Corrosion Control Study and Copper Levels

Introduction

In the Spring of 2020 HWC and the Division of Drinking water received complaints from a few customers in the Trappers Pointe Subdivision about the color of their water. After testing 22 homes, primarily in Trappers, but also throughout the system, 3 homes in Trappers showed elevated Copper levels.

Corrosive water can be a factor in high copper levels, so this triggered a requirement by the DDW to conduct a corrosion control study.

Definitions

- Corrosive water means the metals from pipes are entering the water due to the interaction between the water chemistry and the metals.
- A corrosion control study is an in-depth study of the chemistry of the water through many samples submitted to a laboratory with the results analyzed by a competent engineering firm. It also involves a study of ways to control the corrosive water to stop it from reacting with the metals in the plumbing of homes within the system.
- Alkalinity refers to the capacity of water to resist the process of becoming acidic.
- pH is a measure of how acidic or basic the water is. pH ranges from 0 to 14, with 7 being neutral. A pH of less than 7 indicates acidity and a pH of greater than 7 indicates a base.

Study

HWC contracted with the highly respected firm of Hansen, Allen and Luce (HAL) to conduct the corrosion control study. A variety of methods were analyzed during the study. The results are summarized below.

Results

- HWC has eight spring boxes with varying levels of alkalinity and pH. The first approach was to turn out the springs with the lowest alkalinity and pH during times of the year when the demand for water is lower.
- Sample results from the well show that the water is much less corrosive than that of the springs. HWC is constructing a booster station to pump well water to the storage tanks at the top of the system, allowing the spring water to mix with the well water, raising the alkalinity and pH of the spring water.
- HWC will continue to carefully monitor the situation and use additional methods if needed.

If you have questions, please contact HWC.