

AQUEOUS VETS® PROVIDES THE BEST VALUE

City of Stuart Installs 4 MGD Ion Exchange System to Address PFAS Contamination

BACKGROUND

In May 2016, the EPA issued a health advisory lowering the admissible levels of PFAS (PFOA/PFOS) in drinking water to 70 parts per trillion (ppt). The City of Stuart, Florida had their wells tested and several were found with levels as high as 180-300 ppt. This was primarily attributed to fire-suppressant foam used during firefighter training up until 2002.

Pilot testing was performed using both granular activated carbon (GAC) and ion exchange (IX), to remove PFAS to below non-detect levels from all wells. Due to total organic carbon (TOC) levels in the water above 8-12 ppm, the IX resin was determined to provide lower potential costs vs. GAC. Based on this pilot, Kimley Horn designed a treatment system using IX resin.



PROJECT DETAILS

In August of 2018, the City solicited proposals to expand their treatment process by adding two new pumps, prefiltration, and two IX resin systems capable of 4 MGD. It was determined that Aqueous Vets® (AV®) provided the best value by offering the IX systems, and the installation of the systems.

PROJECT LOCATION
Stuart, FL

PROJECT TIMEFRAME
Oct. 2018 – May 2019

AV® SCOPE OF WORK
\$600,000

END USER
City of Stuart, Florida

PROJECT TYPE
Design, Manufacture,
Install

PROJECT PHASE
Complete

GENERAL CONTRACTOR
Lawrence Lee
Construction, Inc.

DESIGN ENGINEER
Kimley Horn

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AqueoUSVETS®

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KEY SYSTEM DESIGN & OPERATIONAL PARAMETERS	VALUE
Number of Systems/Vessels per System	2/2
Operating Configuration	Parallel/Lead-Lag
Media Capacity/Volume per Vessel	565 ft ³
Media Type	Ion Exchange Resin
Design Flow Rates WTP/per System	4 MGD/1,400 gpm
Hydraulic Loading	12.4 gpm/ft ²
Empty Bed Contact Time per Vessel	3 Minutes
Underdrain	Septa/External Ring Header
Overall System Height to Top of Pipe	15'-10"

