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For Immediate Release

Brush Control for Water Yield Enhancement

There is always a demand for water anywhere you go in the world. That demand in Texas seems to continually be increasing. The realization that we will need a way to support this increase in water supply has people everywhere searching for ways to help conserve water or increase recharge of groundwater.

One way that experts have found can benefit water supplies by recharging our groundwater aquifers and enhancing spring flow is by implementing brush control. Texas uses about 15 million acre-feet annually for human use, however the U.S.D.A Natural Resource Conservation Service has estimated that the brush in Texas uses 10 million acre-feet of water per year. Eighteen years ago there was a study conducted on the North Concho River watershed. This study indicated that the estimated 100 million juniper trees and the 130 million mesquite trees in the watershed were consuming almost 2 million acre-feet of water each year. These statistics alone are reason enough that we should be implementing brush control programs on our Texas lands.

The following are some key points from the Revised 2009 Texas State Soil & Water Conservation Board State Brush Control Plan that many scientists agree on:

- The roots of some brush species extract water from greater depths than do grasses and forbs, and brush control can reduce the total amount of water used by vegetation.
- Brush and other deep-rooted vegetation growing over shallow aquifers near streams can be expected to use large amounts of groundwater, likely reducing the amount in both the interconnected stream and aquifer.
- For brush control to have substantial long-term impacts on water yield, most or all of the woody vegetation in the treated area should be killed, and regrowth of brush and herbaceous vegetation should be controlled so that it is less dense and more shallow rooted than the pretreatment vegetation.

There have been many field studies and modeling investigations, as well as anecdotal observations by ranchers and agency personnel with brush control experience in our area. The conclusions from these studies and experience from these individuals indicate that the majority of brush in a treatment area must be removed in order to see water yield potential. There is a very minimum water yield when going from dense brush canopy cover to 15% brush canopy cover. However, when going from 15% canopy cover to 0% canopy cover there is a rapid rise in water yield. So it has been concluded that a treated area must remove 75% or more of the brush in order to make a significant impact on the water yield.

The Texas State Soil and Water Conservation Board has developed a State Brush Control Plan to manage invasive brush species like mesquite and salt cedar. Keeping high water using brush species managed and under control is a key focus on the state's plan. However, it is going to take all Texans, ranchers and land owners making a joint effort in order to increase our water yield enhancement in our state.

For more information regarding brush control, the Permian Basin Underground Water Conservation District invites you to visit their website at www.pbuwcd.com or call them at 432-756-2136.