JTH FORESTRY RESEARCH CENTER AT MORA

The John T. Harrington Forestry Research Center is the only research program in the U.S. Southwest that focuses on forest nursery technologies, tree improvement, and eco-physiology of young forest trees to facilitate ecological restoration and/or commercial reforestation. These research interests are critical for establishing future forests in the region.

Current and future research directions include:

- Defining seed transfer guidelines for *Pinus ponderosa* in a changing climate.
- Evaluation of drought-conditioned *Populus tremuloides* and *Pinus ponderosa* seedlings after the nursery growth phase.
- New directions in aspen restoration for the Intermountain West.
- Outplanting performance of drought-conditioned *Pinus ponderosa* and *Populus tremuloides*.
- Southwestern white pine blister rust resistance gene conservation.

IMPACTS FOR 2017

- Research conducted on drought-conditioned *Populus tremuloides* (aspen) during the nursery phase promotes increased hydraulic activity through an increase in both the number of active xylem vessels and xylem flow rate. Preliminary field results show that aspen seedlings subjected to limited irrigation during the nursery phase outperform those seedlings using operational irrigation practices.
- The JTH Forestry Research Center produced over 250,000 seedlings for forest restoration efforts in 2017. This equates to the restoration of approximately 1,250 acres of post-fire forestlands in New Mexico.
- Development of a collaborative Forestry Research Lab. In the fall of 2017, the Forestry Research Lab (FRL) was established as a collaborative program between the Department of Natural Resources Management (NRM) at New Mexico Highlands University (NMHU) and the JTH Forestry Research Center at New Mexico State University. Through continued research, the FRL will work to restore proper ecological function to forest landscapes throughout the Southwest. Additionally, the FRL will serve as an educational platform for both classroom activities as well as research opportunities for both undergraduate- and graduate-level students at NMHU.

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PARTNERSHIPS

- New Mexico Energy, Minerals and Natural Resources Department, Forestry Division
- USDA Forest Service
- National Park Service
- New Mexico Highlands University, University of New Mexico, and other universities around the U.S.
- Private industries in New Mexico (e.g., Imerys and Chevron mining companies)
- Tribal communities and private landowners in New Mexico
- Soil and water conservation districts throughout the state