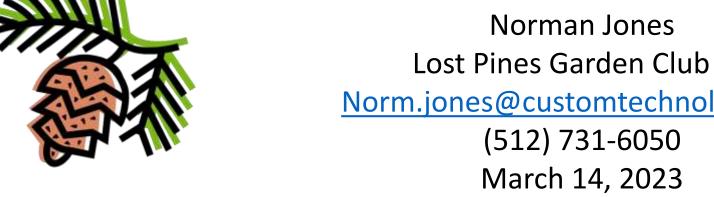




Support of Wildlife in Suburban and Rural Properties

Lost Pines Garden Club VP

Norm.jones@customtechnology.com



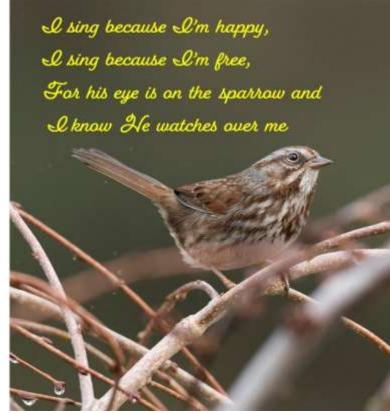


Summary

- Provide an overview of practical measures to support wildlife in suburban and rural properties
- Gardeners and residents have an opportunity to help support:
 - Wildlife
 - Conservation, preservation, and natural beauty of land
 - Rural property owners have an additional opportunity to preserve farms/ranches to benefit:
 - Themselves including reduced property taxes by "Texas Ag 1-d-1 Wildlife"
 - Our environment and our community
- Provide and overview of practical projects to support wildlife and conservation such as "birdhouses"
- Provide an overview of projects to support wildlife in Bastrop and Smithville parks and churches
- Provide brief overview of "Texas Ag 1-d-1" benefits and steps

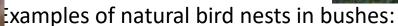
Birdhouse Purposes

- Enhance opportunity for birds as "God's creatures" to thrive and raise their families
- Provide protection from weather, predators, etc. for mothers and nestlings









Nests susceptible to severe weather (wind, rain),



Wood duck house with predator control predators (e.g., squirrels, racoons, snakes, fire ants, etc.) (pole shorter than planned)

Planned Bird Houses



Native songbird (e.g., Bluebird), Wood Duck, Bat houses, Owl

- Install on poles (e.g., 8' T posts)
- Install guards for predators such as squirrels, racoons, snakes
- Check and clean every few months
- Some weathering is expected but plan to replace in approximately 4 years

Wood Duck house approximately 3 years old and still functional





Texas Bluebird Society Design and Wood Duck houses



Wood Duck House

www.ducks.org/conservation/waterfowl-research-science/build-a-wood-duck-box Build a Wood Duck Box

These wooden structures help boost local wood duck populations, and may also be used by other cavity nesting birds.



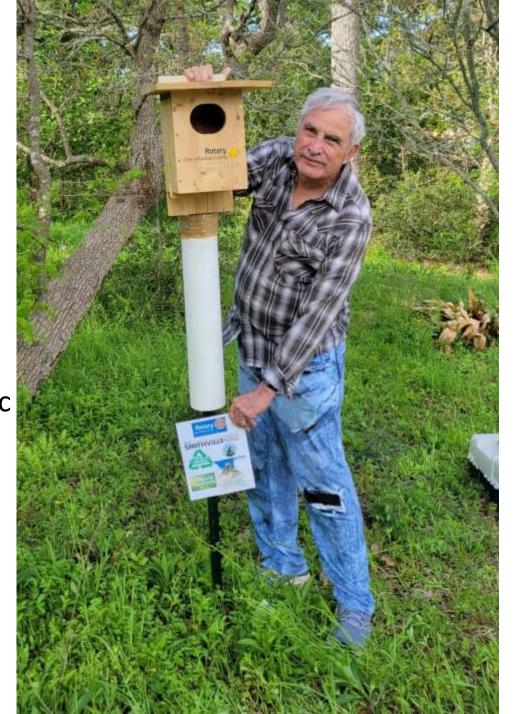
A Home for Wood Ducks and Others





Example of Duck House on T post pole with Predator Guard and sign

- Illustrates configuration with Duck house, Bluebird house would be similar
- This is mounted on a short T post
 - T post is normally 8' long in ranch, 10' on public parks
- Owl and bat houses mounted high on poles



Predator Control for Bird Houses

www.thespruce.com/protecting-bird-houses-from-predators-386633

- Protect nesting birds from predators such as racoons, squirrels, or snakes
- Mounting bird house on pole (e.g., "T post") is simple and effective
 - Predators can readily climb trees
 - Flexible placement of bird house location
- Snake netting deters rat snakes



- 4"x10' solid pipe
- Lowes 187408 \$13.61 for 10'
- Stovepipe predator guard for mounting pole
- Cut into five 2' sections



- Picture with 8' T post and "stovepipe[e guard
- 10' T post is recommended for public spaces to minimize vandalism and increase comfort for birds

Sign for Bird House Posts

8"x10" sign

- Sign for T posts (or poles)
 - Shows aspects
 - Mount on T posts
 - 8"x10"
 - PVC/aluminum sign on T post (or pole)
- Front of bird house is CNC laser engraved with color with Rotary logo





Nest Camera

Last purchased Feb 18, 2023
 View order

Use for observing nestlings and mothers without disturbance

Set ren







WIWACAM WiFi Bird Box Camera, 4K HD WLAN, Live Video to Phone, Easy Installation to Most of Bird Box Bird House Birdhouse Feeders Nesting, for Robins, Wrens, Tree Swallows, with Night Mode, Recording

Brand: WIWACAM

★★★★☆ ∨ 3 ratings | 3 answered questions

Price: \$59.90 Vprime One-Day

FREE Returns Y

Coupon: \
Terms \(\)

15% coupon applied to one item per order at checkout

Earn 5% Back on this purchase when you pay with your Amazon Business Prime American Express Card.

Eligible Prime membership required. Terms and cap apply.

Brand WIWACAM

Special Feature Night Vision, Motion Sensor

Connectivity Wi-Fi

Protocol

Controller Type Android

Mounting Type Wall Mount

Examples of Bat and Bird House Installation





- Jan 8, 2023 at Kovar Ponds Ranch
- Bat house on electric power pole
- Bird house with stovepipe predator guard and snake netting
- Also installed NWF "Certified Wildlife Habitat" sign



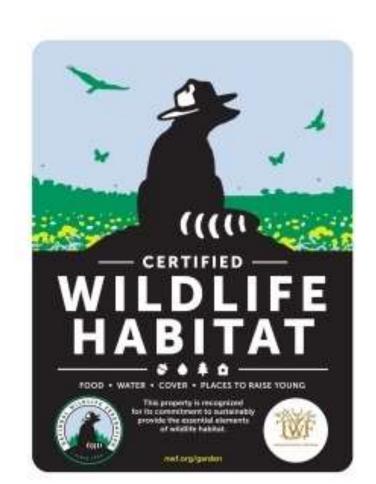
National Wildlife Foundation

- It is possible to have areas in Smithville apply for and obtain NWF recognition as "Certified Wildlife Habitat"
- Riverbend Parks already "Certified Wildlife Habitat"
- Garden for Wildlife (nwf.org)
 www.nwf.org/CertifiedWildlifeHabitat



- The NWF program certifies wildlife-friendly land for homeowners, businesses, schools, universities, places of worship, parks, and community-based organizations as community wildlife habitats
- Example locations:
 - Smithville city property such as Riverbend Park, Railroad museum park, etc.
 - Private property
 - Churches in Smithville

Bastrop and Smithville Parks, Gardens, etc. as Certified Wildlife Habitat



www.nwf.org/CertifiedWildlifeHabitat
The **NWF program** certifies wildlife-friendly land
for homeowners, businesses, schools,
universities, places of worship, parks, and
community-based organizations as community
wildlife habitats.







Rotary Club of Bastrop County project but could be replicated by other organizations!



Norman Jones

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(512) 731-6050 March 2023





Summary of Bird Houses for Cities of Smithville and Bastrop

- A public service project for public spaces such as city parks or City Hall
 - Support of protecting the environment and education
- Provide houses for birds native to (or migrating through) our Central Texas area
 - Support "our feathered friends"
 - Help maintain a natural environment in rural or suburban areas
 - Provide supplemental shelter for wildlife (e.g., native birds) while discouraging predators
 - Houses are available for songbirds (Texas Bluebirds, etc.), ducks, or bats, and owls

Club of Bastrop Count

Serving the Community since 1990

 Install at locations including Fisherman's Park in Bastrop and Riverbend Park in Smithville



Extension of Bird Houses for Cities of Smithville and Bastrop



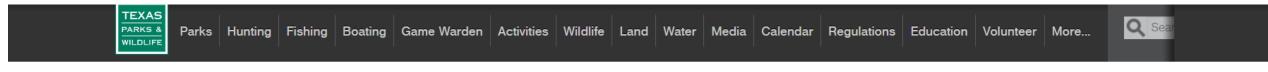
- The Rotary Club of Bastrop County is doing this as a public service project for the Cites of Bastrop and Smithville
- A related project is for "Prayer Gardens" at churches (e.g., FUMC Smithville)
- These measures <u>actively</u> support wildlife and our environment
 - Are not complicated or expensive
 - Other organizations such as Lost Pines Garden Club, Master Naturalist/Gardeners, Lions Club, Audubon Society, church, etc. could readily replicate this for the benefit of people and our natural environment

Possible Considerations and Locations for Bird Houses in Bastrop and Smithville

- Should be visible to the public (with signage) but not in unprotected area with excessive people, vehicle, or pet area to disturb nesting birds
- Located on City owned property
- Fisherman's Park in Bastrop
- Smithville
 - Railroad museum/Smithville Chamber: 1-2 Native songbird (e.g., Bluebird)
 - Riverbend Park:
 - 2+ Native songbird in open areas but near trees
 - Wood Duck on banks of the Colorado River
 - Bat and owl house
- Future: At garden area near highways 71 and 95 (TX DOT Green area)
- Schools, other, Serenity Star Ranch

Proposed Bird Houses Support Bastrop "Bird City Certification"





Bird City Texas

About Resources - FAQ How to Apply Contact Us

Bastrop: Bird City Texas Certified Community

Learn more about the excellent work being done in Bastrop to involve their community, improve habitat, and create safer spaces for birds. Below you will find some details about Bastrop as well as a few examples of the local bird-friendly initiatives they have implemented that led to their Bird City Texas official certification. This list is not exhaustive but hopefully helps give insight on what local communities are doing to support birds and the spaces where they live hope these examples help you discover ways your community can work to protect birds and their habitat where you live.

Details



Approach

- City of Smithville decides on projects including locations of birdhouses (e.g., six)
 - Example: Riverbend park, Railroad/Smithville Chamber area
 - Augment Rotary members with "birders" such as Audubon Society
- Let people know these birdhouses exist and the purpose
- Assess results and next steps
- Rotary Club (ideally with the public) maintains the houses such as checking at least twice a year
- Birdhouses will weather and eventually need replacement for a limited cost and time
- Project in Bastrop

Additional Considerations

- Support of wildlife is also relevant to the rural character of Smithville and Texas
- Growth and development is happening and can be beneficial
- Support of appropriate growth/development is desirable
- One aspect of that can be an approach for support of Texas Ag based upon "Wildlife/open space" for Texas Ag 1-d-1
 - One example is our Kovar Ponds Ranch south of Smithville where we (and our neighbors) support wildlife
 - We are in process of installing many native bird, Wood Duck, owl, and bat houses with predator guards as part of our family love of wildlife/natural environment/conservation, and Texas Ag 1-d-1

Texas Ag 1-d-1: Wildlife

- A viable approach for conservation and preservation of large rural ranches/farms
- Maintain Texas Ag 1-d-1 valuation for low property taxes on land with limited work and expense
- Traditional Texas Ag (1-d) such as cattle can degrade properties and involve significant work, expense, and risks
- Property Texas benefits (land but not houses) of Texas Ag 1-d and 1-d-1 are the same
- Some info at Ag-Use Exemption: Fact or Fiction? (tamu.edu)

TX Ag 1-d-1 (open space/wildlife) Aspects

Texas Ag 1-d-1 rules require "3 out of 7" measures in an approved and executed plan

1. Supplemental food:

- 1. Wild bird food (sunflower seeds) in bird feeder on pole
- 2. Other measures such a food plots, etc. are also being done
- 3. There will be a nearby traditional deer feeder

2. Supplemental water

- 1. Metal/concrete stock tanks, rainwater collection
- 3. Census (wildlife and predators)
 - Game cameras (2) on pole to record wildlife activities and effectiveness of the system
 - Food and water will attract desirable and undesirable (e.g., feral hogs, raccoons)
 wildlife.
 - 3. Record data in log books/spreadsheet

TX Ag 1-d-1 (open space/wildlife) Aspects of Continued

4. Predator control

- 1. Predator baffle (snake, racoon, etc.), and netting at bird houses
- 2. Other: Fire ant poison, Raccoon traps and feral hog shooting as needed
- 3. "Tanglefoot" insect barrier for fire ants

5. Supplemental shelter

- 1. Bird house, duck houses, bat houses on snake/squirrel proof mounting pole
- 2. Nearby are brush piles and woods for wildlife

6. Habitat control: improve environment for wildlife

1. Limit cattle, planting of desirable vegetation, invasives control, etc.

7. Erosion control

Birds at "Kovar Ponds Ranch"

Recorded on game camera



Backup slides on birdhouse construction

Owl Box House

www.audubon.org/news/how-build-screech-owl-nest-box

Plan calls for 1x10 8' cedar or Cyprus

Activities

How to Build a Screech-Owl Nest Box

Step-by-step instructions for building a home that Eastern and Western Screech-Owls will enjoy.







- An owl house is rather large and heavy
- Best mounted on a high pole (e.g., metal)

Materials for House for Native birds, Ducks, Bat, and Owls

	Α	В	С	D	Е	F
1	Materials for Houases for Native Bird, Wood Duck, bat and owl houses)					
2						
3	Item	Cost	Quantity	Total	Source	
4	Bird house: native song bird	\$11.00		\$0.00	SturdiBilt (Paul Beach	y)
5	Bird house: Texas Bluebird Society style	\$18.00	1	\$18.00	SturdiBilt (Paul Beach	y)
6	Wood Duck house	\$18.00		\$0.00	SturdiBilt (Paul Beach	y)
7	Bat house			\$0.00	SturdiBilt (Paul Beach	y)
8	Owl box	\$50.00				
9	T post, 8'	\$8.79	1	\$8.79	Tractor Supply 36091	4699
10	Strapping for mounting bird house	\$0.38	2	\$0.77	Lowes 301796 \$9.62	for 25
11	4" PVC pipe for stovepipe predator guard	\$3.50	1	\$3.50	Lowes 279187 (5 fror	n 10')
12	Snake netting for predator guard (option	\$1.00				
13	Hardware cloth for predator guard	\$0.75	1	\$0.75	Lowes 492408 \$56 fo	r 25'x
14	Miscellaneous	\$1.00	1	\$1.00		
15	CNC laser engraving (optional)	\$3.00	1	\$3.00	DV Laserworks Bastrop	
16	NWF sign	\$12.00	1	\$12.00		
17	Sign for post 8X10 nine per 24x30 sheet	\$2.56	1	\$2.56	Aluminum PVC cord E	Board (
8			TOTAL	\$50.37		

A Good Single Board Songbird Native Birdhouse

- https://youtu.be/MqDcem62MP0
- (1) How to Make a Birdhouse with 1 board | Simple DIY Bing video

- May be optimum design
- Uses single 1x6 cedar fence picket



1.5" hole

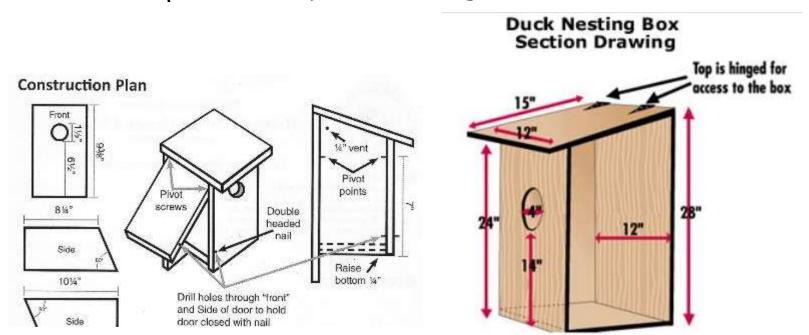
Some More Birdhouses





Other Information on Bird and Bat Houses

- Provides supplemental shelter for birds
- Bird houses plans at: 28 Free DIY Birdhouse Plans You Can Build Today (thespruce.com)
- http://www.nabluebirdsociety.org/PDF/Eastern%20-%20Western%20Bluebird%20Nestbox%20plans.pdf
- Wood Duck https://www.ducks.org/conservation/waterfowl-research-science/wood-duck-boxes
- Bat house plans at: https://www.nwf.org/en/Garden-for-Wildlife/Cover/Build-a-Bat-House





Texas Bluebird Society Birdhouse

- www.texasbluebirdsociety.org/BuildingPlans.php
- Has swing out door
- Made of white pine 1x12 3' (or glued up boards)
- Lowes 1368 \$23.38 for 1x12x8' for \$23.38
 - Makes 2+ houses (2' left over)
- Texas Bluebird Society sells for \$30



Wood Duck House

www.ducks.org/conservation/waterfowl-research-science/build-a-wood-duck-box Build a Wood Duck Box

These wooden structures help boost local wood duck populations, and may also be used by other cavity nesting birds.



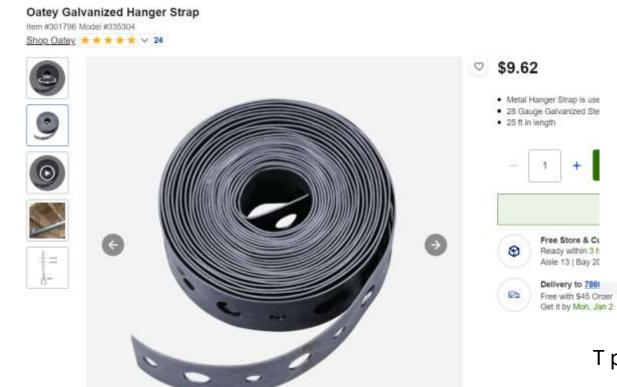
A Home for Wood Ducks and Others

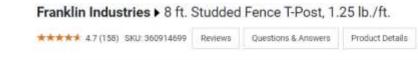


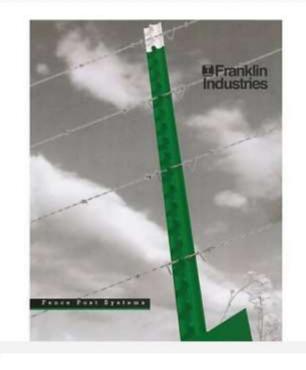


Mounting of Bird House

25' can be used with 12 bird houses







\$8.79

Specifications

As a Neighbor, you are eligible to earn 1 point per dollar on this purchase. Join Now

Bulk Discount buy 400 get 5% off each. Learn More

The Franklin Industries 8 ft. Studded Fence T-Post features an ang stud that helps hold the fence against the post. With a large anchor plate that provides greater holding power, this 8 ft. studded fence post is finished with enamel for rust-resistance above and below ground. 5 clips are included with the fence T-post for easy, conveninstallation.

- · Angled stud helps hold the fence against the fence T-post
- · Large anchor plate provides greater holding power
- Finished with enamel for rust-resistance above and below to ground
- · 5 clips included with the fence T-post for easy installation
- Comes in an 8 ft. size; 1.25 lb. per ft.

Additional Product Information:

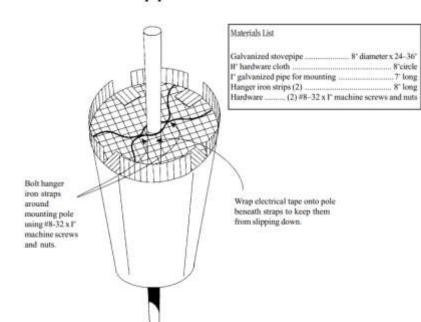
T posts are very study and readily installed even on hard ground

Stove Pipe Predator Guard

PREDATOR BAFFLES: Easy, Inexpensive and Effective | Bluebird Conservation https://bwdmagazine.com/solve/stovepipe-baffle/ 6"x34"

YouTube https://bwdmagazine.com/solve/stovepipe-baffle/

A Plan for a Stovepipe Predator Baffle



- 8"x24" Lowes 36398 \$9.28
- 6"x60" Lowes 36444 \$15.88
 - Cut into three

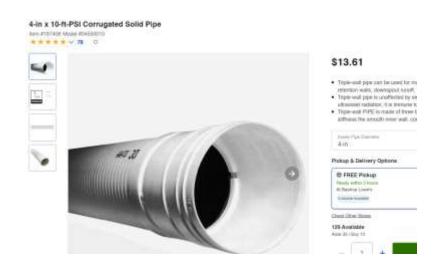


Summary of Bird Houses for City of Smithville

- A public service project for public spaces such as city parks or City Hall
 - Support of protecting the environment and education
- Provide houses for birds native to or migrating through our portion of Central Texas
 - Support "our feathered friends"
 - Help maintain a natural environment in rural or suburban areas
 - Provide supplemental shelter for wildlife (e.g., native birds) while discouraging predators
 - Houses are available for songbirds (Texas Bluebirds, etc.), ducks, or bats
- Install at locations such as Riverbend Park and Railroad Museum/Chamber area

Stovepipe Style Predator Baffle Using Plastic Pipe

- Slick, wobbly surface should deter any predator
- 18" long vinyl should be satisfactory
- Top with poultry netting or hardware cloth
- Vinyl: Optimum:
 - Minimal dangerous sharp edges
 - Simple to build (miter saw with fine blade)
- Metal stovepipe
 - Traditional
- Can add optional bird netting skirt below the guard as a rat snake catcher in a farm/ranch environment



Cut with power miter saw





Squirrel, Snake, and Racoon Proof Bird Feeder

and Bird House

- Added part of the "Wildlife Support system"
- Can be used for wild bird feeder or bird house
 - Supplemental shelter and food
- Use combination of metal cone (use plasma cutter) and skirt of made of bird netting to deter and catch snakes
- Make base from scrap steel and 4'x4' cattle panel
- Use ½" electrical conduit for support
 - 7' vertical, 3' horizontal bar
- Pivots down for refilling



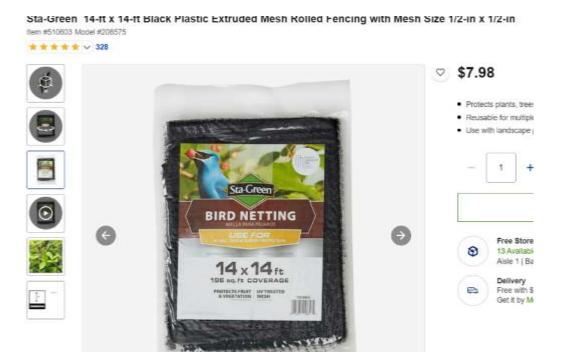
Custom artwork and support (Smithville Tiger)

Baffle and netting for predators

Pivot for refiling of bird seed

Bird Netting for Rat Snakes: form into skirt and fasten with tie wrap to conduit

Lowes



Amazon



for birds who will not become trapped or entangled.

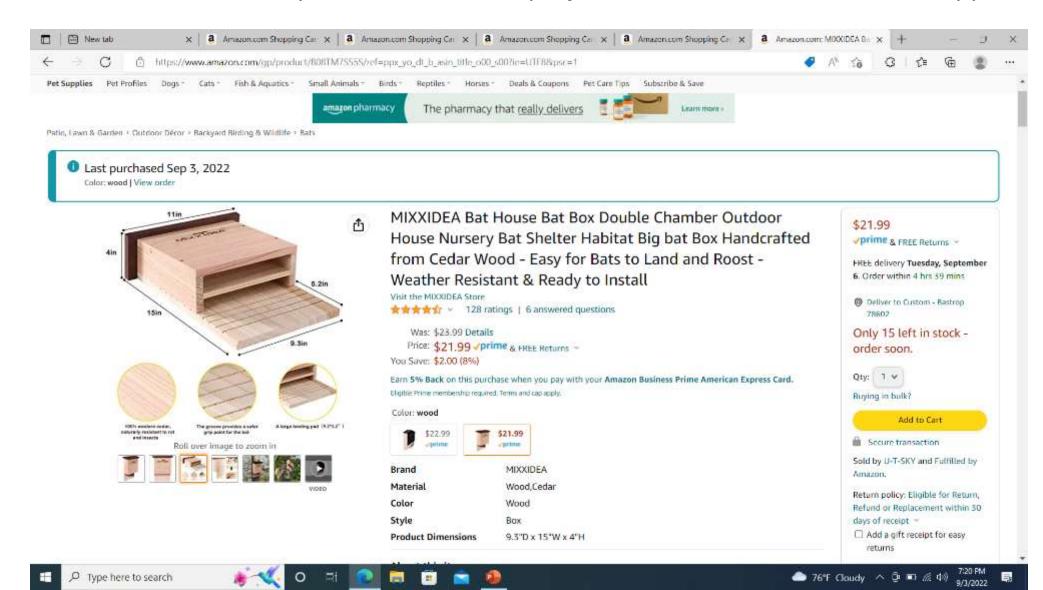
Wood Duck House at Kovar Ponds Ranch



August 22, 2022



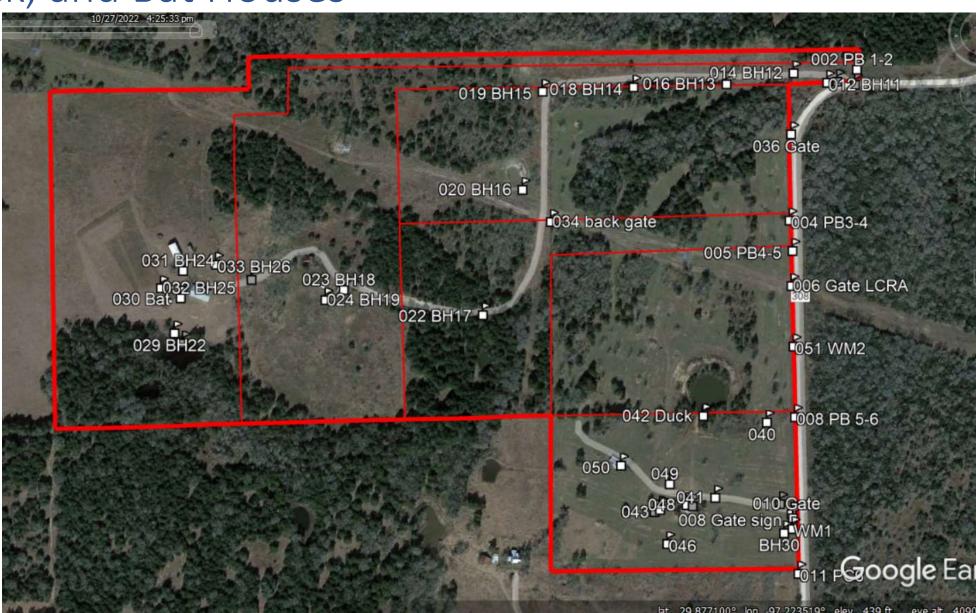
- It is possible to build this or some version
- www.thespruce.com/bat-house-plans-4775009
- Bat House diy.dunnlumber.com/projects/how-to-build-a-bat-house?pp=1



Wildlife Census

- Have record log to document results of effectiveness and use by wildlife of the "Wildlife Support System"
 - Useful for general interest and as one (or 7) steps in Texas Ag 1-d-1
- Examples:
 - Birdhouses: clean semi-annually and note evidence of nesting
 - Bird houses and feeders: note evidence of rat snakes which we caught in netting

Example of Marking Locations of Native Bird, Wood Duck, and Bat Houses



Game Camera for Census

t purchased Feb 18, 2020

: 14 Megapixel | View order



Share

Wildgame Innovations Terra Extreme Megapixel IR Trail Camera

Visit the Wildgame Innovations Store

**** 2,076 ratings | 87 answered questions

Price: \$44.99 Vprime One-Day & FREE Returns V

Earn 5% Back on this purchase when you pay with your Amazon Busine Prime American Express Card.

Eligible Prime membership required. Terms and cap apply.

May be available at a lower price from other sellers, potentially without free Prime shipping.

Style: 14 Megapixel

Recommended Game

Uses For Product

Brand Wildgame Innovations

Model Name Terra Extreme 14 Megapixel IR Trail Camera | Sti

Images and Video

Connectivity Infrared

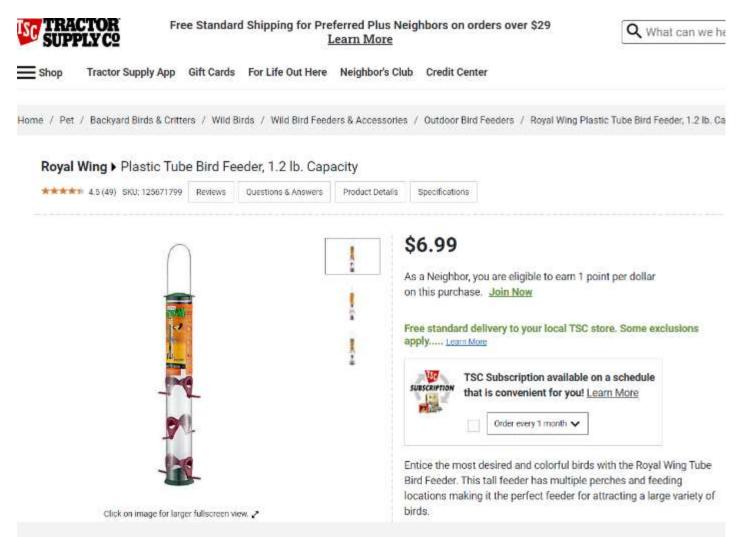
Technology

Power Source Battery Powered

About this item

- · Wildgame Innovations Trail Cameras Terra 14 Megapixel Trail Camera
- Terra Extreme Trail Camera 14 Megapixel Game Camera in Trubark Camo | Video capabilities for gathering further intel on deer herd. IR Flash range and Detection Range out to 65 feet

Bird Feeder: Supplemental Food and Census



- Fill parodically with Black Oil Sunflower seed
- Tractor Supply \$32.99 for 40 pounds