**Habitat Happenings**

**Trees in Playa Wetlands Not Welcome**

While it is true that Nebraska is the home of Arbor Day and most of our residents’ love trees, it should be said that trees are not welcome everywhere on the landscape. For example, eastern red cedar invading Nebraska’s native grasslands is causing the loss of thousands of acres of grazing land each year. Honey locust is also a tree species that invades pastures and reduces the amount of forage available to cattle. Cottonwood trees can also be problematic when growing in the wrong place.

Prior to European settlement of the Great Plains, Cottonwoods were naturally found along streams and rivers. Prairie fires and grazing by bison, elk, and pronghorn kept Cottonwoods mostly confined to protected stream valleys and corridors. But today, lack of these two historic controlling factors have allowed Cottonwoods to spread onto the prairie and populate areas they were formally absent from. Streams, rivers, ponds, and reservoirs all provide suitable habitat for Cottonwoods. One ecosystem that Cottonwood trees cause problems for are the playa wetland systems found in southcentral, central, and southwest Nebraska.

The primary issue with Cottonwood trees growing in or around playa wetlands is their water demand. A researcher found that a single large Cottonwood tree had a maximum daily water consumption of 244 gallons. Many variables can influence this rate. However, using this figure as an example, 8 large Cottonwoods growing on the edge of a small playa wetland with a storage capacity of 10-acre feet can remove 10% of the water during the growing season. Other natural processes such as evapotranspiration by the plants in the wetland and seepage to the groundwater are continually removing water as well. Cottonwoods are one source of water loss that can be eliminated through management. Several techniques can be used to control Cottonwood trees.

**Burning:** Cottonwoods are vulnerable to fire and even light burns will kill seedlings. Hotter fires can severely injure the bark on older trees which opens the trees to decay. If sufficient understory vegetation exists, burning is the cheapest and most efficient method to eliminate Cottonwoods. For best success, burn early in the year, burn while the trees are small, and burn when there is adequate fuel to create a hot fire.

**Herbicide Injection:** This technique is applicable for low number of trees/acre and can be used on larger Cottonwood trees. Cut surface applications can be effective by use of a special herbicide injection hatchet or by girdling the tree with a chain saw and applying the herbicide to the cut surface.

**Foliar Spraying:** Success has been achieved by foliar spraying smaller Cottonwoods with various herbicides such as Rodeo, Arsenal, Habitat, Polaris, and Vastlan.

**Shredding or Mowing:** Small trees can be mowed or shredded but should have a follow up treatment spraying herbicide over the cut stumps to prevent re-sprouting.

**Disking or Rototilling:** Small trees can also be eliminated by disking or rototilling.

**Grazing:** The use of cattle, goats, or horses to graze small trees can be successful. It should be noted that cattle will only eat the leaves. Therefore, re-sprouting of the trees will likely occur the next year unless there is a follow up treatment to the grazing.

*The Rainwater Basin Joint Venture is a public/private partnership that works with federal and state agencies, local Natural Resources Districts, non-governmental organizations, and private landowners to develop “win-win” opportunities to protect, restore, and enhance wetlands in the Rainwater Basin. For more information, visit www.rwbjv.org and follow us on Facebook and Instagram.*