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NEWS

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Colorado State Forest Service Wildland Fire Fleet Always Ready

Note to editors: Photos of the CSFS fire equipment shop and fleet fire engines are available upon request.

FORT COLLINS, Colo. – More than 40 Colorado State Forest Service personnel were directly involved in fighting the recent Fourmile Canyon and Reservoir Road fires on the northern Front Range. Several who repaired equipment on-site, staffed fire engines and supported aircraft operations were mechanics from the CSFS fire equipment shop.

Matt O’Leary, lead mechanic at the CSFS fire shop, was in charge of mandatory pre- and post-fire safety inspections on the hundreds of fire engines and tender trucks from every agency involved. Shop mechanic Nate Taggatz spent weeks on an engine protecting structures and patrolling the fire line. And others from the shop worked tirelessly, mixing fire retardant and loading it onto single-engine air tankers (SEATs) that flew out of the Fort Collins-Loveland Airport.

Of the more than 1,000 firefighters at the Fourmile Canyon Fire, O’Leary was one of only 13 officially recognized by the Type I National Incident Management Team, which awarded him for his outstanding efforts.

Despite the importance of their efforts during the fires, the CSFS mechanics know the bulk of wildland fire suppression work actually occurs before fires even start. And to ensure that Colorado’s rural fire departments are ready for the next blaze, the CSFS fire equipment shop constantly maintains a fleet of 140 wildland fire engines for fire departments throughout the state.

Making Engines Affordable

When a wildfire is reported in rural Colorado, the first firefighters on the scene usually are from smaller city or county departments. The initial attack role these fire departments play in fighting Colorado wildfires is significant, yet the budgets of these mostly volunteer organizations often are prohibitively low to allow for the provision and maintenance of fully equipped fire engines.

To build and maintain an engine fleet in Colorado, the CSFS fire equipment shop obtains retired vehicles through the Federal Excess Personal Property (FEPP) program. The program allows the CSFS to acquire

used vehicles from the Department of Defense and other federal entities, which become property of the U.S. Forest Service and are loaned to rural fire departments.

Together, the CSFS and USFS absorb nearly all costs of the engine fleet program to ensure that fire departments around the state have the necessary equipment to fight fires. The CSFS fire equipment shop provides ongoing major vehicle maintenance on the fleet, also replacing vehicles as needed. Recipient fire departments are only required to contribute \$200 annually to help cover travel costs for CSFS fire shop mechanics, who must complete annual inspections on the vehicles.

Sergio Lopes, the CSFS aerial and ground fire equipment supervisor, said the locations of the 140 fleet vehicles are based on recommendations from CSFS districts, local fire department budgets and fire risk. For example, several state fleet engines that responded to the Fourmile Canyon Fire are based in Boulder County's highly populated wildland-urban interface. On the other side of the state, Moffat County also needs multiple wildland fire engines, due to a high number of lightning strikes and impressive annual burned-acreage figures. Yet the county does not have the budget to maintain such a large fleet. Todd Wheeler, fire management officer for the Moffat County Sheriff's Department, said that he and the 13 other firefighters who work for the county rely on the CSFS to maintain its five fire engines.

"Without these CSFS engines, the sheriff's office could not afford the equipment necessary to help protect the citizens of Moffat County from wildfires," Wheeler said. He said that he currently has an order in with the CSFS to build a smaller Type-6 engine to join his fleet of larger Type-4 engines.

CSFS Builds Fire Trucks from Start to Finish

Lopes says that unlike many other states, the CSFS program builds fire engines from start to finish. Most other state agencies provide only the vehicles, and the fire agencies are responsible for adding a fire package and performing maintenance.

"We handle everything, from purchasing the vehicle chassis to sending a fully completed fire engine to its new position with a rural fire department," Lopes said.

It takes about four weeks to build a fire truck. CSFS mechanics first perform a full-scale overhaul of a vehicle from its stockpile, replacing hoses, belts, brakes, fluids, filters and shocks. They then make necessary modifications to meet wildland firefighting needs and attach a state-owned fire package consisting of such components as a water tank, pump, hose reel and tool boxes. Finally, a Buena Vista prison crew paints the state fleet trucks their characteristic golden yellow color.

"These trucks are all ready to fight fire right out the door," O'Leary said.

Better Vehicle Designs

The CSFS primarily builds dump truck-sized Type-4 engines that can deliver 1,000 gallons of water to the fire lines; they also can craft smaller Type-6 engines on full-size pickup chassis. Lopes says the CSFS Type-4 engines, which make up most of the engines in the state fleet, are unique in that they follow a design offering more balance and stability than typical large fire engines.

"We developed a new Type-4 engine design after firefighters regularly complained that standard truck designs were too top-heavy," he said. "Our unique design offers a water tank that rests below the bed

height, instead of above it, for a much lower center of gravity and greater stability.”

Wheeler says his firefighters and cooperating agencies in Moffat County, such as the Bureau of Land Management, have come to appreciate this innovative CSFS engine design, which performs well on the rugged terrain of northwest Colorado.

“We have found that CSFS engines outperform other engines because they are able to go places only hand crews are usually able to access,” Wheeler said.

The Hotchkiss Fire District also fights fires with one of the 140 fire engines in the CSFS fleet. Hotchkiss Fire Chief Doug Fritz, who currently is collaborating with the CSFS to build his district another truck, also has good things to say about his current CSFS-built engine.

“I think it’s the best wildland engine on the Western Slope,” Fritz said. “Our engine has even led bulldozers to fires. In the 15 years we’ve had it, it has saved more homes from wildfire than we can count.”

By the end of next year, the CSFS plans to replace all the Type-4 engines in the state fleet that still have the previous higher-profile design.

More than Routine Maintenance

Available to the CSFS fire division mechanics on-site at the state office are a repair garage, welding shop, fabrications area and machine shop, which allow them to maintain the state fleet and build new fire trucks. Yet the mechanics also regularly perform maintenance around the state at fire departments and on-scene at wildfires. The majority of CSFS mechanics are certified wildland firefighters who see action alongside other CSFS firefighters – providing an opportunity for insight into how the fire equipment they repair functions on the fire lines.

“It lets us see what works and what doesn’t,” said O’Leary, who often acts as an interagency fire equipment manager on large incidents throughout the West.

According to Butch Smith, the ground support unit leader for the Great Basin National Incident Management Team that managed the Fourmile Canyon and Reservoir Road fires, roughly 350 mandatory vehicle inspections were necessary prior to engaging the fires. Without the fast response provided by O’Leary and the CSFS fire equipment shop, Smith says the incident management team would have been in a bind.

“O’Leary and his crew were instrumental in helping our team serve the firefighters on the line,” Smith said. “I was very impressed with the Colorado State Forest Service fire personnel, who fought so hard to minimize damage to land and property.”

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