

Moab Big Box Biochar Open House Demonstration 2020

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[//www.youtube.com/embed/y1L00ETQNpw5603150](https://www.youtube.com/embed/y1L00ETQNpw5603150)

The Utah Biomass Resources Group (UBRG) and USU Forestry Extension collaborated with other agencies to demonstrate a new approach to reducing hazardous fuels in January of 2020 near Moab, Utah. Over the course of two days, 35 people attended the Open House style demonstration of the Big Box biochar kiln technology the UBRG is engaged in developing. The UBRG is working with private landowners, the Utah Division of Forestry, Fire and State Lands, Utah Sovereign Lands, the Utah Bureau of Land Management, Lone Peak Engine Crew and others to test and evaluate this new approach to reducing piles of woody debris and making biochar. A 2018 Utah Public Lands Initiative Grant allowed the UBRG to have the 2,000 lb biochar kiln fabricated in 2019. This double-walled kiln measures 12' x 6' x 4'. The double wall construction better contains the heat, compared to single wall construction, allowing people and equipment to get close to the load and tend the burning debris. It also allows for a more even burn inside the kiln. These are lessons learned through a partnership with an Oregon based non-profit called the Yew Creek Alliance that is working toward similar goals. The open house demonstration was the first use of this kiln. The feedstock consisted of invasive Russian Olive trees that were choking out native tree species and wildlife along the Colorado River before they were cut and piled using another grant the UBRG is part of, the 2015 Southern Utah Biomass grant from the Utah Division of Forestry, Fire and State Lands. We began by filling the kiln with several piles of Russian Olive using a mini-excavator that was being operated by the landowner and firefighters from the Lone Peak Engine Crew. The full kiln was then lit from the top which creates the flame cap and allows for a cleaner burning fire. As the material burned down, the kiln was refilled. The kiln was filled and dumped twice a day over the course of two days. Prior to dumping the kiln, the biochar must be doused with water. It took roughly 300 gallons of water to quench the biochar in the kiln to extinguish the fire. Once the excavator dumps the kiln, the char is broken down into smaller pieces for agricultural/horticultural uses. In this case the landowner was developing a tree nursery and planned to use the biochar in the soil to support the seedlings.