

## QUICK FACTS

- ◆ **INDUSTRY:** Municipal
- ◆ **PROCESS TYPE:** Activated Sludge
- ◆ **TECHNOLOGY:** Ideal IFAS™
- ◆ **DESIGN:** 140 MLD; 50,320 kg/day BOD;  
9,380 kg/day TN
- ◆ **STARTUP DATE:** September 2019

## BACKGROUND

Sharjah, located just north of Dubai on the Persian Gulf, is United Arab Emirates' (UAE) third largest city. As Sharjah's population flourished and environmental regulations tightened, so did the stress on their wastewater treatment facilities. With limited space for physical expansion, the treatment plants needed a solution to treat the higher flows and meet the new Total Nitrogen (TN) effluent limits.

Sharjah retained the services of a global engineering firm to evaluate their treatment requirements and recommend a workable solution; ideally a process that would fit seamlessly into existing tanks.

## SOLUTION

The engineer recommended the Integrated Fixed Film Activated Sludge (IFAS) process from World Water Works. IFAS is a single tank reactor combining the conventional activated sludge process (CAS) and the Moving Bed Biofilm Reactor (MBBR) process.

Bio-media is added to portions of the existing aeration zone providing the ideal propagating surface for bacteria, especially slower growing bacteria such as nitrifiers. As other bacteria, also essential to wastewater treatment, move through the CAS process, the nitrifiers remain affixed to the media consistently available to aid in the reduction of ammonia.

By incorporating the IFAS process into existing reactors, Sharjah was able to treat the increase in influent flow and meet TN effluent limits without having to build any new tanks. With over 50 MBBR / IFAS installations world-wide, World Water Works has the experience and expertise required by Sharjah and their engineer to provide an effective and sustainable solution.

