

INTRODUCTION

An in-flight catering and commissary terminal (**SATS**) was in need for a more advanced wastewater treatment system, as their current wastewater treatment solution was inefficient and did not meet discharge requirements. CWT and its partners developed a solution which allowed ATS to not only treat their water to reduce discharge costs, but also allowed water re-use as well.



CHALLENGE



The previous system consisted of a traditional DAF System, followed by traditional activated sludge treatment. The DAF System did not exhibit high enough removal efficiencies, which increased the overall cost for discharge. A new floatation system was required in order to meet the treatment demand.

In addition to primary treatment, client required an expanded process which allowed the re-use of water within the facility. CWT needed to

install a new series of products which delivered full re-use water in the old DAF building.

SOLUTION

- Replaced Existing DAF with **GEM System**
- Installed a **Compact MBR System** for BOD Removal
- A **Skid Mounted RO Unit** was Implemented for TDS Reduction
- The GEM System **Doubled Flow Capacity**
- Expanded from Primary Treatment to Tertiary Treatment within the **Same Footprint**
- Re-used Water **Reduced \$300,000** a Year in Cooling Water Costs



BEFORE TREATMENT

- *BOD=1500~3000mg/l
- *COD=1800~4000mg/l
- *Oil & Grease= 300~1500mg/l
- *TSS = 1000~2500mg/l
- *TDS = 1000mg/l
- *pH = 4~7 (equalization= 6~7)

AFTER GEM+MBR

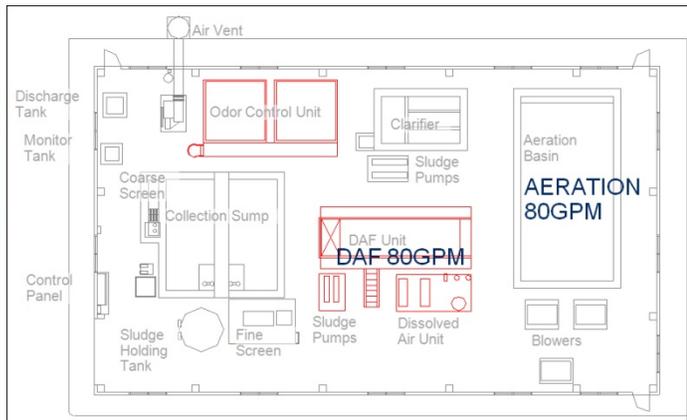
- BOD < 4 mg/l
- TSS < 1 mg/l
- COD < 65 mg/l
- TDS < 1200 ppm

AFTER RO TREATMENT

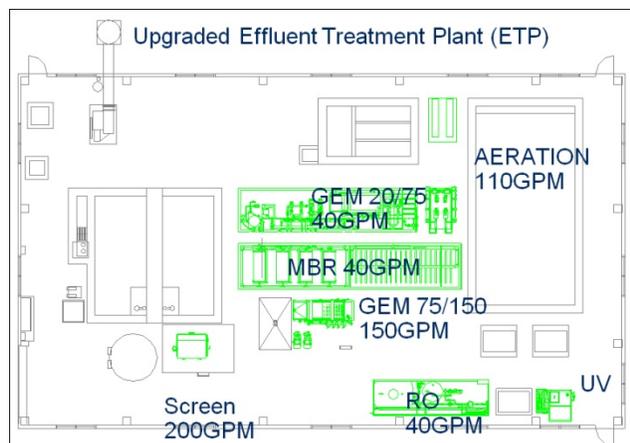
- BOD < 1 mg/l
- TSS <= 0 mg/l
- TDS < 82 ppm



CWT's Full Wastewater Treatment Recycle Solution was able to help **SATS** meet their wastewater recycle needs. CWT was able to reduce the required footprint, provide easier operation, meet discharge requirements and reduce discharge costs, all while expanding a primary treatment system to a full recycle solution.



LAYOUT BEFORE UPGRADE



LAYOUT AFTER UPGRADE