



## Water Department

### **Water Quality Update November 2012**

This report provides an update on the Water Department's recent water quality program activities. The Water Department has implemented a number of water quality activities in the Thaynes neighborhood including enhanced water testing and technological improvements at the Spiro Water Treatment Plant. Staff also submitted a research grant application to the Water Research Foundation for a pilot program to test more aggressive pipe cleaning programs. Additional water quality improvements have been made system-wide including an expansion of the water portfolio with the completion of the Quinns Junction Water Treatment Plant and enhanced staffing deployment and specialization. Design work has begun on the Judge Tunnel pipeline that, when completed, will transport Judge Tunnel water to the Quinns Plant for treatment to reduce metals concentration and lower antimony levels.

#### Thaynes Water Quality Updates

- All water is below MCLs with the exception of antimony at the Judge Tunnel source. A compliance schedule has been established with the Department of Drinking Water requiring the concentrations be below the MCL by June 2014. Monthly notifications about antimony concentrations are provided in each water bill. Improvements are included in the FY 2013 and 2014 budget to address antimony and other elements. These improvements include the Judge Tunnel Pipeline, and capacity and process upgrades to Quinns Junction Water Treatment Plant to receive and treat Judge Tunnel water.
- Monthly testing at various tap locations has been implemented and the results are available [here](#). During the July 19, 2102 Council Work Session Water Department staff committed to reinstating quarterly sampling in the distribution system. During third quarter 2012 drinking water quality samples were collected within the distribution system at eight areas that represent water being supplied throughout the City. Fourth quarter results will be collected at the same locations in mid-November 2012 and posted when they are available. Results will be posted for four consecutive quarters to illustrate the changes in water quality based on seasonal source blends. Immediate notification will be provided to all water customers if MCLs are exceeded. Park City

does not collect water from taps as it does not accurately reflect water within the City maintained distribution system due to individual internal plumbing issues, water softening and/or treatment.

- A specific Water category has been added to the Notify [Me](#) menu. Residents who choose this option will receive notification when new water updates or other information is posted to the website. A link to the Notify Me signup for water-related issues has been added to the Water Department webpage. Reverse [911](#) signup capability was added to the site also.
- Additional programming has been implemented at all City water treatment plants (WTPs) and other sources to shut down the supplies if there are significant changes in water quality. The Spiro Water Treatment Plant is brought up to the highest technological capabilities. Alarms have been put in place to shut down the plant if online instruments within the treatment plant detect low chlorine residuals. The backwash system has been improved allowing for better operational control. Water treatment staff continues to assess, prioritize and initiate optimization recommendations including potential infrastructure upgrades to further address solids removal and handling deficiencies.
- From December 8, 2011 to current staff has discussed with Council the goal of investigating more aggressive pipe cleaning strategies. During the March 24, 2012 and July 19, 2012 Work Sessions staff discussed with Council opportunities to gain funding to study high velocity flushing, swabbing and ice pigging through with the Water Research Foundation (WaterRF). Council supported submittal of a proposal to conduct this research.
- Water Department staff has submitted the proposal to the WaterRF for a Tailored Collaboration (TC) Proposal entitled *Metals Accumulation and Release within the Distribution System: Evaluation of Mechanisms and Mitigation*. If the project is approved after the beginning of 2013, a stepwise approach will be taken to better understand the potential release mechanisms and operational and maintenance practices that can assist in determining the most proactive distribution system practices. If the project is approved, high velocity flushing, swabbing and pigging will be pilot tested for pipe cleaning comparison purposes within a small portion of the system. The preliminary, proposed WaterRF project schedule goal is to conduct pilot testing during fall 2013. High velocity flushing has been conducted throughout the distribution system this fall. This is double the effort than recent years, and impacts both staff resources and analytical

costs. A future project has been identified to add flushing “blow offs” in cul-de-sacs that may not have as successful flushing results.

#### System-wide Water Quality Improvements and Progress

- Hired a highly qualified Water Treatment Superintendent and Grade 3 Water Treatment Operator.
- Department restructure has been implemented to handle the growing complexity and need for specialty knowledge to manage and operate one of the most complicated water systems in the west. This new structure allows the water department to better focus on specific disciplines such as water quality/treatment, distribution, conservation, customer service, and engineering while encouraging the high performance organization model to facilitate resource sharing and cross training.
- Introduction of the QJWTP changes our water resource portfolio from a ground water and tunnel supply to a surface and ground water system. Weber River surface water, treated by QJWTP, requires more advanced treatment operations and techniques. Due to continual demand changes, consumers may notice aesthetic changes in water quality including flavor changes such as changes in chlorine concentrations.
- Judge Tunnel water will be treated at the QJWTP to reduce metals concentrations and to lower antimony levels consistently below the Environmental Protection Agency Maximum Contaminant Levels. Work has begun by design consultants on the pipeline design to accept Judge Tunnel water at QJWTP.
- Upgrades to the QJWTP will be made to accept Judge Tunnel water including increased capacity and solids handling. Consultants have also been selected for this project.
- A high level water quality advisor (PhD level) has been selected to assist with the treatment of Judge Tunnel water, distribution water quality improvements, and process improvements at Spiro WTP.
- Water Department staff is continually evaluating capital improvements to improve drinking and stream water quality.