Mulchers Make Easy Work of Sandy Soils

The highly erodable sandy soils of the Nebraska National Forest Pine Ridge District make fire fuels reduction work difficult. Over time, the natural drainage of water from the ridges has washed out the basins making it impossible to bring in heavy equipment. The slopes into the basin areas are steep and treacherous, which proves problematic for most tree-clearing equipment.

"The ground is rugged and broken into a lot of steep canyon drainages," said Jim Clyde, owner of the Clyde Co., of Chardon, Neb. "In this region the terrain is really tough."

Fire fuels reduction work has to be carefully completed so as not to tear up the environment or the equipment.

Clyde's company is working on several stewardship contracts for fire fuels mitigation on state, federal, and privately owned properties. This includes removing diseased or damaged trees as well as thinning the forest to the optimum tree density per acre.

"We are taking out some saw logs," said Clyde, "but most of the fuels reduction work is masticating trees that are five to eight inches in [diameter at breast height] or trees that are damaged.

"We also are able to leave mulch on the ground or work it into the soil which helps stabilize it until the grasses come in. We are very cautious because the ground erodes so easily. We've found the [mulcher] really helps because it is able to process an area and not disturb the ground and cause more erosion." Leaving the mulch atop the soil or actually working it into the soil also prevents erosion.

The company also has other stewardship contracts from the U.S. Forest Service and expects them to be about 25% of its workload.

Generally, in the western states, the Forest Service uses the sale of commercial timber products such as saw logs to offset the costs of the fuel reduction work. However, log quality in the

Nebraska National Forest Pine Ridge District is poor, so timber sales don't provide enough revenue to offset the fuels reduction work. Therefore the Forest Service is paying for the fuels reduction.

"It is much more cost effective for us to handle the trees and slash on site versus removing the trees by hand, picking them up with grapple skidders and piling them into brush piles which would still need to be removed, burned, or chipped," said Clyde. "By using [our mulcher], we are able to keep our costs down."

Clyde also does work for the state and private landowners. He is often tasked to clear areas referred to as "dog-hair thickets." These are extremely overpopulated stands of ponderosa pine where the trees are so numerous a person can barely walk through them.

"Before … we would have had to hand pile the slash and then pick it up with grapple skidders and move it to a brush pile," said Clyde. Handling the materials multiple times requires more people — and more people costs more money. Hand crews typically cost four to six times that of completing the work with a [mulcher]. "Instead of using that labor intensive method we can now mulch it and be done with it."

But labor and time savings are not the only advantages. "We also do thinning and fuel reductions work on private land," said Clyde. "On private lands we work with the landowners to help them understand how to access the cost-share dollars that are available to them from the state forest service to help pay for the fire fuels reduction work."

Landowners must be qualified through the Nebraska State Forest Service for the cost-share program. The goal of the program is to reduce the fire fuels in private property adjacent to National Forest Service property.

The State Forest Service will pick up 50% of the cost, up to a total value of $300 per acre. Most private property projects run about $200 to $300 per acre depending on what the landowner prefers to have done.

"Most of the private properties are adjacent to the National Forest ground," said Clyde. "To protect the boundaries, the U.S. Forest Service and Nebraska State Forest Service would like the neighboring landowners to have fuels reduction completed on their property. This helps to reduce the chance of the fire raging out of control when controlled burns are conducted on the government-owned properties." W

— Fecon Inc.