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HYDRO-GUARD[®] IMPROVES WATER QUALITY AND SAVES MAN-HOURS FOR CENTRAL TEXAS VACATION COMMUNITY

Water Quality Case Study

PROJECT:

Horseshoe Bay Water Distribution System Project

LOCATION:

Horseshoe Bay, TX

PRODUCTS:

Mueller / Hydro-Guard 100 Series Warm¹ Signature Automatic Flushing Unit and Safety-Guard Sampling Station from Hydro-Guard

THE VISION

Steve Hawley, Plant Operations Supervisor for the City of Horseshoe Bay, came to the HBWDS from Eugene, Oregon. Eugene's WDS features Safety-Guard Sampling Stations from Mueller / Hydro-Guard. The sampling stations are located at various points throughout the town and the water system, allowing field personnel to sample water quickly, easily and accurately.

Hawley subsequently made a move to Texas to work with the HBWDS, the water utility for the progressive and growing City of Horseshoe Bay. After becoming familiar with the WDS's characteristics and operations, Steve and the Utility Department saw a need for the same levels of control of sample points there as exist in Eugene, OR. The Utility was also interested in improving water quality by using Hydro-Guard 100 Series Warm¹ Automatic Flushing Units. Taking their study, plans and vision to the City of Horseshoe Bay government, officials gave a green light to the HBWDS system update with automated flushing equipment.

Their challenges are now greatly reduced at HBWDS— made possible by one utility's forward thinking plus proven water quality equipment and technology from Mueller.

SCOPE

The Central Texas resort city of Horseshoe Bay includes a growing number of lakeside properties for vacations and weekend getaways. It borders the south shore of ten-square-mile Lake Lyndon B. Johnson (Lake LBJ), formed by the Lower Colorado River Authority (LCRA). The area features a highly developed, built-up shoreline, boat houses and properties with a seasonal population.



PROBLEM

The Horseshoe Bay Water Distribution System (HBWDS) water quality testing includes eight parameters, from temperature and pH to coliform bacteria. Testing, flushing and sampling ensure water quality and provide critical data to the LCRA.

The user population of the Horseshoe Bay Water Distribution System does not reach its peak until summer and the resultant levels of peak and low usage vary widely. This fluctuation impacts levels of disinfectant residual and, consequently, water quality — especially at the end of the line. Maintaining proper disinfectant residual is not traditionally problematic for closer lines of the system. Also, manual flushing of the utility's hydrants to maintain water quality has resulted in excessive time and labor as workers must access the outlying areas.

SOLUTION

The City of Horseshoe Bay Utilities Department's solution to the HBWDS's challenges was a simple decision. According to Steve Hawley, Plant Operations, Supervisor, "We found that we had some water quality issues at the very end of our lines, and wanted to make this automated flushing project part of a much more comprehensive program to maintain water quality in our system."

HBWDS subsequently installed:

- Ten, 2-inch Mueller Hydro-Guard 100 Series Warm¹ Automatic Flushing Units, primarily at the end points, plus
- Seven, 1-inch Safety-Guard Sampling Stations

Hawley is already seeing substantial labor and time savings in the system. Each of his 100 Series Warm¹ Automatic Flushing Units is metered: readings are accurate and water age issues are now more manageable. Hawley remarked, “We’ve freed up man-hours and seen improvement in trouble areas. In some areas, a single 100 Series Warm Automatic Flushing System¹ is saving us four to five hours of labor every week.”

Once it is known how much water must be flushed to maintain water quality levels, they can move to more frequent, lower-volume flushes, no matter what water usage in the city. Data showing savings in time and water quantity will soon exist which will aid in future expansion and updating of the system.

REFERENCES

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3. Jordan, S., Mayor, City of Horseshoe Bay, “State of the City,” Oct. 2014.
4. Official Website of the City of Horseshoe Bay, Texas, 2014.
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6. “Fishing Lake LBJ,” Texas Parks & Wildlife (TPWD), 2014.
7. Colorado River Watch Network Water Quality Monitoring Manual, 2012.
8. Video: “Hydro-Guard[®] Automatic & Programmable Flushing Systems Overview,” March 2014.
9. Hydro-Guard[®] 100 Series¹ Automatic Flushing System, Mueller Company, 2012.
10. Safety-Guard[®] Sampling Station from Hydro-Guard[®] by Mueller Co., 2014.

¹ The Hydro-Guard[®] 100 Series Warm Automatic Flushing System is was previously referred to as the Hydro-Guard HG-1 Automatic Flushing System.

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