



# Oaks and Prairies Wildlifer

A newsletter for landowners in the Post Oak Savannah  
and Coastal Prairies Regions of Texas



Winter 2018

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## District Field Notes

BY DAVID FORRESTER

We experienced an average deer harvest this year. Some really good bucks were harvested across the district. Doe harvest is still ongoing. With the new Land Management Assistance system and the Harvest Option or Conservation Option tags, doe harvest can go until the end of February. We do not recommend waiting that late to harvest your doe in this district, but it can legally be done. We recommend getting the doe harvest complete by mid-January at the latest. If you wait to harvest later than that, you can (in certain years) run the risk of harvesting an antlerless deer that is in fact a buck that has shed its antlers. Also, all doe are bred by now and waiting to harvest late just means you will be harvesting a heavy bred doe.

Biologists in the district have done another great job collecting Chronic Wasting Disease (CWD) samples this year and are starting to shift priorities to other things as we start the New Year. We want to thank the local sheriff's departments, game wardens, Texas Department of Transportation, and animal control officers that notified us about road kills. Also, we want to thank the hunters that brought us deer. Although we are shifting focus a bit, we will still collect and submit samples if you have an animal you want tested. We have detected two positives in free ranging white tailed deer since last year. One positive was detected in Medina County within the mandatory testing zone and one of the most recent was a road kill from the panhandle mandatory testing zone. We've also had one new positive in the Trans Pecos. All additional white-tailed deer positives continue to be confined to breeding operations in Medina County. You can find the latest information on CWD in Texas at this web site: <https://tpwd.texas.gov/huntwild/wild/diseases/cwd/>.

Other areas to which we are shifting our focus are the district turkey project and conducting prescribed burns on private lands. Biologists have several properties that have prepared burn units and we are just waiting for the safe environmental conditions to conduct a prescribed burn. We have some prescribed burn workshops listed in the upcoming events if this interests you. We also have several locations across the district that have turkey regularly sighted and coming to feeders.

*Continued on page 2*

### *State of the District, continued*

We've already successfully trapped a few birds and plan on more. Hurricane Harvey appears to have impacted our turkey negatively, but we hope we can glean some information from the birds we had tagged and continue to tag. Hopefully, we can obtain quality information on the types of habitat these birds are using to roost, nest, and brood their young.

We said goodbye to wildlife biologist Trey Barron back in September. He made the move to regional diversity biologist, so he's still with the department and we'll still work with him on a regular basis. We've filled Treys' position with Shannon Lawrence. Shannon is originally from Texas where she received her B.S. in Range and Wildlife Management from Texas A&M University-Kingsville and then went on to the University of Arizona where she received her M.S. in Wildlife Conservation and Management. Most recently she has been working in Arizona as a contract wildlife biologist with the Department of Army.

She will officially take over duties in Victoria, Calhoun, and Refugio counties on February 19<sup>th</sup>.

Although it can get cold, this is a great time of year, so please get out and enjoy the wildlife and habitat on your piece of Texas.



*David Forrester is the District 7 Leader in La Grange. He has been with TPWD since 2001 when he started his career as the TPWD wildlife biologist for Fort Bend and Wharton counties. David has a Bachelor of Science in Agricultural Economics and a Bachelor of Science in Wildlife and Fisheries Sciences, both from Texas A&M University, and a Master of Science in Range and Wildlife Management from Texas A&M University-Kingsville.*

## Hunt Photos Needed

WRITTEN BY BOBBY EICHLER

Folks, we would like to create a supplement to the Oaks and Prairies Wildlifer over the next several months that highlights the 2017-2018 hunting season. Please send us photos of your harvest from the 2017-2018 season from any legal game such as dove, waterfowl, deer, and feral hog to name a few. Photos do not need to be trophy quality animals but should have been harvested within the counties of the Oak Prairie District. Please see the last page of this newsletter for a map of the district. The intent of this hunting themed edition would be to highlight the wildlife within our district as well as to promote the hunting tradition.

When you e-mail your photos please include basic information, such as:

- Name of hunter
- County of harvest
- Anything that you may feel pertinent (first harvest, number of points for a buck, etc.)
- Also, please complete the photo release on page 15 and include that with your email

E-mail photos to [bobby.eichler@tpwd.texas.gov](mailto:bobby.eichler@tpwd.texas.gov) by April 15<sup>th</sup>. Assuming an abundance of pictures are sent in, the goal will be to have a supplement to our current newsletter and will be e-mailed once finished. Due to size constraints of the newsletter, as well as quality of individual photos, not all photos may be used.

# MLDP: Harvest Data Due by April 1, 2018

WRITTEN BY BOBBY EICHLER

**If you are a Managed Lands Deer Permit (MLDP) cooperator you will need to have your Harvest Data and Management Practices for the 2017-2018 season submitted by April 1, 2018.** This information is to be submitted online by the cooperator (landowner or designated agent) using the new Land Management Assistance (LMA) website. Please do not rely on your local wildlife biologist to enter the data for you. Ultimate responsibility is on the cooperator to have the information entered into LMA by the deadline. If you received MLD permits but failed to harvest any deer and did not utilize permits, you still need to report a harvest of zero and management practices.

With the new system, April 1 is a hard deadline. Cooperators who fail to enter data, are late, or have incomplete data will not receive permits for the 2018-2019 season for the affected property. Please understand that your biologists will not have the capability of overriding the system for future permit issuance if you are late.

Periodic reminders will be sent to you by e-mail from the LMA system prior to the April 1 deadline. If you see these emails, please do not disregard them. You may also periodically check your 'junk e-mail'.

Please remember the LMA system is not supported by the browser Internet Explorer. If you need to download a different browser, you can do so from the LMA homepage just under the log-in information.

## Harvest Data Entry Instructions

The LMA system can be found at the following website: <https://lma.tpwd.state.tx.us/>

Remember your username is your e-mail address. Either the landowner or designated agent may enter harvest data. If you have forgot your password, there is a link 'Forgot Your Password'.

Once on the LMA system the first screen will have a list for 'My Properties'. At this point you should select the property that you want to enter data for.

1. At the Property Information screen, select 'View Management Units'. This will bring up a screen with the Management Unit map.
2. Select the green 'View/Edit' link.
3. Under Management Unit Information, select the Harvest Info 'View All' link.
4. You will see a summary of past harvest records for the property. At this point select the blue 'Report Harvest' tab at the top right.
5. At the Harvest Info page use the pull-down menu and select '2017-2018 Season'.
  - Under White-tail Deer, use the pull-down menus to enter the number of deer harvested for each of the following:
    - Antlerless
    - Total Bucks (this includes all bucks)
    - Unbranched Bucks (this entry is optional but please enter this number, it helps determine the unbranched portion of the buck harvest across the landscape)
    - EXAMPLE: You and your family/hunters harvested 4 doe and 8 bucks total off your property. Of the 8 bucks, 3 were bucks with at least one unbranched antler (or spikes). You would enter 4 under *Antlerless*; 8 under *Total Bucks*; and 3 under *Unbranched Bucks*.



Photo © TPWD

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***MLDP: Harvest Data Due by April 1, 2018, continued***

6. Once data has been entered, remember you must select 'Submit' at the bottom right of the screen, otherwise data will not be saved.
7. In order to check your data entry, once you have submitted the harvest numbers you should be able to see the new entries in the above harvest summary.

**Management Practices Entry Instructions**

Submitting a record of approved management practices fulfilled on the property are a requirement for all properties on Conservation Option MLD's. A minimum of three practices should be implemented annually. Members of Wildlife Management Associations (or Co-ops) should submit practices fulfilled on a property-by-property basis and the practices will all count towards the WMA's achievements. So as a WMA member, you may submit less than 3 practices with the key factor being that numerous properties are applying various practices across the WMA landscape. ***If you are issued Conservation Option permits but not under the umbrella management of a WMA, then you are required to report a minimum of 3 practices annually.***

Submitting Management Practices is very similar to submitting Harvest Records.

1. At the Property Information screen, select 'View Management Units'. This will bring up a screen with the Management Unit map.
2. Select the green 'View/Edit' link.
3. Under Management Unit Information, select the Management Practices 'View All' link.
4. This will now show you a summary of past Management Practices for the property, at this screen select 'Report Habitat Practices'.
5. At the Property Info page use the pull-down menus to select the Reporting Year (2017-2018) as well as the Management Practice.
6. Enter the appropriate Management Practice and once complete be sure to select 'Submit'.
7. You will need to follow step #5 for each practice you wish to submit. As you submit practices you will see the practice added to the summary.
8. Once complete, select 'Log-Out' at the top-right corner of the screen.

Lastly, the LMA help desk will be available at [1-844-592-6472](tel:1-844-592-6472). Please make sure to enter data in a timely manner so that if issues arise you do not miss the deadline.



*Bobby Eichler is the Technical Guidance Biologist for the Oak Prairie District. He has Bachelor and Master of Science degrees in Forestry both with emphasis in Game Management, from Stephen F. Austin State University. A native of Giddings, Bobby started his TPWD career in East Texas before moving to La Grange in 2007.*

# Plant Profile: Rattlesnake Master

WRITTEN BY NATIVE AMERICAN SEED

**The name alone is enough to grab your interest and, like the name suggests, there is evidence that both the early Pioneers and Native American Indians used the roots for a medicinal antidote for rattlesnake bites.**

Other uses reported by James Adair an 18<sup>th</sup>-century Indian trader included venereal disease, impotence, expelling worms, and to induce vomiting. He also recounted tales of Native Indians chewing the root of rattlesnake master, spitting it on their hands and then handling rattlesnakes without being bitten (please don't try this at home!). The dried seed heads of rattlesnake master, *Eryngium yuccifolium*, were used as rattles by the Native American Indian tribes in some of their ceremonies. This native perennial of the tall grass prairie ranges from Minnesota east to Ohio then south to Florida and Texas. During the summer it is a striking wildflower standing erect in defiance to the blistering heat. At first, seed heads have a milky white-grayish cast that then turn to a bluish hue when mature. Its close cousin Eryngo, *Eryngium leavenworthii*, has a slightly more elongated head and a more striking purple color at maturity. Rattlesnake master has numerous tiny flowers that consist of 5 white petals, a divided white pistil, and several white stamens with light brown anthers imbedded in a prickly stiff ball about the size of a malted milk ball or a big shooter marble. Rattlesnake master blooms from June until September and the flowers have a sweet honey like scent. The scent attracts insects galore. Some of these include; native long-tongued bees, short-tongued bees, wasps, flies, butterflies, skippers, moths, beetles, and for a lack of a better name, a variety of plant bugs. Although not found in Texas, the caterpillars of the rare *Papaipema eryngii* (Rattlesnake Master Borer Moth) bore into the stems and feed on the pith. Here in Texas, rattlesnake master is a host plant for the swallowtail butterfly and in particular the black swallowtail butterfly. Rattlesnake master along with prairie parsley is a native variety in the carrot family. The plant itself will grow from 2-5 ft. tall on a stiff erect stem that is unbranched except at the top giving it a very unique experience. The leaves wrap around the stem and are long and thin with prickly edges that resemble yuccas hence rattlesnake master's scientific name *Eryngium yuccifolium*. *Eryngium* is the Greek meaning for prickly plant and *yuccifolium* is Greek for yucca leaves. It is definitely a native plant that will add interest to any place it is planted.



*Rattlesnake master found the summer following the catastrophic wildfire in Bastrop. Rattlesnake master was previously rarely, if ever, seen in the area. Photo © Bobby Eichler, TPWD*



*Rattlesnake master, branched head. Rattlesnake master along with prairie parsley is a native variety in the carrot family. Photo © Carolyn Fannon*



*Rattlesnake master close-up. Rattlesnake master blooms from June until September and the flowers have a sweet honey like scent. The scent attracts insects galore. Photo © Carolyn Fannon*

## Species Spotlight: Gadwall: A Commonly Under-Appreciated Species

WRITTEN BY MARK LANGE

**If you have explored the world of waterfowl hunting or bird watching you should be very familiar with gadwall (*Anas strepera*).** While somewhat

less photogenic than other waterfowl species, gadwall possess many characteristics that are pleasing to the eye. It is not just their plumage that makes them interesting, but also their ecology.

Gadwall are also known as “gray ducks” due to their primary color being grayish/brown while the rump area is black. They are easily identified by the buffy/rust colored wing patch and white secondary wing feathers. Their legs are yellow as well as the outside edges of the bill in immature and female gadwall. In adult breeding males, the bill will be primarily black in color. Gadwall are a medium sized duck with a stocky build much like a pintail.

Gadwall are a very common duck and have a widespread distribution. They can be found throughout most of North America with the breeding grounds being primary in the Northwestern United States. Like most waterfowl species, gadwall only overwinter in the Texas Gulf Coast area. During the winter months the highest concentrations are seen along the Pacific and Gulf Coast. The fall migration south starts in early September and is typically concluded by late September whereas the spring migration back north begins in late February and has concluded by April each year.

Gadwall are seasonally monogamous, meaning that one hen and one drake pair for the entire season, and hens most commonly make their nest in tall prairie vegetation. The nest is comprised of various grasses, rushes, soil, and down feathers. Hens commonly lay 7 to 12 oval creamy-white to grayish-green eggs and complete all of the incubation duties as the drake is not present during active nesting. Gadwall possess homing abilities and hens have been known to re-use a nest for multiple years. One egg a day is laid and total incubation time is 26 days (range of 24-27). Juvenile birds will not have noticeable plumage until 14 days after hatching and are capable of flight in just 53 days. The hen will leave the brood less than 10 weeks after hatching.



*Top: Gadwall drake, Bottom: Gadwall hen*  
Photos © Trey Barron, TPWD

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### *Gadwall: A Commonly Under-Appreciated Species, continued*

Gadwall are a dabbling species in terms of their feeding behavior. Dabbling ducks feed by tipping up on the water surface and have legs centered on the body, while diving ducks dive to feed and their legs are positioned more toward the rear of the body. Gadwall primarily feed on seeds, aquatic vegetation, and aquatic invertebrates. Some of the more common plants in their diet are spike rush (*Eleocharis spp.*), smartweed (*Polygonum spp.*), pondweed (*Potamogeton spp.*), and water milfoil (*Myriophyllum spp.*). Young birds and egg-laying females increase ingestion of invertebrates out of need for additional protein. During the winter months the majority of the day is spent feeding while only a small part of the day is spent swimming.

This species currently has no conservation concerns. Due to conservation efforts focused on protecting and improving habitat in all waterfowl flyways, gadwall are a species that have shown positive trends in overall population in the last 20 years.

Gadwall are one of the most common ducks in this area and annual surveys trends show that the population is increasing. While habitat protection and improvement have aided in the increase in gadwall populations, aspects of their ecology are also believed to be why they seem to be less impacted by some of the extreme weather conditions that have more severely impacted other species. Gadwall nest later in the year than many other species. As other species abandon nesting grounds that decreases competition for nesting habitat as well as decreases predator abundance. Gadwall also commonly nest on islands where common mammalian predators are minimal. Habitat conservation coupled with these aspects of their ecology has led to a higher percentage of hens and drakes pairing to breed and higher nest success therefore leading to the overall recent increase in population size.

While this article is a species spotlight on one waterfowl species, I would encourage you to read about the history of waterfowl conservation in the United States. Waterfowl seem to be appreciated by all, but relatively few realize the threats to these magnificent species. Habitat loss and fragmentation pose a serious threat to all waterfowl species. What once were thriving wetlands are becoming parking lots and buildings. In this article I mentioned that gadwall populations have been increasing over the last few decades and that is true for many waterfowl species, but that is because hunter dollars are funding conservation efforts. Many of you buy your federal duck stamp every year so that you can legally pursue waterfowl. Thankfully, your money has gone to the conservation of these species. If you are not an active waterfowl hunter I would still encourage you to buy a duck stamp every year, if for nothing more than starting a collection, but also an investment into future waterfowl conservation.

*Gadwall in flight. Photo © TPWD*



*Mark Lange is the wildlife biologist for Colorado and Austin Counties where he started in June 2012. He grew up in the Texas panhandle in the small town of Nazareth. He attended West Texas A&M University where he completed his Bachelor of Science Degree in Biology/Wildlife Science in 2006 and his Masters of Science Degree in Biology in 2011. Mark offices out of the Columbus field office. Mark has diverse interests and enjoys working with landowners towards their management goals.*

## Counting Deer Bites: *Using Small Observations to Make Big Management Decisions*

WRITTEN BY TRENT TEINERT

### **During late winter, keen observers can learn a lot about the health of a property and the animals that it supports by studying deer bites on plants.**

As a land manager and a hunter, making small observations and counting the bites that deer and other animals make on plants is one of the most critical pieces of information you can gain about a property. We must think like a deer trying to fill its stomach. Deer are trying to expend as little energy as possible while finding food that has the best nutritional content. This principal is the main driver in a deer's day-to-day activities and movements.

It is critical for deer to have access to ample supplies of nutritious browse plants at all times. Supplemental feeding, corn or protein, should never be relied on as primary food sources for deer. Although a great attractant and source of energy, corn is high in starch content and provides few nutritional benefits if it comprises a large portion of a deer's diet. Corn provides 6-8% protein content and is low in mineral and nutritional content. In addition, eating too much corn can lead to foundering and acidosis. Protein feed, although fairly nutritious, still cannot compete with natural food. Deer that are primarily fed pelleted protein feed have underdeveloped stomach villi that do not absorb or process nutrients as well. Native plants also have something that protein feed does not, they provide tannins and compounds that reduce internal and external parasite loads. On properties with great deer habitat, deer will rarely consume supplemental protein food. This is a good thing! Native plants provide optimum nutrition and even less preferred browse plants such as huisache can contain up to 29% protein content. During the growing season, in spring and summer, deer prefer to eat forbes. Forbes are broad leaf flowering plants that are many times referred to as "weeds". Although they can get a bad reputation when growing in a hay field, forbes can comprise up to 75% of a deer's diet during this time of year. Going into the fall, forbes begin to go dormant and deer diets switch more to browse plants. Browse plants are woody plant species that are slower growing and perennial making them a predictable food source. These two key features are the reason we use browse plants to determine how much "browsing pressure" animals are placing on the property. Then, in late winter many plants are dormant and winter grasses start to grow. Often, grasses growing in late winter are low in nutritional value and high in water content. At this time these grasses might comprise up to 90% of a deer's diet. They consume a lot of these to make up for low nutritional value. At this time, a deer's digestive system is capable of processing soft new growth of winter grasses. Other than this time of year, a deer will rarely eat grass. With the onset of spring, there is once again an abundance of food and the cycle continues. The key point in time is late winter because most plants are dormant and food is scarce. At this time, bucks are exhausted from rutting activities and pregnant does are growing fetuses. This is the most challenging time for deer and the perfect time for us to look for deer bites. Biologist developed a systematic browse survey methodology to quantify the preference and diversity of browse consumed on a property.

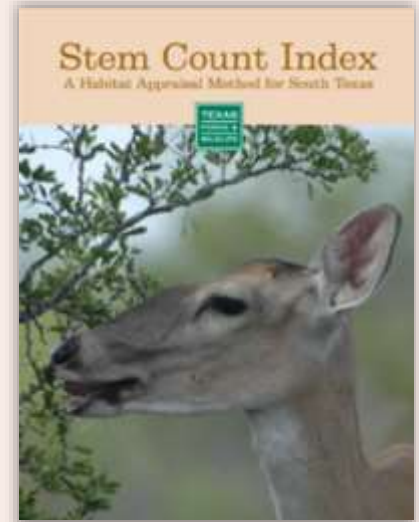


Photo © TPWD

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### *Counting Deer Bites: Using Small Observations to Make Big Management Decisions, continued*

Browse surveys are founded on the principal that deer prefer to eat more of the plants that that are most beneficial to them. We classify plants into categories of “First Choice”, “Second Choice”, and “Third Choice”. First choice being the most desirable and third choice being the least desirable. You can find detailed methodology in the Texas Parks and Wildlife Publication Stem Count Index, A Habitat Appraisal Method for South Texas to conduct the survey on your property. If you adapt some of these principals and techniques you can make a quick judgement on the condition of your deer habitat and also find the most productive hunting areas.

Also, remember that livestock consume these plants and compete with deer. Properties where cattle, sheep, goats, or other livestock are stocked excessively often do not have easily available browse for deer to consume. When this happens, deer prefer to use other areas or properties where livestock competition is minimal.

As you travel over a property, look at the end of stems on woody plants. You will notice that where no bites are present, browse species grow long slender branches with leaves. You will also start noticing branches with their ends bitten off that look stubby and broken. After you train yourself to distinguish between bitten branches and unbitten branches, it will start to become very apparent what deer are eating and what they are not. In a browse survey, we make many stops across a property counting multiple plant species at each stop. For each plant species, at each stop, we count 100 stems to determine the percent use of that plant species. For example: If we count 100 live oak stems and 50 of them are bitten, then we have 50% utilization of live oak at that spot on the property. After counting many different plant species at different locations on a property, a clear picture will appear. If you are not finding many bites, the browsing pressure is low. If every plant you see is covered in bites, then you are severely over populated.

For you to effectively survey deer browse, you must be able to identify a few plants across the spectrum of preference. Texas Parks and Wildlife has developed great introductory guides for different ecoregions across the state. For the Oak Prairie region of the state, refer to Common Browse Plants Utilized by White-Tailed Deer in South-Central Texas. Let us go over a few plants that can be found on most properties which can be helpful to gauge browsing pressure.

- First choice plants include green brier, cedar elm, and hackberry. These are the some of the most desirable species and you will typical see utilization of 35% or less on areas with low browsing pressure. When utilization exceeds 65% on these species it is an indication that the habitat is severely over browsed.



*Left: Yaupon stem not bitten by deer. Notice the long slender branches with tender leaves on its end. Middle: Deer bite on yaupon. Right: Deer bite on greenbrier. Photos © Trent Teinert, TPWD*

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**Counting Deer Bites: Using Small Observations to Make Big Management Decisions, continued**

- Second choice plants include bumelia, live oak, and yaupon. Since these sit on the threshold of desirability, they make great indicators of over browsing. With light browsing pressure you should expect to see less than 10% utilization. With heavy browsing you will see utilization approaching 45%.
- Third choice plants include eastern red cedar, Hercules club, and mesquite. In areas with light browsing you will see around 0 to 1% use. Once you observe greater than 15% use in third choice plants, you know food sources are limited. Seeing any browsing occurring on third choice plants is an indication that resources are being over utilized. If deer are browsing on third choice plants, this a big warning sign that they are really hungry!



Photo © TPWD

Use the Stem Count Index to judge the condition of your property over time. When you see browse utilization rates reaching high levels, this is a clear indicator that is time to remove some animals from the range. If you have livestock, consider reducing your stocking rate or implementing rotational grazing. If livestock are not the culprit for over browsing, then most likely the deer population is too high and it needs to be lowered. By allowing the most desirable plants to proliferate, and competition to be minimized, you will be turning your entire property into a food plot that will attract more deer and provide more nutrition for them. We all know that better nutrition means heavier body weights, healthier deer, and better antler production. Please check out the TPWD publications listed below to learn more about browse surveys, plant identification, and deer plant preference.

**Sources:**

*Common Browse Plants Utilized by White-Tailed Deer in South-Central Texas.* Texas Parks and Wildlife Department, 2009, PWD BR W7000-1222 (10/09).

[https://tpwd.texas.gov/publications/pwdpubs/media/pwd\\_br\\_w7000\\_1222.pdf](https://tpwd.texas.gov/publications/pwdpubs/media/pwd_br_w7000_1222.pdf)

*Rutledge, Jimmy, et al. Stem Count Index: A Habitat Appraisal Method for South Texas.* Texas Parks and Wildlife Department, 2008, PWD BK W7000-1666 (7/08).

[https://tpwd.texas.gov/publications/pwdpubs/media/pwd\\_bk\\_w7000\\_1666.pdf](https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_1666.pdf)



Trent Teinert has a B.S. and M.S. in Range and Wildlife Management both from Texas A&M-Kingsville. Trent started his career in 2011 with TPWD covering Victoria, Calhoun, and Refugio counties. In late 2013, Trent transferred over into the South Texas District and took on responsibilities in Karnes and Wilson Counties. District 7 was fortunate to be able to lure Trent back in 2015 and he began covering Gonzales and Guadalupe counties and caring for the Neasloney Wildlife Management Area. Trent resides in Seguin, Texas and is married to a wildlife biologist.

# Herbicide Applications: A Systematic Approach to Success

WRITTEN BY ROBERT TRUDEAU

**As we all know, spring time is just around the corner. Many Texans acknowledge spring as their favorite time of year. With spring rains, we rapidly get to witness green vegetation emerging upon the landscape with the wildflowers blooming underneath the bright blue skies. Without a doubt, it is a magnificent time of year.**

In the realm of wildlife management, we strive to manipulate and manage the habitat on our properties for the benefit of our native wildlife species, and ultimately our personal enjoyment. Across the state, landowners utilize herbicides for tackling vegetative problems. The reasons to utilize herbicides are numerous; however, brush control, exotic species control, competition control/reduction, and even ground preparation are some of the top reasons we utilize the wide variety of herbicides that are available on the market today. The effective use of herbicides is dependent on creating a plan of action and implementing it to its full extent.

There are a number of details we need to evaluate before a drop of herbicide hits the ground. Skipping this evaluation process could cause us to misuse a product and possibly realize unintended results. Completing this evaluation process or “research process” should result in us selecting the right herbicide, the correct application rate, and the proper application method to successfully accomplish the desired objectives of the project.

With any good research process, we have to first establish the goal of the project. What do you want to accomplish? Do you want to eradicate exotic grasses, ebb the encroachment of mesquite or huisache, or control the spread of Chinese tallow, etc.? By establishing the main goal of the project, we can then start to break things down into manageable portions. We should take into consideration the total acreage involved, how much personal time we have available, the availability of project funding, and the equipment or resource requirements that will be needed to complete the project.

The next step in the research process should involve learning about the targeted species of vegetation and what herbicides are available for control. Some key details to investigate in this phase are: 1) how the problem (plant) spreads (i.e. roots vs. seeds), 2) what are the growth characteristics (i.e. does it re-sprout if cut, does it re-grow from plant parts, etc.), 3) are there unique features the plant may exhibit (i.e. waxy coating on cacti, minimal leaf production, stress characteristics, etc.). These attributes will help us figure out what application method could work the best, what time of year and/or weather is needed, and if there may be additional needs such as surfactants, dyes, and post-treatments.

Up to this point, we have weighed the problem, examined the characteristics of the vegetation, and concocted a list of possible herbicides. With this list, we can now review the labels; evaluating and weighing the pros and cons for each of the possible options on the list. There is an array of concerns to consider when evaluating the pros and cons of an herbicide. Ultimately, we should be able to narrow down our options to one or two chemicals that will have the effect we want for our project. The list below contains some aspects that we might consider:

- Is any special licensing required? (restricted use vs. over the counter)
- Is it a pre-emergent or post-emergent herbicide?
- Is it a liquid, granular, powder, or pelleted format?
- When can it be applied? (temperature requirements, rain events, etc.)
- What is the application rate? (10% vs. 25%, 1 vs. 3 lbs. per acre, etc.)
- Can follow up treatments be made within a reasonable time?
- How much does it cost? (cost per acre)
- What application methods are approved use? (foliar spray, cut-stump, basal bark, etc.)
- What is it mixed with? (water, diesel, etc.)
- Can this be used on other issues (other target species) that exist on the property?

*Continued on page 12*

### *Herbicide Applications: A Systematic Approach to Success, continued*

- Will it have a diverse effect on desirables/non-target species?
- Can it be used near water sources? (streams, creeks, ponds, etc.)
- What is the re-entry period?
- Does it have any grazing/haying restrictions?
- What Personal Protective Equipment (PPE) is required?

Once we've selected the herbicide(s) we plan to utilize, we can then begin the implementation process; keeping in mind, we are responsible for how we utilize herbicides. As most of us may be aware, achieving a successful application is highly dependent on the working condition of the equipment and our ability to get it tuned properly. Herbicide application equipment and implements are highly variable and can range from spray bottles, a 90+ foot agricultural boom sprayer, to helicopters and planes. Each type of sprayer equipment needs to be tuned to achieve the desired effects.

When tuning our equipment, one should be mostly focused on establishing the application rate. This can easily be done on most sprayers by utilizing a measured amount of clean water over a distance and calculating the application rate (i.e. gallons per acre). Sometimes, the application rate will need to be adjusted to mitigate unwanted side-effects. Most commonly, adjusting the equipment's spray pressure and changing the size of the spray nozzles are variations employed to minimize spray drift onto undesirable areas and/or vegetation. Knowing the application rate of our equipment ensures we only mix what herbicide we need to cover the targeted area and that we stay within the guidelines specified on the specimen label. Exceeding the rates specified on the specimen label can cause major problems, not to mention it is against the law.

With tuned equipment and appropriate herbicide, it is now time to try some test plots. Most herbicides on the market today allow a variable mix ratio. Testing areas allows us to fine tune the mix ratios to achieve the desired results. The old saying that "more is better" is not always the case. Testing mix ratios can take some time. Starting with the lighter mix ratio for the targeted species, test small plots to evaluate how well the mixture will work. Mix ratios of some herbicides can be gradually increased, stopping when the maximum allowed mixture is reached or the desired results are achieved. Each different mixture should be tested to find the minimum effective ratio. Exceeding mix ratios and application rates identified on the specimen label is illegal and can cause major issues. Taking the time to find the low end of an effective mixture will definitely save us money and headaches down the road. Once the most effective ratio is found for our herbicide mixture, we can then start applying it to the designated area.

The efficient use of herbicides can be an effective tool to utilize for a wide variety of reasons. It can however, create some serious complications if not used properly.



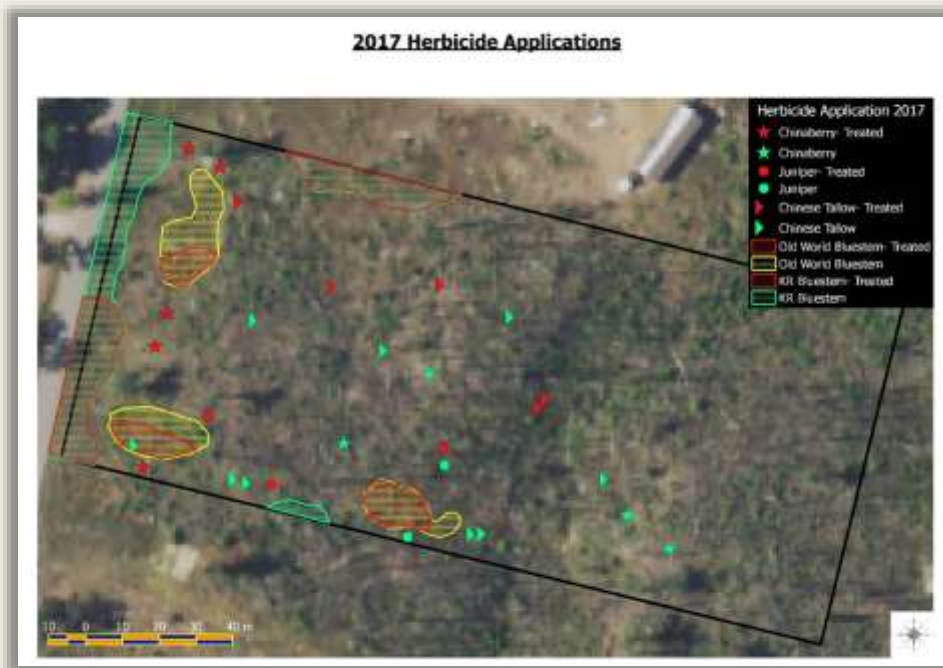
*Top: Equipment and supplies can vary. Remedy Ultra and diesel in a hand sprayer may be used to spot treat yaupon holly. Bottom: Basal bark application of yaupon holly. The blue hue is a dye additive used to identify treated stems. Photos © Robert Trudeau, TPWD*

### *Herbicide Applications: A Systematic Approach to Success, continued*

The success of any herbicide application lies in the patience an applicator has in learning and implementing the activity on the property. The methodic implementation of a herbicide program on a property can quickly provide some amazing results.

#### **Additional points to consider when gearing up for a possible herbicide application**

- The treatment of smaller areas allow for less financial and time commitments, and also circumvents creating voids in usable habitat.
- Keep your equipment in good operating condition, properly cleaned after every use and winterized as needed.
- Keep records of all herbicide applications. This includes the application rate used, area treated, species targeted, etc.
- Utilize GIS programs, such as Google Earth, and GPS units to help track treated/untreated areas.
- Use local professionals whose knowledge can assist the planning process. (Texas Parks and Wildlife Department, Natural Resources Conservation Service, Texas AgriLife Extension Service, Texas Forest Service, and others)
- Take time lapse photographs. Set a t-post in a random location within treated and untreated areas. Periodically take landscape photos while facing each t-post. This will allow you to see the treatment's effectiveness and the change in habitat over time.
- More is NOT always better!
- Last, but certainly not least... Be persistent. Herbicide applications are more than just a project, they're an in-depth process. Follow-up treatments and maintenance treatments are usually needed in the future.



*Utilizing GIS and GPS tools to help track vegetation problems and treated/untreated areas. From the map legend, you can see the landowner has some unwanted exotic species (King Ranch Bluestem, Old World Bluestem, Chinaberry, and Chinese Tallow) and is also managing the native juniper trees.*

*Photo © Robert Trudeau, TPWD*



*Robert Trudeau is the Wildlife Biologist for Bastrop and Caldwell counties and offices out of Bastrop. He graduated from Tarleton State University in 2011 with a Bachelor of Science in Wildlife Management and a minor in Biology. Robert was hired by TPWD in 2013, where he filled the position of Resource Specialist for the Lost Pines Complex until accepting his current biologist position in 2014. Prior to working for TPWD, Robert has also worked as a Biological Science Technician for the US Fish and Wildlife Service in South Dakota, Illinois, and Nebraska.*

# 2018 HLSR: Ranching and Wildlife Expo

WRITTEN BY DAVID FORRESTER

The 12th Annual Ranching and Wildlife Expo is scheduled to take place February 27-March 3, 2018 at NRG Center in Houston, Texas. The event is organized by the Ranching and Wildlife Expo Committee, with help from the Texas Parks and Wildlife Department, the All Breeds Committee, Texas A&M AgriLife Extension Service and the Texas Wildlife Association in conjunction with the Houston Livestock Show and Rodeo (HLSR). It is designed to showcase the complementary and beneficial relationships that can exist between a successful ranching operation and a successful wildlife program.

This year's expo will consist of presentations taking place February 27-March 1. There are also commercial vendor booths and a wildlife auction on March 2. Finally, a youth wildlife video competition (new this year) and poster competition and presentations by the winners will round out the Expo on Saturday, March 3. Past Ranching and Wildlife Expos have generated scholarship dollars for youth ranging from about \$235,000 in the early years to over \$500,000 recently.

Some of the presentations scheduled for this year's Expo include: Cattle and Market Report for 2018, H—Calf: Educational Committee Kickoff, Pen Design and Handling Techniques to Minimize Herd Stress, Managing for Cattle and Quail, Chemical Application to Benefit Grazing and Wildlife (1 CEU, General), Identifying Predators on your Urban or Rural Land (with live animals), Background and Implementation of Prescribed Burns, Brush Management and Considerations for Follow-up (0.5 CEU, General), Implements on the Ranch (0.5 CEU, General), Grazing Rotation for Maximum Cattle and Wildlife Benefit, Managing for a Healthy Deer Herd, Wild Game Preparation: White-tailed Deer, Learning Your Herps: Common Amphibians and Reptiles of Texas (with live animals), Managing Oil and Gas Production with Wildlife in Mind, Estate Planning, Profiting on your Land from Wildlife, 2017 Legislative Update, Ranch Financing Update and 2017 Texas Rural Lands Market Report and Wild Game Preparation: Exotic Deer and Antelope.

A complete schedule of topics and speakers is available on the HLSR website at: [www.rodeohouston.com/Portals/0/Content/VisitShow/Attractions/RanchingWildlifeExpo/Downloads/2018\\_Schedule\\_RanchingAndWildlifeSeminars.pdf](http://www.rodeohouston.com/Portals/0/Content/VisitShow/Attractions/RanchingWildlifeExpo/Downloads/2018_Schedule_RanchingAndWildlifeSeminars.pdf). Admission to the seminars is free. Pre-register today for a free gate and admission pass at: [www.eventbrite.com/e/ranching-wildlife-expo-seminars-tickets-39844952325](http://www.eventbrite.com/e/ranching-wildlife-expo-seminars-tickets-39844952325). For more information contact the TPWD District 7 office at 979-968-6591.

		<b>2018 Ranching &amp; Wildlife Educational Seminars</b>
<b>TUESDAY, FEB. 27</b>		
		<b>NRG ARENA, ROOMS 2 &amp; 3</b>
10:45 a.m.	Cattle Market Report and Outlook for 2017	Jeff Geider, TCU Ranch Management
11:45 a.m.	Lunch	All Breeds Committee
1 p.m.	H—Calf: Educational Committee Kickoff	Jason Cook & Barry Summerour, Show Volunteers
1:30 p.m.	Pen Design and Handling Techniques to Minimize Herd Stress	Dr. Ron Gill, TAMU Animal Science, Extension Livestock Specialist
2:30 p.m.	Managing for Cattle and Quail	Deborah Clark, Birdwell-Clark Ranch
3:15 p.m.	Chemical Application to Benefit Grazing and Wildlife (1 CEU, General)	Garry Stephens, Wildlife Habitat Federation
<b>WEDNESDAY, FEB. 28</b>		
		<b>NRG CENTER, ROOM 207</b>
noon	Identifying Predators on your Urban or Rural Land (with live animals)	Mary Anne Weber, Houston Audubon Society & Laura Sherrod, Texas Parks & Wildlife Dept.
12:30 p.m.	Background and Implementation of Prescribed Burns	Morgan Russell, PhD, Texas A&M AgriLife Extension
1 p.m.	Brush Management and Considerations for Follow-up (0.5 CEU, General)	Megan Clayton, PhD, Texas A&M AgriLife Extension
1:30 p.m.	Implements on the Ranch (0.5 CEU, Draft)	Stephen Deiss, Natural Resource Conservation Service
2 p.m.	Grazing Rotation for Maximum Cattle and Wildlife Benefit	Megan Clayton, PhD, Texas A&M AgriLife Extension
2:30 p.m.	Managing for a Healthy Deer Herd	Bobby Eichler, Texas Parks & Wildlife Department
3 p.m.	Wild Game Preparation: White-tailed Deer	Prasek's Hije Smokehouse, El Campo, TX
<b>THURSDAY, MARCH 1</b>		
		<b>NRG CENTER, ROOM 207</b>
11 a.m.	Learning Your Herps: Common Amphibians and Reptiles of Texas (with live animals)	Kelly Norrd
12:30 p.m.	Managing Oil & Gas Production with Wildlife in Mind	Chase Currie, San Pedro Ranch
1 p.m.	Estate Planning	Ramsay Slugg, US Trust, Bank of America
1:30 p.m.	Profiting on your Land from Wildlife	Greg Simons, Wildlife Systems
2 p.m.	2017 Legislative Update	Texas State Representative Kyle Kacal (R-College Station)
2:30 p.m.	Ranch Financing Update and 2017 Texas Rural Lands Markets Report	Joe Patterson, Vice President Ranch Lending, Crockett National Bank
3 p.m.	Wild Game Preparation: Exotic Deer & Antelope	Prasek's Hije Smokehouse, El Campo, TX

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## Upcoming Events

### JANUARY

- 13 Red Rock WMA Spring Meeting**  
114 Red Rock Rd, Red Rock, TX 78662  
Begins at 6:30 p.m.  
Contact Robert Trudeau at 512-332-7280 or [Robert.trudeau@tpwd.texas.gov](mailto:Robert.trudeau@tpwd.texas.gov)
- 19 Washington County Wildlife Society Winter Meeting**  
Social begins at 6:00 p.m., meal at 6:45 p.m.  
Washington County Fairgrounds Event Center,  
1305 E. Bluebell Rd., Brenham TX 77833  
To RSVP call 979-277-6212 or online at [www.wcwildlife.org](http://www.wcwildlife.org)
- 26 2017-2018 Wild Game Supper**  
Knights of Columbus Hall 321 US Hwy. 77 S.,  
Hallettsville, TX 77964. Doors open at 5:30  
p.m., meal at 6:30 p.m. Contact Richard  
Klimitchek at [rcklimitchek@gmail.com](mailto:rcklimitchek@gmail.com) or  
<http://kchall.com/wildgame-supper/>
- 27 Alum Creek WMA Spring Meeting**  
Bluebonnet Electric Cooperative Headquarters,  
155 Electric Ave., Bastrop, TX 78602  
3-5 p.m. Contact Robert Trudeau  
at 512-332-7280 or  
[Robert.Trudeau@tpwd.texas.gov](mailto:Robert.Trudeau@tpwd.texas.gov)
- 27 Western DeWitt County WMA Big Buck Contest**  
5D Lounge and Steakhouse ,  
Begins at 5:00 p.m.  
Contact Stephen Gowens at  
[nordheimian@yahoo.com](mailto:nordheimian@yahoo.com)

**JANUARY: TIME  
TO CLEAN OUT  
THOSE NEST  
BOXES! Make  
sure nest boxes are  
cleaned out and  
ready to go by  
the start of  
nesting season.**



Photo © Trey Barron, TPWD

### FEBRUARY

- 2 Lee County Wildlife Association Spring Meeting**  
The Silos: 1031 CR 223, Giddings, TX 78942  
Social starts at 5 p.m., meal at 6:30 p.m.  
Contact James Norment, President LCWA at  
979-571-6674 or Trevor Dickschat, Texas A&M  
AgriLife Extension Service, Lee County  
at 979-542-2753
- 9 15<sup>th</sup> Annual Neasloney Prescribed Burn Field Day**  
M.O. Neasloney WMA, 20700 St. Hwy. 80 N,  
Gonzales, TX 78629, 8:30 a.m. to 4:00 p.m. RSVP  
by 5:00 p.m. on February 8.  
Contact Trent Teinert at 830-203-0896 or  
[trent.teinert@tpwd.texas.gov](mailto:trent.teinert@tpwd.texas.gov)
- 10 Central DeWitt County WMA Annual Awards Banquet**  
VFW Hall  
Doors open at 5:00 p.m., meal at 6:00 p.m.  
Contact Jim Loos at [jloos74@yahoo.com](mailto:jloos74@yahoo.com)
- 24 Jackson County Wildlife Management Association**  
Jackson County Service Center located at 411 N.  
Wells St. Edna, TX 77957, Begins at 4:00 p.m.  
Contact Jim Theiss at 713-253-1135 or  
[jtheiss@comcast.net](mailto:jtheiss@comcast.net) or visit  
<https://www.facebook.com/jacksoncowildlife/>

*Continued on page 17*



*Upcoming Events, continued***MARCH**

- 24 Colorado County WMA Spring Banquet**  
Columbus K.C. Hall, 4:00 p.m.  
Contact Chad Emmel at 979-732-1399 for more information or visit [www.ccwma.org](http://www.ccwma.org) .

- 24 Meyersville WMA Meeting**  
Clem Waskow's , 5:00 p.m.  
Contact Hank Chinnery at [hchinnery@hotmail.com](mailto:hchinnery@hotmail.com)

**Rio Grande Turkey Spring Season**

(see TPWD Outdoor Annual for County Listings)

**North Zone** - March 31 - May 13

Special Youth Season: March 24-25, May 19-20

**South Zone** - March 17 - April 29

Special Youth Season: March 10-11, May 5-6



*Photo © Chase A. Fountain, 2012, TPWD*

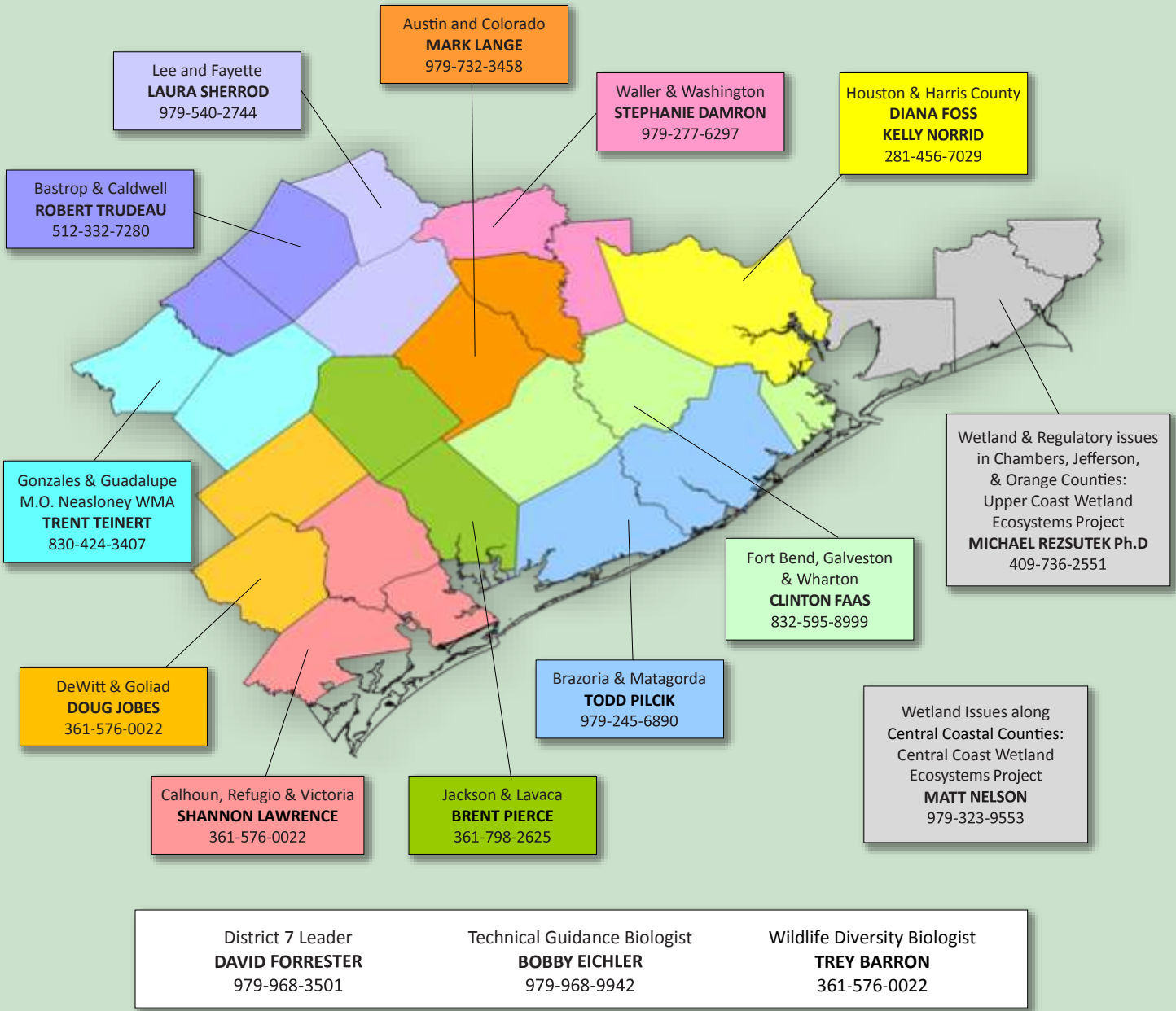
**APRIL**

- 13 22nd Annual Wildlife Activities and Practices Workshop**  
S.P.J.S.T. Nature and Education Center at Cooper Farm, 8:30 a.m. – 2:30 p.m.  
Contact Fayette County Appraisal District at 979-968-8383 to RSVP or for more information.  
RSVP required by April 11, lunch to be served.



*Photo © TPWD*

# Our Wildlife Biologists



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*"To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations."*

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