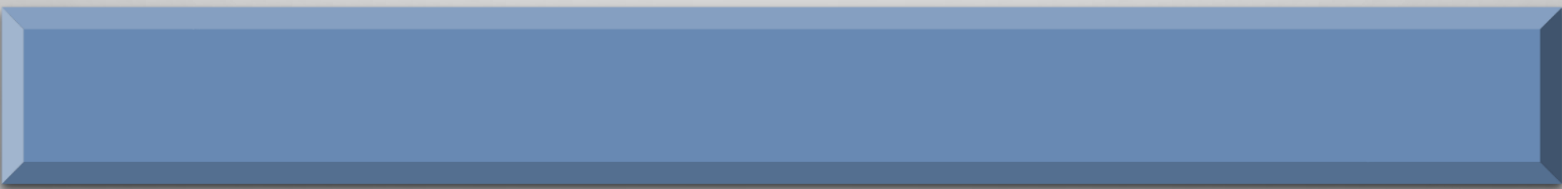
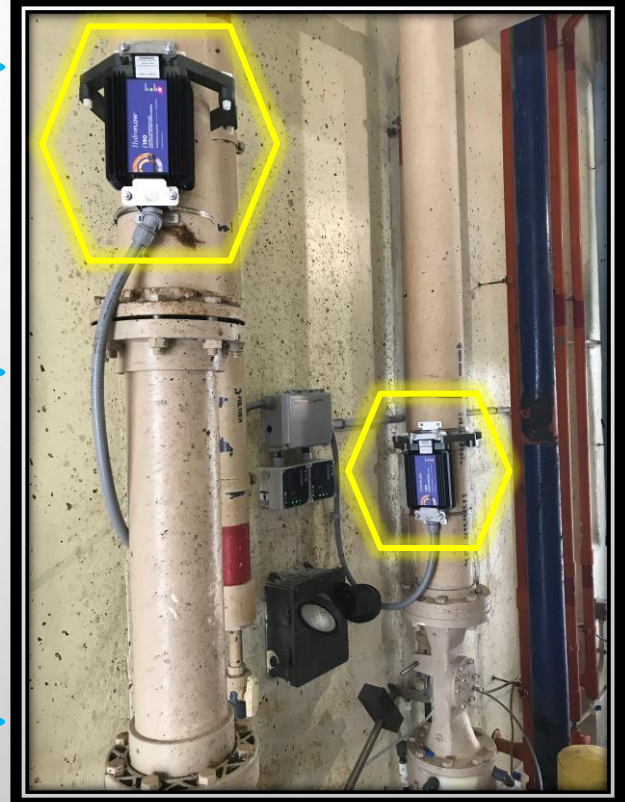
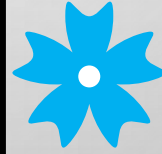
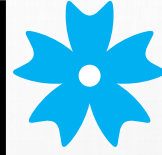


HydroFLOW Case Study - Struvite Reduction

Water Resource Recovery Facility - Minnesota, U.S.A.

January 2022



Background

The Customer

The Water Resource Recovery Facility provides advanced wastewater treatment. The effort results in low phosphorous discharge into a river. The facility produces water for reuse, which is used to irrigate parks and green spaces and to help clean roads during street-sweeping. In addition, a local power plant uses the reclaimed water in their cooling system.



Belt Filter Press (BFP)

In an anaerobic wastewater treatment plant, a BFP is used to dewater digested sludge using a porous belt filter. The digested sludge is spread out across the belt and pressed through rollers to force the water through the belt filter. [Struvite](#) (magnesium ammonium phosphate) buildup is a common problem; as Struvite accumulates on the belt filter, it begins to block the water flow which reduces the dewatering effectiveness.

Objective

The customer has two BFPs that suffer from struvite buildup. After seeing success at other wastewater treatment plants across the U.S., They asked *HydroFLOW* Midwest to provide a solution that utilizes Hydropath technology. Units were installed on the incoming sludge feed lines to each BFP, as shown in slide #1.

Common Struvite Issues:

- Accumulation on the belt filter surfaces, decreasing belt life.
- Buildup on drums and rollers, decreasing production flow.
- Scaling inside drain lines, leading to blockages.
- Increased maintenance costs due to frequent physical and chemical cleaning.

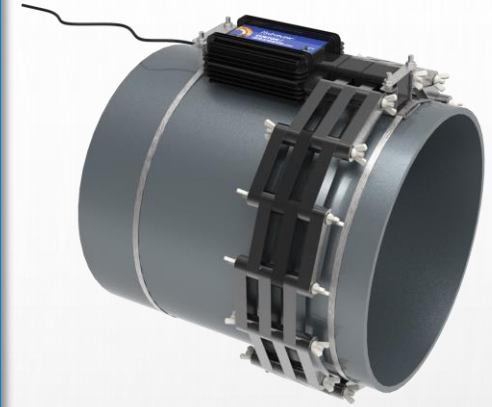


Results

- Reduced Struvite buildup.
- Softening of existing Struvite scale.
- Maintenance costs were reduced due to the increased time between cleanings.
- Reduced equipment wear-and-tear which led to an extended life cycle.

Public Utilities Superintendent Quote:

“Operators noticed BFP operations run more consistently after installing *HydroFLOW*, requiring less maintenance and adjustments.”



For additional information, please contact 