

# Licensed Wireless Ethernet Backhaul for government utility agency



Think Smart • Get Connected

“We chose SAF Tehnika  
for the quality and  
reliability. ”

Mr. Joe Wargo  
President  
Alpha Omega Wireless Inc.

## SAF CFIP systems provide the following services for “Contra Costa Water District”:

- ||| Ethernet for data and video surveillance
- ||| T1 for voice

## Customer preferred SAF product advantages:

- ||| Quality and reliability
- ||| Withstands harsh conditions
- ||| Flexible, easy to install and maintain



**Customer:** Alpha Omega Wireless Inc.  
**End-user:** Contra Costa Water District, [www.ccwater.com](http://www.ccwater.com)  
**Location:** Contra Costa Water District , CA (USA)  
**Industry:** Utilities, Government Agency  
**Challenge:** To provide connectivity between head office and facilities (Data, Voice & Video)

**Solution:** Fast Ethernet full-outdoor SAF CFIP microwave radio systems

## About Contra Costa Water District

The Contra Costa Water District (CCWD) serves a population of about 550,000 people in central and east Contra Costa County supplying clean water for several large Counties. About 265,000 people receive treated water directly from CCWD, and the other 285,000 receive water the Water District delivers to six local agencies.

## Challenge

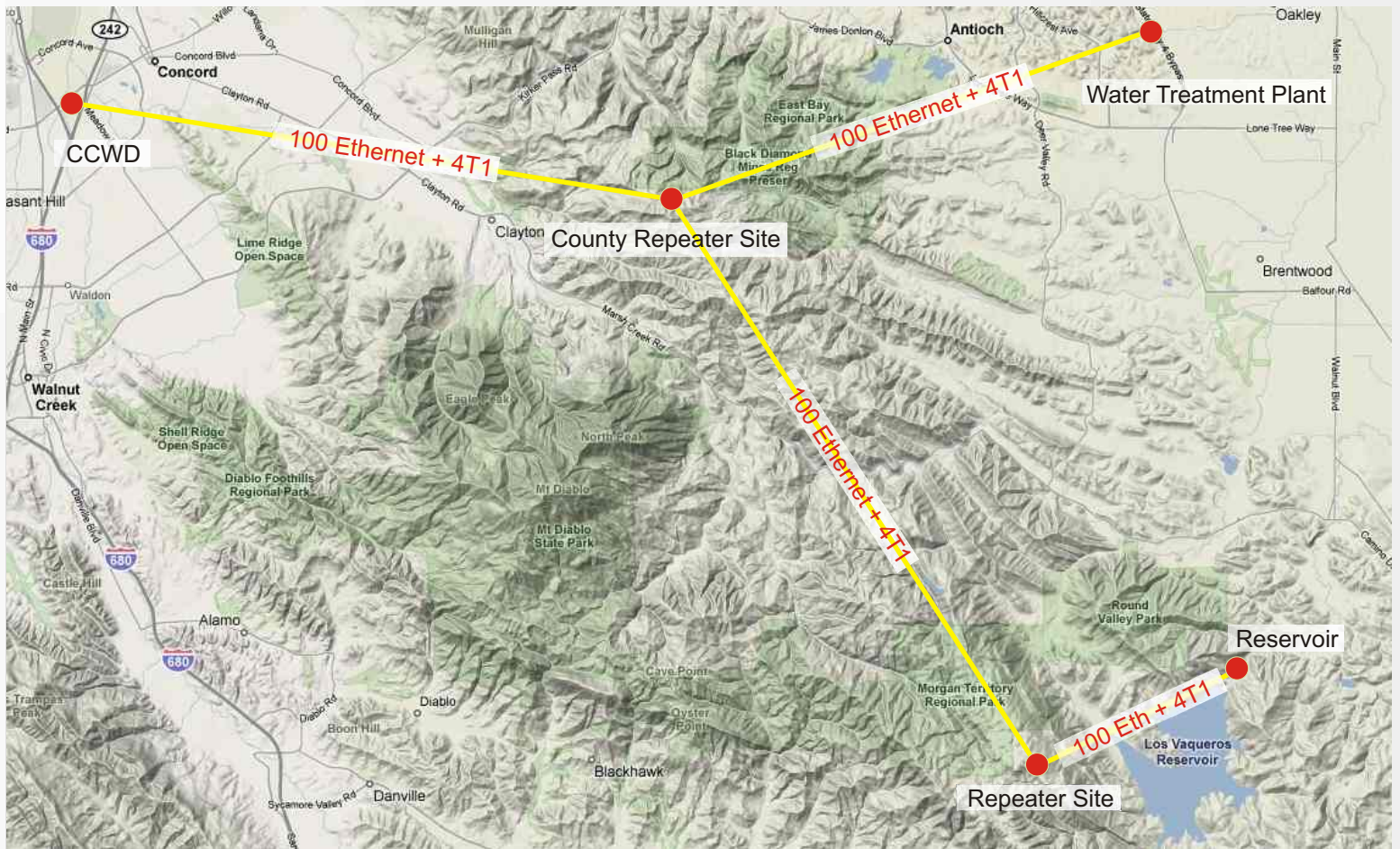
The Water District that covers a large geographic area, traversing several counties, needed to build out their data/voice network to connect all their facilities. In conjunction of having both data and voice network connectivity, the Water District needed also to deploy an extensive video surveillance network for security and access control.

Unfortunately, the Water District cannot get sufficient Telco presence at the majority of their locations due to the remoteness. Many of their locations would only be accessible with a lowbandwidth DSL or T1 connection. This bandwidth would not be enough to run neither their data applications nor backhaul their video surveillance system. Leasing fiber connections to their locations that can have a Telco presence would be extremely costly due to the mileage. Another major difficulty is the geographic coverage area which is divided by a large mountain range.

## Solution

Alpha Omega Wireless (“AO Wireless”) installed SAF CFIP (100Mbps Full Duplex - licensed) Point-to-Point wireless Ethernet backhauls from the District’s main campus to several of their other remote facilities. From these main locations the District can now branch off to other remote sites to achieve their connectivity needs. The District is utilizing VLAN trunks to dedicate bandwidth for their different network segments and to setup QoS for their Voice & Video traffic. This system was designed to provide 99.999% reliability and uptime. The ROI of this system is less than 1 year compared to the leased line alternative.

## Network topology - Contra Costa Water District, CA (USA)



### “Contra Costa Water District” CFIP network details

- ||| Equipment used: 8 x SAF CFIP-FODU terminals
- ||| Link distance: up to 11 miles (17km)
- ||| Capacity: 100Mbps + 4T1
- ||| Frequency: 18GHz



||| CFIP Full outdoor site