents Not Regulated Under the Federal Safe Drinking Water Act (SDWA) - PPCP's - Summary

- Re: PPCP's - The concentrations found in the environment and reported have been in the parts per trillion range.
- One part per trillion is equivalent to one drop in a thousand Olympic size swimming pools.
- No current scientific study has found that these low levels pose any human health issue.
- There are studies underway to determine the impact on the environment and aquatic organisms.

# Constituents Not Regulated Under the Federal Safe Drinking Water Act (SDWA) - PPCP's - Summary

- For TMWA, the last testing was completed in May of 2008 on Truckee River water – the primary drinking water supply.
- Samples were sent to a nationally recognized laboratory for analysis by two methods established by the USGS to identify pharmaceuticals most commonly found in water.
- 31 different compounds were analyzed.
- Each was found to be non-detect.
- No additional sampling has been completed since.
- **New Sampling** by USGS is getting underway for the Chalk Bluff and Glendale Water Treatment Plants (WTP's).

# Constituents Not Regulated Under the Federal Safe Drinking Water Act (SDWA) - PPCP's - Summary

- From testimony to the United States Senate by a leading researcher on behalf of the AWWA "Based upon our four-year study of the health relevance of trace pharmaceuticals, using the highest concentrations found and the most conservative safety factors to protect susceptible populations such as infants and pregnant women, our report will demonstrate that one could safely consume more than 50,000 eight ounce glasses of this water per day without any health effects."

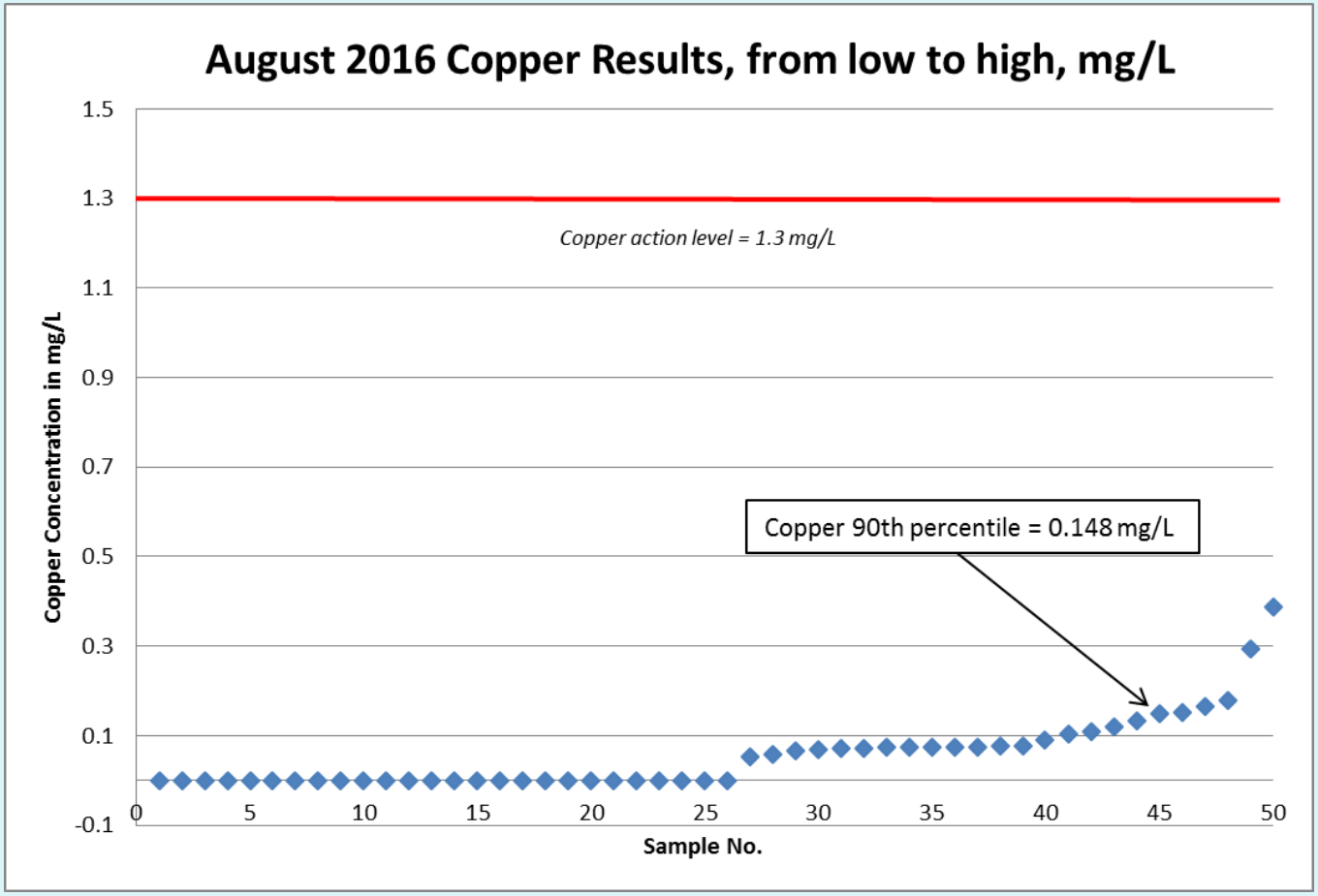
# Constituents Not Regulated Under the Federal Safe Drinking Water Act (SDWA) - PPCP's - Summary

- Water Utility professionals continue to call for additional research to ensure scientific data is available for water utilities, customers, and other concerned parties to make informed decisions about how to best deal with these and all chemicals in the future.
- The bottom line is we continue to believe our tap water is safe.

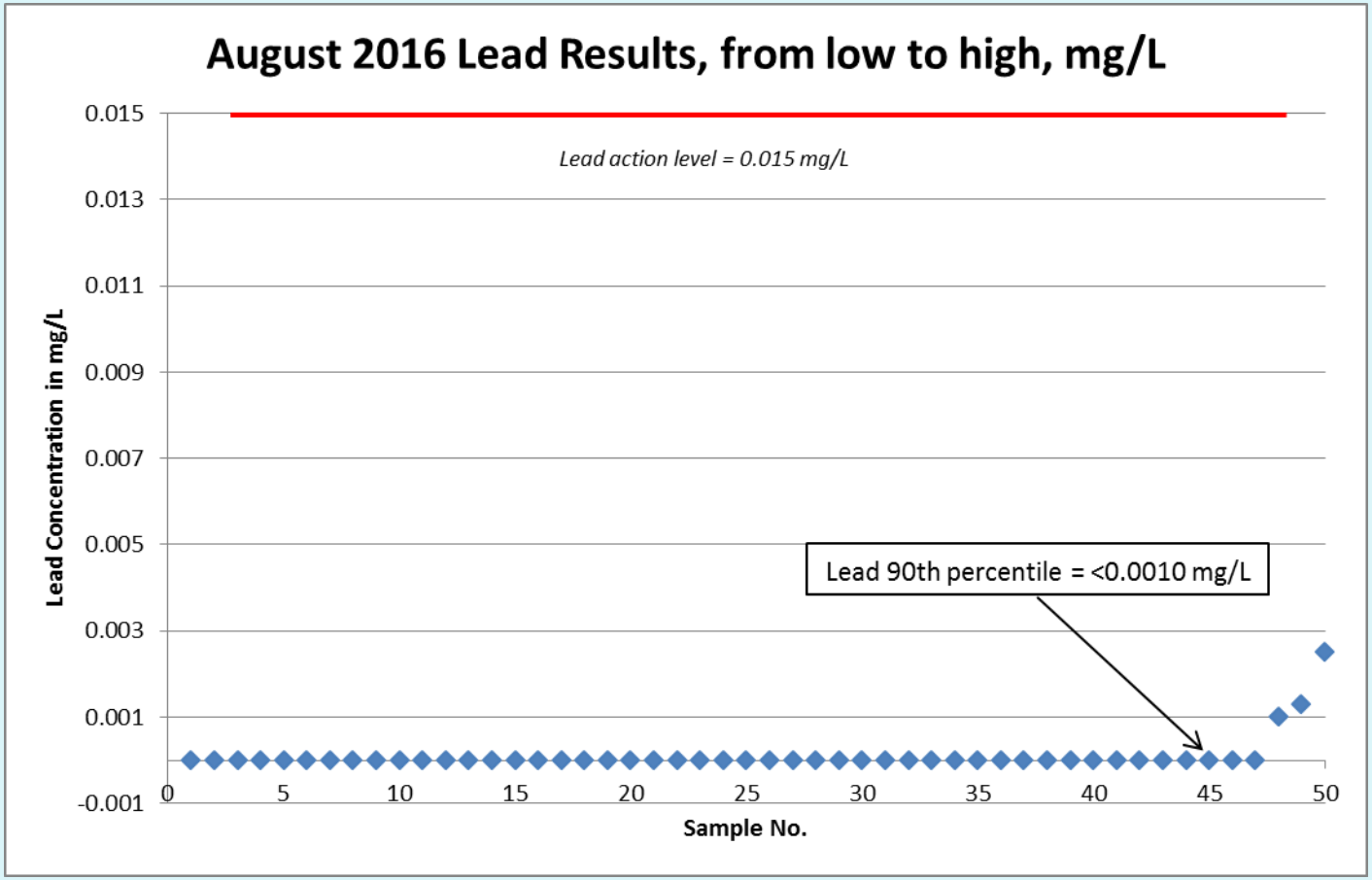
# Lead and Copper Rule

- EPA to provide **new recommendations on implementation** and published **a new memo regarding sampling procedures.**
- Lead and copper enter drinking water primarily through plumbing materials. Exposure to lead and copper may cause health problems ranging from stomach distress to brain damage.
- Results

# TMWA 2016 L&C Results - Copper



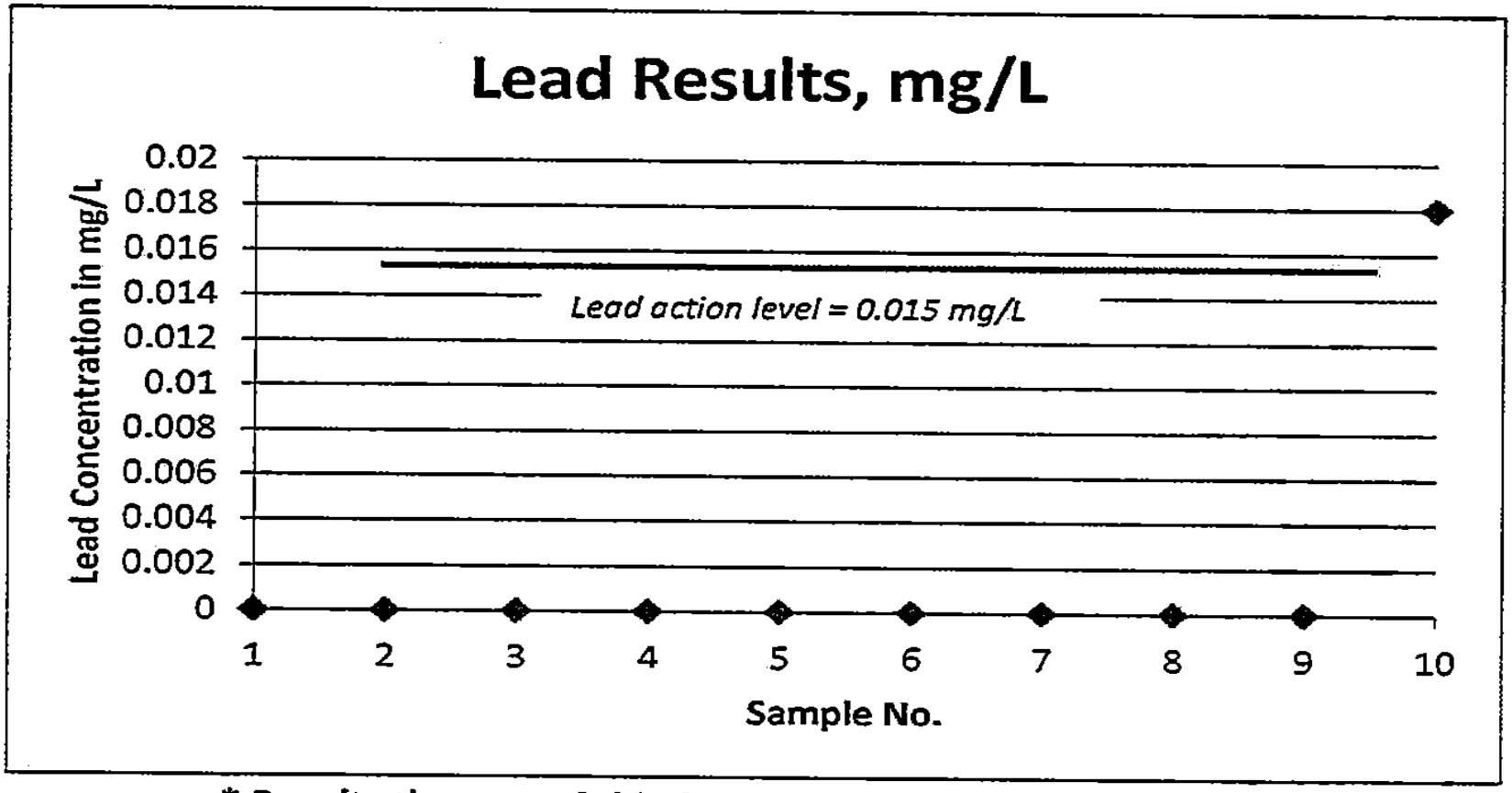
# TMWA 2016 L&C Results - Lead



# Regulatory Direction

- People want to know what level of lead is safe/acceptable?
- Current Standard is not an MCL – it is an action level. What does that mean?
- The MCL goal (MCLG) is zero (0) mg/L
- So what is acceptable?
- EPA has been and is working on this answer.

# For Example – High Value > AL




* Results that are <0.0010 reporting limit are reported as "0"

# What Do We Do – Contact Customer, Send Letter

June 29, 2016

Subject: Lead and Copper Sampling Results for 8490 Gipsy Way

Dear Participant,

Thank you for your participation in the residential Lead and Copper Sampling Program as required by the EPA. Our laboratory analysis indicates that the levels of lead and copper in our study are all below the action level established by the Safe Drinking Water Act.

The lead and copper action levels of 0.015 mg/L and 1.3 mg/L respectively are calculated as a $90^{th}$ percentile, and were created to provide maximum health protection by reducing exposure to lead and copper that could be leached from residential plumbing. For this June 2016 study the $90^{th}$ percentile for lead was <0.0010 mg/L and <0.0500 mg/L for copper.

Your individual results were <0.0010 mg/L for lead and <0.0500 mg/L for copper.

# Question

- Is this enough to protect public health?
- It is in compliance!

# EPA Latest on L&C

- Surveys indicated a national estimate of 6.1 million Lead Service Line (LSLs) (either full or partial) currently present in Community Water Systems (CWSs) of the United States.
- 15 to 22 million people served by CWSs are estimated to have either a full or partial LSL serving their home out of a total population served by CWSs of about 293 million (7%)
- Approximately 30% of the CWSs surveyed (national average) reported having some LSLs in their system.
- So – more to come

# From AWWA July 2016 Issue – Prior Director of Regulatory Affairs

- Key points
  - Public Confidence in government has sunk to very low levels
  - Whatever the latest crisis is seems to be the regulatory driver
  - USEPA's regulatory schedule is in continuous state of flux
  - Nothing on PPCP's
  - "We need to recapture the collaborative spirit"

# For TMWA - It's not just about PPCPs and lead – It's about everything in water: What we additionally think about and work on.

- Crypto/Giardia
- Taste and Odor (Geosmin, MIB)
- TOC (Total Organic Carbon)
- Increasing Levels of DBP's formed – Stage 2 DDBP Rule
- Algae – Microcystin – didn't expect and wasn't an issue 2015
- PCE/TCE – UV/AOP Pilot Study
- Nitrate – Spanish Springs – Following up on
- High Turbidity Events – exasperated with low river flow
- Fire/Ash Runoff – exasperated with low river flow
- Aquatic Invasive Species
- Hexavalent Chromium – California has a regulation
- Arsenic – have an arsenic compliance plan in place
- Uranium – Lightning W
- Boron, Antimony – in areas of WC
- Storm Drainage Impacts – Low river flow impacts
- Indirect Potable Reuse (IPR); Direct Potable Reuse (DPR)
- Recharge – ASR for WQ and WR criteria
- High pH in Fish Springs pipeline

# TMWA Board

- Questions?