1-D-1 Open Space Agricultural Valuation
Wildlife Management Plan for the Year(s) 2021

Submit this plan to your County Chief Appraiser, not to Texas Parks and Wildlife Department

Part I. Owner Information **Account Number:** N/A

Owner's Name: Laurel Treviño M., Outreach Coordinator, Shalene Jha, Ph.D. Lab

Current mailing address: Integrative Biology, The University of Texas at Austin

City, town, post office, state and zip code: 78712

Phone number: 512-232-3521

Tract Name: Example of all applicable practices Majority County: Travis

Additional Counties (if any): Hays

Part II. Property Description

Legal Description of Property: Example of all applicable practices for educational purposes

Location of Property (distance and direction from nearest town; specify highway/road numbers):

Texas Hill Country South of Austin, 50 years ago former land use: ranching, current use: restoration

Is Acreage under high fence: ☐ Yes ☐ No ☒ Partial: (Describe) 8-ft North, 4-ft East bound

Total Acreage: 10 acres Ecoregion Edwards Plateau (7 TPWD) Balcones Canyonlands (30c EPA)

(refer to Comprehensive Wildlife Management Planning Guidelines)

Habitat Types and Amounts of Acres:

☐	Cropland		☒	Bottomland/Riparian Native	1 ac	☐ wetlands	
☐	Non-native Pasture		☒	Pasture/Grassland	3 ac	☒ timberlands	3 ac
☒	Native Range/Brush	3 ac	☒	Other (describe)	Oak Juniper Savannah climax vegetation type		

III. Species targeted for management. (List all that apply. Attach additional page(s) if needed)

☐ Deer ☐ turkey ☐ quail ☐ songbirds ☐ waterfowl ☐ doves ☐ bats

☐ Neotropical songbirds (List)

☐ Reptiles (list) ☐ Amphibians (list)

☐ Small mammals (list) ☒ Insects (list) Native Bees and Butterflies

☒ Identified species of concern (List) SGCN & native bee functional groups (TPWD manual)

☒ Other (List) https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/native-pollinators/media/TPWD-Native-Pollinator-Management.pdf

Part IV. Management Plan Goals and Objectives

Describe the wildlife management ***goals*** (*what you want the property to look like, or want to be able to do with it*) and ***objectives*** (*how you intend to achieve these goals)* for this piece of property. You may use an additional page if needed. (Note: This space will expand as you type.)

Restore Oak-Juniper Savannah, enhance wildflower prairies/meadows for native bees/pollinators

Part V. Qualifying Wildlife Management Activities

Check the wildlife management practices to be implemented on the property during the coming year that will support and achieve your management goals. A minimum of three practices is required.

- ☒ Habitat control
- ☐ Erosion control
- ☐ Predator control
- ☒ Making census counts to determine population.
- ☐ Provide supplemental supplies of water
- ☒ Provide supplemental supplies of food
- ☐ Provide shelters

Part VI. White tail Deer and Mule Deer Population Management

Is hunting to be a part of this wildlife management plan? ☒ Yes ☐ No

If YES, type of hunting: ☐ Lease hunting ☒ Family/guests only ☐ Both

List deer harvest for past three seasons:

Year:	20 years ago	Bucks:		Does:	
Year:		Bucks:		Does:	
Year:		Bucks:		Does:	

Population Management Goals:

Target Density for Pre-season Deer Population (fall density) _____

Target Sex Ratio (does/buck): _____

Target Production (fawns/doe): _____

Other (may be age, weight, antler measurements, browse conditions, etc.

_____

Deer Harvest Strategy (numbers, types of deer to be harvested to achieve goals):

Take sick, diseased, excessive amt. that cause over-browsing of native forbs, shrubs, trees

Part VII. Wildlife Management Association Membership

Are you a member of a wildlife management association (co-op)? ☐ Yes ☒ No

Are you a member of a wildlife property association? ☐ Yes ☒ No

Name of wildlife property co-op/association, if YES is checked. _____

Part VIII. Wildlife Management Activities

Check the activities you intend to implement during the year to support each of the wildlife management activities listed in Part V.

1. HABITAT CONTROL

☒ *Grazing management*. Check grazing system being utilized.

☐ 1 herd/3pasture ☐ 1 herd/4 pasture ☐ 1 herd/multiple pasture
☐ High intensity/low frequency (HILF) ☐ Short duration system
☐ Other type of grazing system (describe)

Prevent deer browsing within fence exclosures to conserve forbs (wildflowers)

Additional Information: Apply to 1% of site where pollinator management is practiced p.26 TPWD

☒ *Prescribed Burning*

Acres to be burned: 5 acres Planned burn date: late fall after grass seed shed

Additional Information: contract certified professional to burn small pocket prairies/meadows

☒ *Range Enhancement (Range Reseeding)*

Acres to be seeded: 10% or 10 acres Date to be seeded: Fall (Oct 1) or Spring (Mar 1)

Seeding Method: ☒ Broadcast ☐ Drilled ☐ Native Hay

Seeding mixture to be used: 9 sp. native wildflower 3 sp. bunchgrass (min 8 dry/3 wet areas)

Fertilized: ☐ Yes ☒ No

Weed control needed for establishment? ☒ Yes ☐ No

Additional Information: 3 different sp. per season Spring, Summer, Fall (Spring & Fall in dry areas)

☒ *Brush Management*. Acres to be treated: ~5 acres Check method of brush management:

☒ Mechanical

☐ grubber ☐ chain ☐ roller chopper/aerator ☐ rhome disc
☐ brush hog (shredder) ☐ dozer ☒ hand-cutting (chainsaw)
☐ hydraulic shears ☐ other (describe): Prevent soil compaction/erosion

☐ Chemical Kind: Rate: In winter = not foraging season

☒ Brush management design:

☐ block ☒ mosaic ☐ strips: width: Length:

Additional Information: Thin juniper/yaupon, retain hardwood logs/snags & grass stalks

☒ *Fence Modification*

Target species: ☐ pronghorn antelope ☐ bighorn sheep

Technique: ☐ fold up bottom of net-wire Gap width:

☐ replace sections of net-wire with barbed wire. Gap width:

Miles of fencing that will be modified:

☐ replace entire net-wire fence with barbed wire. Miles replaced:

Additional Information: Exclosures keep deer from browsing native flowering forbs, shrubs, trees

☒ *Riparian management and enhancement*

☐ Fencing of riparian area

☐ Complete fencing ☒ Partial fencing

☐ Deferment from livestock grazing

☐ Complete deferment ☐ partial deferment Season deferred : _____

☒ Establish vegetation

☒ Trees (list species) American sycamore (Platanus occidentalis)

☒ Shrubs (list species) Button bush (Cephalanthus occidentalis), Black willow (Salix nigra)

☒ Herbaceous species (list) Pigeonberry (Rivina humilis), Gold groundsel (Packera obovata), Violet (Viola missourensis)

Additional Information: Virginia creeper (Parthenocissus quinquefolia), Grape (Vitis mustangensis)

☒ *Wetland enhancement*

☐ Provide seasonal water ☒ Provide permanent water ☒ Moist soil management

☐ Other (describe) Small pond or water catchement good but not necessary

Additional Information: Cavity-nesting mason bees need mud to build nests/butterfly mud puddling

☒ *Habitat Protection for species of concern*

☒ Fencing ☐ Firebreaks ☐ Prescribed burning ☒ Control of nest parasites

☐ Habitat manipulation (thinning, etc.) ☐ Native/exotic ungulate control

☒ Other (describe) Clean wood/bamboo nests annually after bees emerge in spring

Additional Information: Exclosure fences around wildflowers. Appendix B, SGCN rare native bees

☒ *Prescribed Control of Native, Exotic and Feral Species*

☒ Prescribed control of vegetation ☒ Prescribed control of animal species

☒ Species being controlled: Feral hogs destroy riparian areas

☒ Method of control: best control invasive grass: Rx burns, worst: mow

Additional Information: Invasive Nandina, Chinaberry, Ligustrum, bamboo, KR bluestem, Johnson

☒ *Wildlife Restoration*

☒ Habitat restoration ☒ Wildlife restoration

☒ Target species: Native bees, App. B, functional bee gps. NSGC p.13

☒ Method of restoration: Control soil erosion/compaction, sow native seeds

Additional Information: Target native bee species, sow seeds/plant native bee plants

2. EROSION CONTROL

☒ *Pond construction and repair*

Surface area (acres): Small Number of cubic yards of soil displaced: _____

Length of dam (feet): _____ Planned date of construction: _____

Additional Information: A permanent source of water is preferable but not necessary

☒ *Gully shaping*

Total acres to be treated: _____ Acres treated annually: _____

Seeding mix used for reestablishment of vegetation: Favor perennial native forb & grass

Planned date of construction: Winter, NOT during pollinator foraging season, Spr-Fall

Additional Information: Install rock/log berms (branches, grass, mulch tucked upslope of berm)

☒ *Streamside, pond, and wetland revegetation.* Techniques used:

☐ Native hay bales ☐ Fencing ☐ Filter strips ☒ Seeding upland buffer

☐ Rip-rap, etc. ☐ stream crossings ☐ Other: _____

Planned date of construction: Winter, NOT during pollinator foraging season, Spring-Fall

Additional Information: Riparian vegetation (above) + sabal palm, rushes, sedges

☒ *Herbaceous and/or woody plant establishment on critical areas (erodible)*

☐ Establish windbreak ☒ Establish shrub mottes ☒ Improve plant diversity

☐ Improve wildlife habitat ☒ Conservation/no-till practices ☐ Manage CRP cover

Additional Information: Prevent soil compaction & erosion. Plant native bunchgrasses & forbs. Ground-nesting bees need small patches of non-compacted bare soil, p.26

☐ *Dike/Levee Construction/Management*

☐ Reshaping/repairing erosion damage ☒ Revegetating/stabilize levee areas

☐ Install water control structure ☐ Fencing

Additional Information: If revegetating, use native plants local to the Ecoregion listed above

☐ *Establish water diversion*

Type: ☐ Channel ☐ Ridge

Slope: ☐ level ☐ graded Length (feet) _____

Vegetated: ☐ No ☐ Yes

If Yes: ☐ Native: _____ ☐ Crop: _____

Additional Information: _____

3. PREDATOR CONTROL

☒ Imported red fire ants (verify prior to application that product is labeled for pasture use)

☐ Control of cowbirds ☐ Grackle/starling/house sparrow control

Method of control: ☐ Trapping ☐ Shooting ☐ Baiting ☐ Scare tactics _____

☐ Coyotes ☒ Feral hogs ☐ Raccoon ☐ Skunk ☐ Bobcat ☐ Mountain lion

☐ Rat snakes ☒ Feral cats/dogs

Method of control: ☐ Trapping ☐ Shooting ☐ M-44 (licensed applicators)

☐ Poison collars (1080 certified, licensed, applicator) ☐ Other _____

Additional Information: Ants, hogs disturb ground-nesting bees, cats kill birds who spread seeds

4. SUPPLEMENTAL WATER

☒ *Marsh/Wetland Restoration or Development*

☐ Greentree reservoirs ☐ Shallow roost pond development ☐ Seasonally flooded crops

☐ Artificially created wetlands ☐ Marsh restoration/development/protection

☐ Prairie pothole restoration/development/protection ☒ Moist soil management units

Planned date of construction: If managing, abstain during rainy & foraging seasons

Additional Information: 1% plot bare ground, mason bee mud nest material, butterfly mud puddling

☒ *Well/trough/windmill overflow/other wildlife watering facilities*

☐ Drill new well Depth: _____ Gallons per minute: _____

☐ Windmill ☐ Pump ☐ Pipeline: Size: _____ Length: _____

☐ Modification(s) of existing water source

☐ Fencing ☐ Overflow ☐ Trough modification ☐ Pipeline

Distance between water sources (waterers): _____

Type of wildlife watering facility:

☐ PVC pipe facility	#	_____	☐ Drum with faucet or float	#	_____
☐ Small game guzzler	#	_____	☐ Windmill supply pipe dripper	#	_____
☐ Plastic container	#	_____	☐ In-ground bowl trough	#	_____
☐ Big game guzzler	#	_____	☐ Inverted umbrella guzzler	#	_____
☐ Flying saucer guzzler	#	_____	☐ Ranch Specialties guzzler	#	_____

☐ Other: Any small permanent source of fresh aerated water enhances habitat,

Additional Information: but is not as necessary as nest/food habitat is

☐ *Spring development and/or enhancement*

☐ Fencing ☐ Water diversion/pipeline ☐ Brush removal ☐ Spring clean out

☐ Other: _____

Additional Information: _____

5. PROVIDING SUPPLEMENTAL FOOD

☐ Grazing management ☒ Prescribed burning ☒ Range enhancement

☐ Food plots Size: _____ Fenced: ☐ Yes ☐ No

Irrigated: ☐ Yes ☒ No

Plantings: ☐ Cool season annual crops: _____

☐ Warm season annual crops: _____

☒ Annual mix of native plants: Native bee plants per Ecoregion

☒ Perennial mix of native plants: Native bee plants per Ecoregion

Additional Information: Mix annual/perennials, 9 spp native plants (3 bloom/season). If not possible, minimum of 8 spp., 3 season (wet areas), 2 spp/season (dry)

☐ *Feeders and mineral supplementation*

Purpose: ☐ Supplementation ☐ Harvesting of wildlife

Targeted wildlife species: _____

Feed type: _____ Mineral type: _____

Feeder type: _____ Number of feeders: _____

Method of mineral dispensing: _____

Number of mineral locations: _____

Year round: ☐ Yes ☐ No If not, state when:

Additional Information: _____

☒ *Managing tame pasture, old fields and croplands*

☒ Overseeding cool and/or warm season legumes and/or small grains

☐ Periodic disturbance (Discing/Mowing/Shredding) ☒ Conservation/no-till

Additional Information: Native legumes: bluebonnet (Lupinus texensis), Senna lindheimeriana, Illinois bundleflower (Desmanthus illinoensis) (more below)

☒ *Transition management of tame grass monocultures*

☒ Overseed 25% of tame grass pastures with locally adapted legumes

Species planted: ☒ Clover ☒ Peas ☐ Vetch ☐ Other: Native legumes

Additional Information: Prairie clover (Dalea emarginata), gold prairie clover (Dalea aurea), partridge pea (Chamaecrista fasciculata) (more above)

6. PROVIDING SUPPLEMENTAL SHELTER

☒ *Nest boxes* Target Species: 25% are cavity-nesters: occupy/carve holes in soft wood

☒ Cavity type. # wood ☐ Bat boxes. # _____ ☐ Raptor pole. # _____

Additional Information: Woodblocks, bamboo shoots (diameter & length of a pencil shaft)

☒ *Brush piles and slash retention*

☐ Type: ☒ Slash ☒ Brush piles Number per acre: low wildfire fuel

Additional Information: Leave some grass stalks and small pithy stems for small cavity-nesters

☒ *Fence line management* Length: _____ Initial establishment: ☐ Yes ☐ No

Plant type established: ☐ Trees ☐ Shrubs ☐ Forbs ☐ Grasses

Additional Information: Exclusion fences around food plots where native seed is sown (1%)

☒ *Hay meadow, pasture and cropland management for wildlife* Acres treated: _____

Shelter establishment: ☐ Roadside management ☐ Terrace/wind breaks ☐ Field borders

☐ Shelterbelts ☐ Conservation Reserve Program lands management

Type of vegetation: ☐ Annual ☐ Perennial

Species and percent of mixture _____

☒ Deferred mowing Period of deferment: After bunchgrasses shed seeds in late fall

☒ Mowing Acres mowed annually: Mow natives only if needed before sowing

☒ No till/minimum till

Additional Information: drill 3/8 inch deep in dry soil (not moist or muddy) to avoid compaction

☒ *Half-cutting trees or shrubs*

Acreage to be treated annually: thickets Number of half-cuts annually: winter

Additional Information: Only old/damaged trees, leave stumps/logs for carpenter bees

☒ *Woody plant/shrub establishment*

Pattern: ☐ Block ☒ Mosaic ☐ Strips: Width: _____

Acreage or length established annually: _____ Spacing: _____

Shrub/tree species used: native Sambucus, Rubus, Vernonia, Silphium, Symphoricarpos

Additional Information: native Acer, Ulmus, Quercus, Prunus, Cercis

☒ *Natural cavity/snag development*

Species of snag: Oak, Elm Size of snags: _____ Number/acre: _____

Additional Information: 25% native bees are cavity nesters, occupy/carve holes in old wood

7. CENSUS

☒ *Spotlight counts* Targeted species: Native bees on flowers per instructions below

Length of route: 2x50m at 5m/min. Visibility of route:

Dates (3 required) A. April ~15 B. July ~15 C. October ~15

Additional Information: walk 1 transect/acre (160 ft x 6 ft) 15 minutes steady pace, ID bees & fls

☒ *Standardized incidental observations* Targeted species: Native Bees

Observations from: ☐ Feeders ☐ Food plots ☐ Blinds ☐ Vehicle ☒ Other on flower

Dates: April ~15, July ~15, October ~15 or 2x (foraging season), same period/yr, 3 yrs

Additional Information: w3.biosci.utexas.edu/jha/wp-content/uploads//Pollinator-Habitat-Surveys

Stand counts of deer (5 one hour counts per stand required). Number of stands:

Dates:

Additional Information:

Aerial Counts Species counted:

Type of survey: ☐ Helicopter ☐ Fixed-wing

Percent of area surveyed: ☐ Total ☐ 50% ☐ Other:

Additional Information:

☐ *Track counts:* ☐ Predators ☐ Furbearers ☐ Deer ☐ Other:

Additional Information:

☐ *Daylight deer herd/wildlife composition counts*

Species: ☐ Deer ☐ Turkey ☐ Dove ☐ Quail ☐ Other

Additional Information:

☐ *Harvest data collection/record keeping*: ☐ Deer ☐ Game birds

☐ Age ☐ Weight ☐ Sex ☐ Antler data ☐ Harvest date

Additional Information:

☐ *Browse utilization surveys* (thirty 12-foot circular plots required)

Additional Information:

☒ *Census of endangered, threatened, or protected wildlife.* Species: native bees SGCN

Method and dates: Fixed route bee survey (above) & optional/modif. veg. survey below

Additional Information: veg survey: 10 1x1m quadrats per 4m of transect (4x4ft square/12ft)

☒ *Census and monitoring of nongame wildlife species.* Species: Native bees (see above)

Method and dates: Fixed route survey: 1 transect/acre 2x50m (160x6 ft) 15 min

Additional Information: Sp, Sum, Fall, or 2x in foraging season, same period 3-5 consecutive yr

☒ *Miscellaneous Counts:* Species being counted: Native Bees

☐ Remote detection (i.e., cameras) ☐ Hahn (walking) line ☐ Roost counts

☐ Booming ground counts ☒ Time/area counts ☐ Songbird transects and counts

☐ Quail call and covey counts ☒ Point counts ☐ Small mammal traps

☐ Drift fences and pitfall traps ☐ Bat departures ☐ Dove call counts

☐ Chachalaca counts ☐ Turkey hen/poultry counts ☐ Waterfowl/water bird counts

☐ Alligator nest/census counts ☒ Other: Modified Survey (see webpage above)

Additional Information: Estim. abundance/sp. monitor diversity/abundance 3-5yr population trend

IX. Additional Supporting Information. (Optional)

Attach any other supporting information, such as maps or photographs that you believe to be relevant to this wildlife management plan.

I certify that the above information provided by me in this application is to the best of my knowledge and belief, true and complete.

Landowner Signature _____ Date _____

This area for use only if the wildlife management plan was prepared for the above landowner for a fee by a wildlife professional or consultant. *

	The University of Texas, Austin
Signature of person preparing wildlife management plan.	Date
Laurel Trevino M.	2021
Company	Phone Number

*Signature by TPWD not required for this plan to be valid.

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