August 2018 DOH 331-612

Drinking Water State Revolving Fund

City of Olympia

McAllister Well Field Corrosion Control Facility Project

In 2014, the City of Olympia switched from an unfiltered surface water source to the McAllister Well Field, which produces over 10,000 gallons per minute and provides about 80 percent of the city's drinking water. To comply with the Lead and Copper Rule, the city was required to install corrosion control on the new wells. The well water has a rather low natural pH of 6.5, which can cause lead and copper to leach from metallic pipes in the distribution system.

Olympia already had aeration towers on two other permanent groundwater sources in the system. So, the city did a pilot study to determine whether packed tower aeration treatment would increase the pH of the McAllister well water to 7.5 or greater. The pilot study showed the towers would raise the pH to about 7.6.

Packed tower aeration facility for corrosion control.

Using a $4.1 million DWSRF construction loan to complete the project, Olympia constructed three towers; each filled with plastic spheres. Air blown into the towers raises the pH of the water by removing carbon dioxide. They constructed the facility to allow a fourth tower when needed to meet future demands. The new treatment plant went into service in April 2018 and pH measured throughout the distribution system is about 7.7. The city notified all customers about the change in pH.

Public health and environmental benefits

City of Olympia is able to provide safe and reliable drinking water with a pH that is not corrosive, minimizing the potential of lead or copper to leach into the drinking water.