

AFCEC works throughout COVID-19 crisis at former Mather AFB

By Dante Gulle

AFCEC/CIBW Contract Support

SACRAMENTO, Calif. – Working throughout the COVID-19 crisis while practicing safety protocols, the Air Force Civil Engineer Center (AFCEC) and its contractors recently completed installation of a new submersible pump at an off-base private water well near the former Mather Air Force Base in Sacramento, California.

The well with the new pump ensures a local church has an alternate long-term source for drinking water while AFCEC addresses effects from detected perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) as quickly as possible with coordination from the church as well as the US Environmental Protection Agency (EPA) and the State of California's regulators.

PFOS and PFOA are components of Aqueous Film Forming Foam (AFFF) the Air Force began using in the 1970s as a firefighting agent to extinguish petroleum fires. In recent years, the EPA established health advisory levels in drinking water for these chemicals.

This spring when COVID-19 shut down businesses and forced stay-at-home orders in the state, sampling results at the church's wells indicated one drinking water well with PFOS/PFOA concentrations above the EPA lifetime Health Advisory level. The other well, not used for drinking water, was deeper and tested non-detected for PFOS/PFOA.

AFCEC, working with church leaders and environmental regulators, decided to convert the non-detect well into the church's drinking water well.

"Complying with advisory levels for PFOS and PFOA in drinking water is a high priority for the Air Force, which is why we provided bottled drinking water to church members within 24 hours after confirming lab results," said Douglas Self, AFCEC's Mather base environmental coordinator. "We continue to stay in close contact with the church leaders and regulators about PFOS and PFOA impacts at Mather."

Working with environmental contractors and regulators, AFCEC determined the best long-term solution was to use the non-impacted well as the primary drinking water source for the church's needs. After a video inspection survey of the well and church agreement, the Air Force began necessary modifications such as adding a new submersible pump to increase the production capacity. Before the COVID-19 crisis, the church has served up to 2,000 people during weekly services.

The well affected by PFOS/PFOA is now only used for the church's fire suppression system and is locked out from the potable water plumbing system.

AFCEC contractors conducted flow testing of the new well pump to confirm the unit can operate as intended. Samples verified state drinking water quality parameters are met and PFOS and PFOA concentrations continue to be non-detect.

"Despite the emergence of the COVID-19 crisis earlier this year, we have been able to continue sampling and performing fairly major mechanical work while staying safe to ensure the church has a long-term source of drinking water," Self said. "The well will be monitored by the Air Force to ensure PFOS/PFOA levels remain below the health advisory."

Mather was first known as Mills Field of the United States Army Aviation Section, U.S. Signal Corps, in 1918 as a pilot training base. The name was then changed to Mather Field and then Mather Air Force Base, and subsequently the base closed by Base Realignment and Closure (BRAC) law in 1993. Since then, significant environmental cleanup and property transfer actions have been made. A total of 5,718 acres have been transferred to the local community for redevelopment and reuse, and 105 cleanup sites were either closed or have water and soil treatment systems in place to ensure protection of human health and the environment.