

AeroCell®

Open Cell Foam Biofilter

Quick Facts

Application:
Commercial

Product:
AeroCell

Engineer/Designer:
CD&E

Installer:
Palmerosa Construction

Location:
Williams,
Coconino County, AZ

Grand Canyon Getaway

Situation

Jeff Fox was building a small community of vacation cabins with future expansion needs not far from the Grand Canyon in Coconino County Arizona. Inn History Grand Canyon provides top tier themed vacation rentals influenced by the surrounding area's history. They help guests visit the heart of the Grand Canyon by immersing them in the past. The construction needed an efficient way to treat the effluent flowing from each cabin and ultimately decided that Anua's systems would be the perfect solution.

Jeff wanted to maximize the number of cabins he could build on the property while also allowing ample space between the cabins so visitors could maintain privacy and personal space. Jeff also wanted to limit the number of trees he needed to remove to reduce his total environmental impact to complete the project. The goal was to efficiently use every square foot in order to maximize green space blended with sustainable housing concepts.



Inn History Grand Canyon



Features

Flexible configurations

Multiple sizes available

Lightweight pods

Synthetic media

Unique 80%/20% effluent splitting

No gravity recirculation valve needed

Solution

The treatment system needed to handle the effluent produced by the cabins and fit into a small area. The project owner contacted engineering firm CD&E to help him develop a plan to accomplish his goals. The engineers suggested AeroCell with shallow drip irrigation dispersal as the ideal solution.

The engineers had to first develop a site drainage plan that would not encroach on the onsite treatment system or the open spaces. Once the plan was finalized, they managed to fit in a small drip field due to the treatment capabilities of AeroCell.

AeroCell is based on simple, passive biofiltration principles. The treatment occurs by a combination of unique physical, chemical, and biological interactions within the open cell foam media bed. Timed dosing and recirculation attenuates the flow forward. Furthermore, the media properties allow for high level treatment with no by-pass, which protects water quality.



The solution consists of a local precast concrete primary tank with commercial effluent filter, local precast concrete dosing tank with duplex recirculation pumps and gravity recirculation device, an AeroCell IM-1060 treatment pod, drip dosing tank with manual headworks, and a shallow drip irrigation field.

Results

Mike Palmer of Palmeros Construction and his crew easily installed the Phase 1 system with just a few tips from the Anua staff overseeing the installation. A larger AeroCell system is already designed for Phase II.



Ian Braun, P.E., Project Manager for CD&E provided this feedback on the project: *"My [Inn History] install with Anua products was probably the most painless experience of my career."*



AeroCell

