

ALTAPAC™ ULTRAFILTRATION MEETS FILTRATE WATER GOALS

Upgrade of a Non-Compliant Cartridge Filter



Overview

A remote youth camp elected to install a WesTech AltaPac™ system to replace an existing cartridge filter that produced non-compliant filtrate. The AltaPac system was selected to meet the plant's filtrate water-quality requirements, and to consistently deliver high-quality drinking water with >4.0 log reduction in bacterial contaminants while minimizing wastewater discharge volume. WesTech worked with the camp to seamlessly integrate an [AltaPac ultrafiltration \(UF\) system](#) with the existing on-site equipment in the limited space available.

The AltaPac system included one UF module that is used to treat 10 gpm (2.4 m³/h) coming from a spring-water source. To fit in the site's limited space, WesTech designed the system with an integral clean-in-place (CIP) system, a skid mounted control panel, and a low-fouling polyvinylidene difluoride (PVDF) outside-in membrane module with a 0.01 µm pore size. The skid mounted backwash pump provided with the system doubles as a distribution pump, transferring effluent water 60 feet (18 meters) up the mountain to a distribution tank. To incorporate the camp's existing equipment, the skid mounted control panel was sized for additional I/O from the camp's feed and filtrate tanks, as well as from the residual chlorine dosing system. The system uses a 240-volt, single-phase power supply and an existing telephone line to provide a remote connection for ongoing site support and monitoring. It provides seasonal drinking, laundry, cooking, and lawn maintenance water for the summer camp and shuts down every winter along with the camp. ■

RESULTS

>95%
Water Recovery

>4 log Removal
Cryptosporidium and Giardia

<0.1 NTU
Filtrate

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Project Summary

Remote Youth Camp

Location:
Western United States

Application:
Potable Water

Process:
Ultrafiltration
TSS Reduction
Biological Contaminants Removal

Capacity:
10 gpm (2.4 m³/h)

Design Flux (norm):
60.4 gfd (102.7 LMH)

Highlights

- The solution provides seasonal water for a remote camp.
- Fully automated controls minimize operations and maintenance needs.
- Electrical controls accommodate peripheral equipment present on site.
- The solution provides remote connection for ongoing site support and monitoring.