

WavTex™ Installation

Phantom Ranch, Grand Canyon National Park

Entex Technologies recently completed an exciting installation of its WavTex Integrated Fixed-Film Activated Sludge (IFAS) system at the Phantom Ranch Wastewater Reclamation Facility (WRF), located at the base of the Grand Canyon. The Phantom Ranch is a popular destination for hikers and mule riders, attracting thousands of visitors each year.

The WRF, originally built in 1980, has struggled to keep up with increased flowrates as the destination has gained in popularity over the years. Entex's WavTex IFAS system was chosen due to its simplicity, efficiency, and durability. The WavTex system provides the necessary microbiology for removing BOD and ammonia at the increased flowrate while eliminating the need for new tankage and the temporary composting toilets at the facility. The WavTex system is designed to require minimal maintenance, making it ideal for the remote location at the base of the Grand Canyon, accessible only by helicopter or up to an 11-mile hike. Its fixed biomass provides process stability against seasonal fluctuations in flowrate, ensuring the Phantom Ranch facility will have sufficient treatment capacity year-round for the next 20+ years. Entex's FlowTex tertiary Drum Filter was also supplied as a part of this project upgrade for TSS removal.

The installation at Phantom Ranch WWTP is an exciting milestone for Entex Technologies and highlights their commitment to providing top-notch water treatment solutions even in the most remote and rugged of locations. The new WavTex system will play a vital role in ensuring that this iconic destination remains a clean and healthy environment for visitors and wildlife alike.

Application

Overwhelmed WRF due to increases in flowrate (AAF 5,400 gpd)

Entex Solution

Install two WavTex™ modules in the existing aerobic tank

Effluent Target

- $\text{NH}_3\text{-N} < 2 \text{ mg/L}$
- $\text{BOD}_5 < 5 \text{ mg/L}$



View of Phantom Ranch Facility from the River Trail



WavTex Modules Upon Installation in Aerated Tank (note the media sheets are buoyant and rise with the water level)