

## FOREST STEWARDSHIP BRIEFINGS

Timber ◇ Wildlife ◇ Water ◇ Soil ◇ Best Management Practices ◇ Forest Health ◇ Recreation ◇ Aesthetics

## NATIVE GRASS RESTORATION

*from articles by Jason Ellis, District Forester, TFS, Jacksonville, TX; and Alan Shadow, Manager, NRCS Plant Materials Center, Nacogdoches, TX*

*For more information:*

- <https://bit.ly/ETPMC>
- <https://www.thc.texas.gov/historic-sites/caddo-mounds-state-historic-site>
- <https://tfsweb.tamu.edu/PrescribedBurns>

Natural Resources Conservation Service (NRCS) East Texas Plant Materials Center (ETPMC) in Nacogdoches, Texas, was approached by staff from the Caddo Mounds State Historic site in Alto, Texas. Caddo Mounds staff was looking to convert the grassed areas there back to species that would have been present when the Caddo Indians occupied the site.

The site at the time was dominated by Bermuda and Bahia grass, both sod forming introduced pasture grasses. These sod forming grasses choke out plant diversity and become a biological desert.

The conversion to natives is a complicated process as the Bermuda and Bahia grass are very difficult to eliminate. A full year was spent doing site preparation on the area leveling out hog damage and applying herbicide to the field to eliminate undesirable competition from the introduced grasses. Then, a food plot planter was used to plant the native species mix. The species in this mix were: little bluestem, big bluestem (2 cultivars), Indiangrass, sideoats grama, Virginia wildrye, purple top, green sprangle top, sand dropseed, partridge pea, plains coreopsis, lance leaf coreopsis, black-eyed Susan, and Mexican hat, along with Neches germplasm split-beard bluestem they have at the ETPMC.

There are multiple benefits having natives on the site. These species are incredibly deep rooted, tolerate drought periods much better, organic matter back to the soil, remove CO<sub>2</sub> from the atmosphere and lock it way deep in the soil in the form of roots. Most of these plant species feed the soil microbes and increase the biological activity of the soil. This allows for nutrient cycling to feed the grasses and wild-

flowers as well as allowing very deep water infiltration during rain events.

The NRCS has proven time and time again through soil health demonstrations that soils with a wide array of native species present have increased biological activity and allow much deeper water infiltration compared to monotypic stands of introduced pasture grasses. The native grasses typically grow in a bunch formation versus sod and leave areas of bare ground for other plant species to occupy as well as areas for birds and mammals to forage. The bunch grasses also provide wildlife cover.

As a result of these plantings, Caddo Mounds will start to see a much wider array of species use the areas as the system recovers. There will be more insect species and pollinators present as well as song and game birds and small and large mammals. One of the long term goals was having habitat suitable for turkeys, and the native grasses help meet this goal by providing seed and insects for the turkey. The site not only becomes more visually pleasing, it starts to function properly and the species that the Caddo relied on for food, cordage, building material, etc., will return and prosper.

Texas A&M Forest Service (TFS) met with Anthony Souther, Site Manager for Caddo Mounds State Historic Site, to discuss planning and implementation of a prescription burn at the facility. The burn area is a field that was formerly a part of the Indian Mound Tree Nursery where TFS once grew pine and hardwood seedlings for forest landowners. This site and accompanying lands were transferred to the Texas Historical Commission in 2008 when the nursery was closed.

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## STREAM DISCHARGE MEASUREMENTS

So how are stream discharge measurements made?



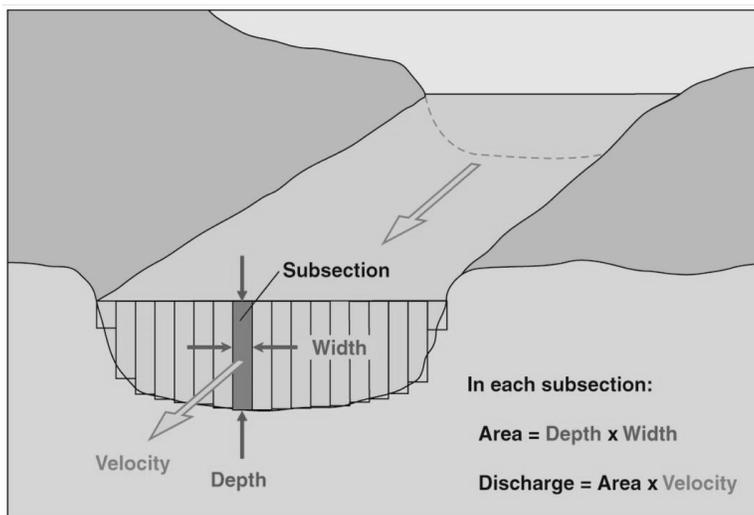
As seen in the photo, a calibrated wire called a tag line is stretched across the river or stream. The hydrologist then measures the depth of the water along selected points (generally 25 cross sections) on the tag line, then multiplies this depth by the width of the segment to get the area. Then, the velocity of the water is measured at a point a little more than one-half the depth.

Measurements can also be taken along a marked line or from a bridge across.

So as an example, if a cross section is 2 feet wide and 3 feet deep and the velocity of the water is 2 feet per second, the discharge for that cross section would be  $2 \times 3 \times 2$  or 12 cfs (almost 90 gallons). Each cross section is then summed to obtain the total stream discharge.

Discharge is the volume of water moving in a river over a given unit of time. In the U.S., we reference this as cubic feet per second, or cfs. The rest of the world uses cubic meters per second. A cubic foot of water is 7.48 gallons.

Discharge is calculated as **Discharge = Area x Velocity**.



## ONLINE TOOL - TIMBER SUPPLY ANALYSIS

The Timber Supply Analysis application has been updated to include forest inventory data for states within 100 miles of the Southern Region, allowing users to accurately conduct supply analyses that extend outside of the Southern Region. The area of interest (supply point) must still originate inside the Southern Region for the analysis to be conducted.

Additionally, a calendar icon was added

that shows the most recent data available for each state. The latest data common to all states in an analysis is used to produce the supply area estimates. Another data update is planned for late summer 2020, as soon as East Texas 2019 data is available.

The application provides estimates of timberland area and standing timber, growth, and removals within a user-defined area in the U.S. South.

from Llano River Watershed Alliance newsletter "Watershed Week in Review" June 12, 2020

For more information:

- <https://on.doi.gov/37tUcr0>

From article dated June 30, 2020, by Rebekah Zehnder, TFS

For more information:

- <https://texasforestinfor.tamu.edu/tsa>

## PRESCRIBED BURN GRANT

Texas A&M Forest Service is now accepting grant applications for the State Fire Assistance for Mitigation – Plains Prescribed Fire Grant through August 15. The grant will provide \$81,000 in total funding for prescribed burns.

Funding will be provided to landowners and communities that have been or may be threatened by wildland fire to reduce hazardous fuels. Properties in the panhandle, west, and northwest Texas at high risk for loss during a Southern Plains wildfire outbreak are eligible.

Grant recipients will be reimbursed actual per acre costs associated with conducting the prescribed burn up to \$30 per acre, with a limit of 500 acres per recipient.

“Historically, fire has been a necessary tool to improve forage quality for grazing, enhance wildlife habitat, and preserve soil nutrients on the rangelands of Texas,” said Jake Gosschalk, Texas A&M Forest Service Wildland Urban Interface Specialist.

Wildfires can be destructive when they occur at the wrong time or near a community that is unprepared. To plan ahead and mitigate these impacts, Texas A&M Forest Service works with landowners and

local and county governments through Community Wildfire Protection Plans and the Texas Ranch Wildfire Program.

“Currently, conditions across Texas are dry, but landowners are already planning for prescribed fire treatments this upcoming fall during the cooler season,” said Gosschalk. “These prescribed fires reduce hazardous fuel loads and mitigate the threat of wildfire.”

Landowners located within two miles of an area with a Community Wildfire Protection Plan or a Texas Ranch Wildfire Program will receive priority funding. Both programs enhance awareness of wildfire risk and empower individual landowners and the overall community to act to reduce the risk of wildfire in their areas.

To check eligibility and complete the online application, visit <https://tfsweb.tamu.edu/PrescribedFireGrantsApplication>.

Learn more about prescribed fire by visiting TFS Prescribed Burns - <https://tfsweb.tamu.edu/PrescribedBurns> - or the TDA Prescribed Burning Board - <https://bit.ly/TDA-PBB>.

*from TFS News Release dated July 6, 2020*

*For more information:*

- <https://bit.ly/RxBurnGrant>
- <https://tfsweb.tamu.edu/TRWP>
- <https://tfsweb.tamu.edu/ProtectYourCommunity>

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## FOOD PLOTS - ANNUALS, PERENNIALS, BOTH?

One of the most basic characteristics of a deer forage that essentially lays the foundation of a food plot program is the time of year it is available and how long it lasts. The time of year that quality forage is available for annual and perennial forages is very different and should weigh heavily on the management strategy for your hunting land.

For example, annual forages typically provide more quality forage during the two primary stress periods for deer, which occur during late summer and late winter and are associated with low natural food availability. Conversely, forage availability from perennial species is typically greatest during the spring and summer, which is an

important season for growth and development for whitetails.

Unfortunately there isn't a one-size-fits-all application for deer managers when it comes to managing food plots on a given area. Each tract of land is unique and presents different challenges. This is why it is important to identify the most limiting factors in your area from a nutrition standpoint and develop an effective plan to address them. A combination of both annual and perennial forages is often needed to fill these voids, and determining the best ratio of annual to perennial plots can be accomplished with a little practice and patience.

*from QDMA article dated June 24, 2020, by Ryan Basinger*

*For more information:*

- <https://bit.ly/APFoodPlots>

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**Editorial Advisor:**

**Joe Pase, TFS-Retired; Lufkin, Texas**

## TEXAS FOREST ACTION PLAN

The 2008 Farm Bill required each state to assess the forest conditions and trends within their boundaries; delineate priority forest landscapes; and identify the issues, threats, and opportunities facing these landscapes. Five primary issues were identified from the assessment in Texas:

- Urban Forest Sustainability
- Central Texas Woodlands Conservation
- Sustainability of Forest Resources in East Texas
- Water Resources
- Wildfire and Public Safety

A forest resource strategy was then developed to address these issues. Together, the assessment and strategy make up the Texas Forest Action Plan. The plan was developed based on three national themes: conserve working forests, protect forests from harm, and enhance public benefits from trees and forests.

Texas A&M Forest Service has completed a draft of the Plan. The agency is requesting comments on this draft. Please go to the following link: <https://tfsweb.tamu.edu/ForestActionPlan/> and click on **Forest Action Plan** (under 2020 Documents) and **Comments for the 2020 Draft Texas Forest Action Plan**.



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