



Landowner Tools and Opportunities

Texas Forest Info & Carbon Markets

Eric Wannlund

Staff Forester

Texas A&M Forest Service

Timber Price Trends



<https://tfsweb.tamu.edu/timberpricetrends/>

- Stumpage- price landowner receives from timber buyer to harvest trees
- Volume-weighted average stumpage price
- Sources come from reporters (Feds, loggers, contractors, consultants, mills)
- Used to monitor general market trend (many factors go into timber sale)



LANDOWNER ASSISTANCE: TIMBER PRICE TRENDS

Timber Price Trends aims to provide timely information on timber market conditions to improve decision making and foster fair transactions that benefit both buyer and seller and encourage conservation of the timber resource.

Average stumpage prices published in this report are calculated from actual timber sales as reported by up to 60 cooperators active in the East Texas timber market. Values are weighted by volume sold to filter out the effect that size of sale has on price paid. Thus, the average price reported is the average price paid per unit of wood, NOT per average timber sale.

View Timber Price Trends Frequently Asked Questions

+ [Timber Price Trends](#)

+ [Bi-Monthly Reports](#)

+ [Annual Summary Reports](#)

+ [Five-Year Stumpage Prices](#)

+ [Historical Timber Price Summary from 1984](#)

+ [Neighboring State Reports](#)

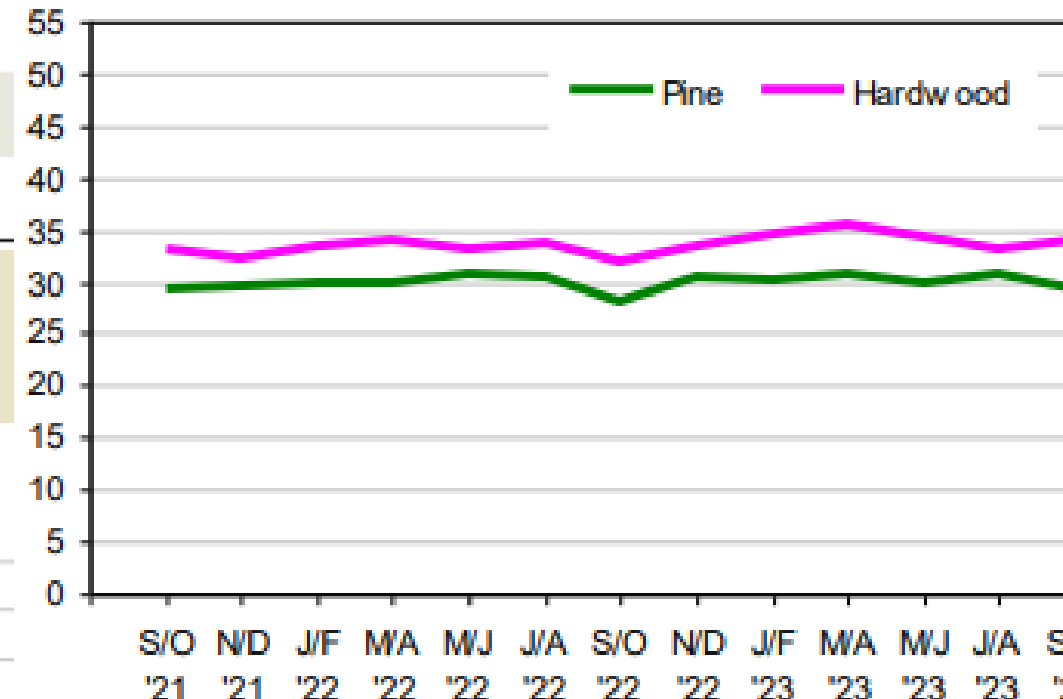


Stumpage Prices in Texas

Product /Region	Average Price		Last Period		Chg	Year Ago		Report
PINE								
Sawtimber	\$/Ton	\$/MBF	\$/Ton	\$/MBF		\$/Ton	\$/MBF	
Northeast TX	\$29.67	\$237.36	\$30.03	\$240.25	-1%	\$28.02	\$224.13	
Southeast TX	\$28.48	\$227.83	\$31.11	\$248.88	-8%	**	**	
Statewide	\$29.23	\$233.83	\$30.65	\$245.18	-5%	\$28.02	\$224.13	

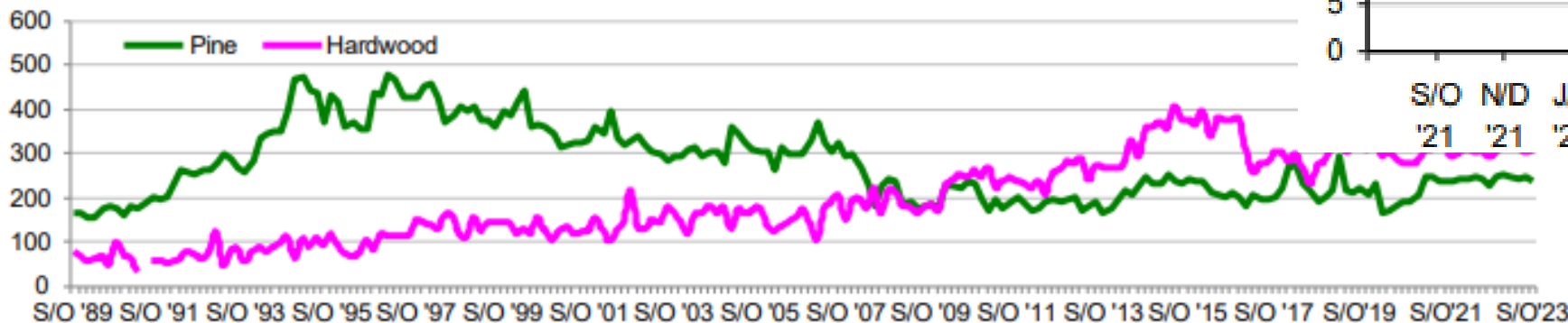
Sawtimber

\$/Ton



\$/MBF-Doyle

Historical Statewide Sawtimber Prices





All 

Search... 

31 of 31 sites

Sort by: 



Funding Connector

This website serves as a clearinghouse for information about various natural resource programs that offer financial assistance to Texas landowners who implement conservation practices.

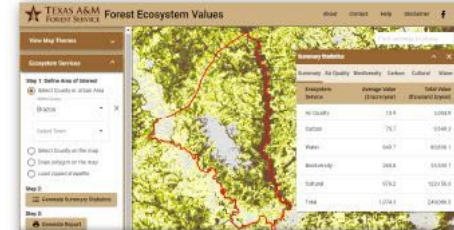
Landowner Tools



Texas Forest Carbon Clock

A widget that displays the real-time tons of carbon captured from the atmosphere and stored in Texas forests.

Forest Management



Forest Ecosystem Values

This application provides estimated economic values for certain ecosystem services and benefits provided by forests.

Forest Products



My Tree ID Mobile App

My Tree ID helps identify tree species based on leaves, flowers, seed, bark or location using a key, descriptions, and full-color images.

Landowner Tools



TreeMD

This app will help you find the root of your tree's problem. It will help you search by species or symptoms and filter by types of pests, or search pest records, list of symptoms and affected trees.

Landowner Tools



Map My Property

Map My Property provides landowners and other interested users a quick and simple tool for making a map of their property that can be shared with others.

Landowner Tools

Got Land?



TEXAS A&M
FOREST SERVICE

got LAND?

Or thinking about purchasing land?

This app is a support tool that assists potential or new landowners during the initial stages of acquiring or owning property by providing management information and resources based on property goals selected.

Select *GET STARTED* and answer a few short questions to return information tailored to your situation.

GET STARTED

en español

TEXAS A&M
FOREST SERVICE

Are you aware of the previous land use of the property?

YES

NO, HELP ME FIND OUT



21%



got LAND?

Resources Report

Map or Survey of Property

While a general map of your property is useful and can often be found at your County Appraisal District, a legal survey will identify restrictions on the property which may affect your use and future development. It should determine whether the property is in a floodplain and if it has any rights-of-way, easements, abandoned roads, joint driveways, water and utility lines, and ingress and egress. Because properties often lack visual boundary markers like an iron rod in the ground and fences may not be built along the actual boundary, a survey can help resolve a discrepancy over who owns what.

The Real Estate Center at Texas A&M University – Surveys

<https://www.recenter.tamu.edu/articles/tierra-grande/Sizing-Up-Surveys>

Texas Society of Professional Surveyors

<https://www.tsps.org/page/faqs>

Map My Property

<http://texasforestinfo.tamu.edu/mapmyproperty/>

Previous Land Use

Knowing the historical land use of your property can identify the location of potential environmental contamination, as well as cut-and-fill processes that may affect soil composition and ability to grow vegetation. Many avenues exist for obtaining such historical information. These include:

- Tax records and maps at your county tax assessor's office
<https://comptroller.texas.gov/taxes/property-tax/county-directory/>
- County soil survey maps from the local NRCS office
<https://offices.sc.egov.usda.gov/locator/app?state=TX>
- Historical maps available at the local public library or online at the Library of Congress
<https://www.loc.gov/maps/>
- Historical topographical maps from the U.S. Geological Survey
<https://www.usgs.gov/news/historical-maps-your-fingertips>
- Historical aerial photographs and imagery from your county extension office, the local public library, the county planning office or online at Texas Natural Resource Information System <https://tnris.org/spotlights/2015-04-09/historical-aerial-map/>
- Previously conducted environmental surveys or investigations
- Title records at the county recorder of deeds office

Clear Title

Clear title is the phrase used to state that the owner of real property owns it free and clear of encumbrances. Also known as clean title, a clear title is a title without any kind of lien or levy from creditors or other parties and poses no question as to legal ownership.

A *title search* will reveal if the property you intend to buy or have inherited has clear title. As the documents concerning conveyances of land are a part of public record, anyone can do a title

- Provides resources based on property goals
- Topics include:
 - Property Maps/Surveys
 - Clear title
 - Tax Valuations
 - Easements
 - Subsurface Rights
 - Surface Water
 - Management Efforts
 - And more!

Map My Property



Search

Draw

Load/Save

Themes

- Soils
- TX Vegetation
- TX Geology
- Visible
- Identify

Transparency 99 %

0% 25% 50% 75% 100%

CLIP

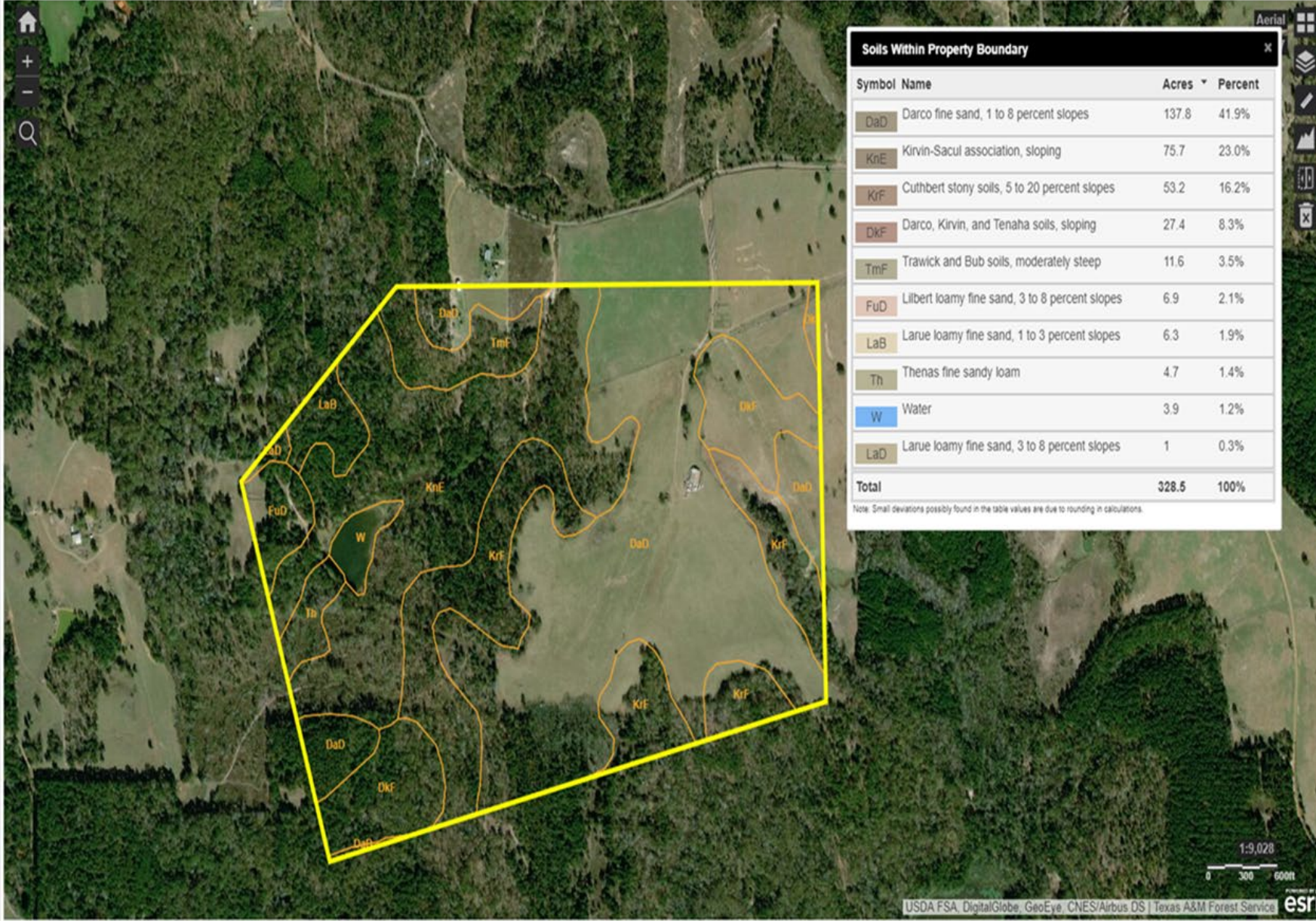
CLEAR

Soils Report

SUMMARY

FULL

Export to PDF



Map My Property

- Site Index
 - Measure of site quality
 - Total average height of both the dominant and co-dominant trees in a forest stand at a given age.

Soil Select Attributes

Symbol	Slope Gradient (%)	Erosion Hazard	Flooding Frequency	Drainage Class	Hydric Rating (%)	pH Top Horizon
DaD	5	Moderate	None	Somewhat excessively drained	0	5.5
KnE	7	Moderate	None	Well drained	0	6.2
KrF	13	Severe	None	Well drained	0	5.5
DkF	10.6	Moderate	None	Well drained	0	5.5
TmF	15.8	Moderate	None	Well drained	0	6.5
FuD	6	Moderate	None	Well drained	0	5.3
LaB	2	Slight	None	Well drained	0	5.8
Th	0.5	Slight	Frequent	Moderately well drained	20	6.2
W		Not rated			0	
LaD	6	Moderate	None	Well drained	0	5.8

Ecological Class

Symbol	Ecological Class ID	Ecological Class Name
DaD	F133BY008TX	Northern Deep Sandy Upland
KnE	F133BY003TX	Loamy Over Clayey Upland
KrF	F133BY003TX	Loamy Over Clayey Upland
DkF	F133BY008TX	Northern Deep Sandy Upland
TmF	F133BY003TX	Loamy Over Clayey Upland
FuD	F133BY006TX	Northern Sandy Loam Upland
LaB	F133BY006TX	Northern Sandy Loam Upland
Th	F133BY014TX	Creek Bottomland
W		
LaD	F133BY006TX	Northern Sandy Loam Upland

Productivity

Symbol	Maximum Site Index	Site Index Species	Range Productivity (lb/ac/yr)	Forest Productivity (cuft/ac/yr)
DaD	81	loblolly pine		114
KnE	83	loblolly pine		119.4
KrF	76	loblolly pine		100
DkF	81	loblolly pine		117.8
TmF	80	loblolly pine		106.6
FuD	88	loblolly pine		129
LaB	80	loblolly pine		114
Th	110	loblolly pine		172
W				
LaD	80	loblolly pine		114

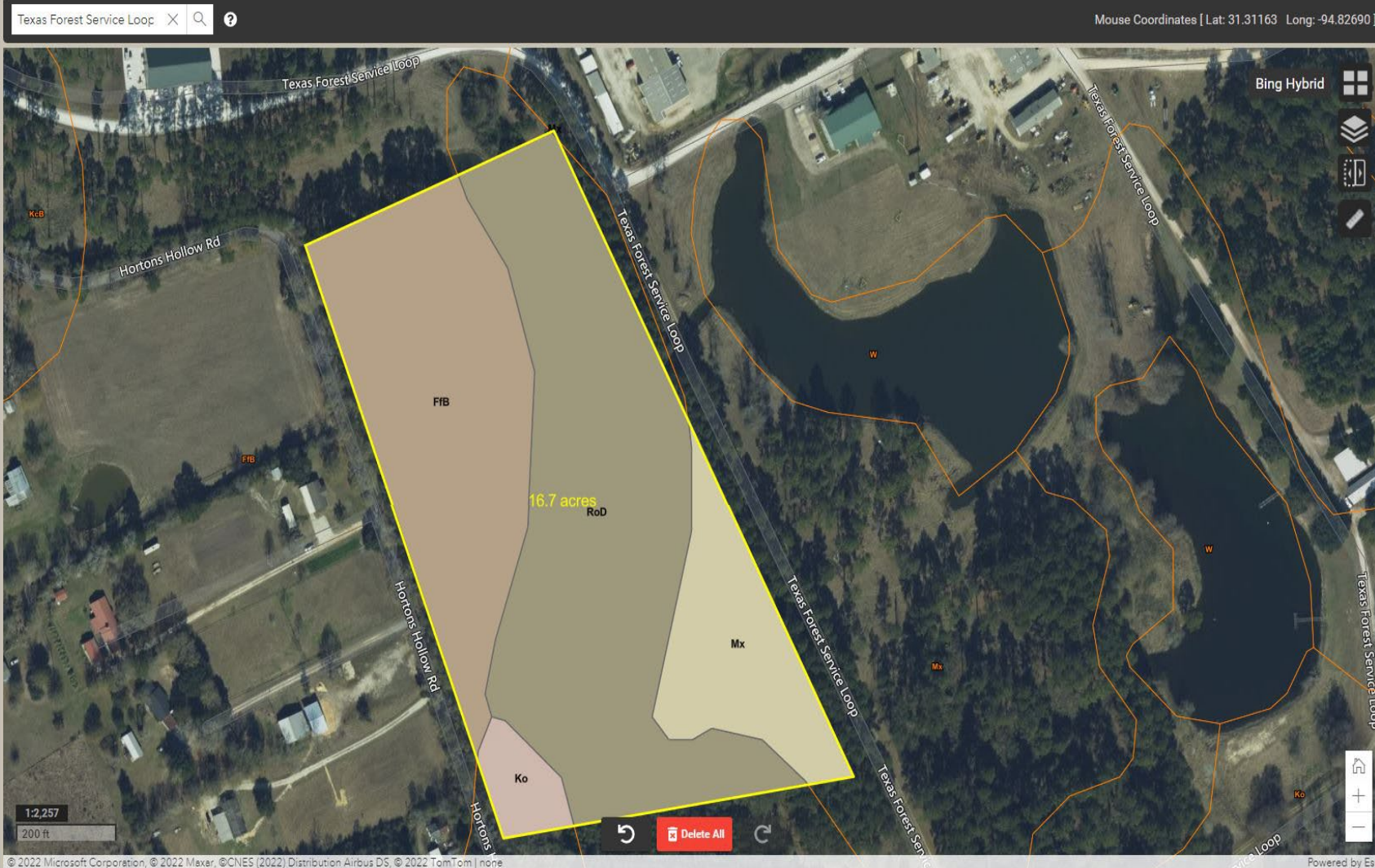
Version

Symbol	Soil Survey Area	Tabular	Spatial
DaD	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
KnE	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
KrF	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
DkF	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
TmF	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
FuD	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
LaB	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
Th	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
W	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014
LaD	v18, Sep 14, 2018	v16, Sep 14, 2018	v5, Jan 10, 2014

Plan My Land



- Draw
- Sensitive Areas
- Soils
- Operational Considerations
- Regeneration
- Elevation Profile
- Culvert Size
- Plot Layout
- Import | Export
- Export Map to PDF



- Defines sensitive areas
- Map of Soils
- Operational Considerations
- Regeneration
- Elevation Profile
- Culvert Size
- Measurement tools



Characteristics and Ratings for Map Unit			
Map Unit Symbol Ko	Map Unit Name Koury loam, occasionally flooded		
Acres in Project Area 51.7	Percent of Project Area 29.0%	Map Unit Dominant Component Koury	Percent of Map Unit 85%
Taxonomic Classification Coarse-silty, siliceous, thermic Dystric Fluventic Eutrochrepts			
A Horizon N/A	B Horizon N/A	Slope Gradient (%) 0.5	
Erosion Class N/A	Drainage Class Moderately well drained	Depth to Water Table (cm) N/A	
Hydric Rating Predominantly Nonhydric	Flooding Frequency Occasional	Presence of Ponding (%) 0	
Harvest Operations			
Harvest Activity	Rating	BMP Awareness	
Construction limitations for haul roads and log landings	Moderate	PROCEED WITH CAUTION. Minimize soil disturbance. Follow basic BMP recommendations. Stabilize disturbed areas. http://tfsfrd.tamu.edu/planmylandoperation/docs/RoadsAndLandings.pdf	
Harvest Equipment Operability	Moderately suited	PROCEED WITH CAUTION. Time operations to avoid wet periods. Minimize soil disturbance. Follow basic BMP recommendations. Remediation may be necessary. Fair performance expected. http://tfsfrd.tamu.edu/planmylandoperation/docs/EquipmentOperationsSiteC/loseout.pdf	
Erosion Hazard: Off-Road/Off Trail	Slight	GREEN LIGHT. Minimize soil disturbance. Follow basic BMP recommendations. http://tfsfrd.tamu.edu/planmylandoperation/docs/ErosionControl.pdf	
Erosion Hazard: Road/Trail	Slight	GREEN LIGHT. Minimize soil disturbance. Follow basic BMP recommendations. http://tfsfrd.tamu.edu/planmylandoperation/docs/ErosionControl.pdf	
Soil Rutting Hazard	Severe	RED FLAG! Rutting occurs regularly. Avoid operations except during extremely dry periods. Remediate disturbed areas. http://tfsfrd.tamu.edu/planmylandoperation/docs/EquipmentOperationsSiteC/loseout.pdf	
Suitability for Roads and Log Landings	Moderately suited	PROCEED WITH CAUTION. Minimize size and extent. Maintenance needed. Implement erosion control measures. Fair performance expected. Stabilize. http://tfsfrd.tamu.edu/planmylandoperation/docs/RoadsAndLandings.pdf	

Plan My Land

Plan My Land Operation

Watershed Size/Culvert Size Report



This report was produced using the *Plan My Land My Operation* application that is accessed from the Texas Forest Information Portal found at TexasForestInfo.com. It calculates size of watershed that drains to a user-defined point along a stream and recommends the minimum size culvert to use at that point. In determining the recommended culvert size, the application uses (1) acres drained, (2) soil texture, and (3) slope as provided in the culvert sizing chart found in the [Texas Forestry Best Management Practices Handbook](#).

Results of this analysis are:

Latitude: 31.311858
 Longitude: 94.82881
Acres Drained: 124.32
 Mean Slope (%): 2.70
 Soil Texture: Sandy Loam
 Sand (%): 59.80
 Silt (%): 30.60
 Clay (%): 9.60

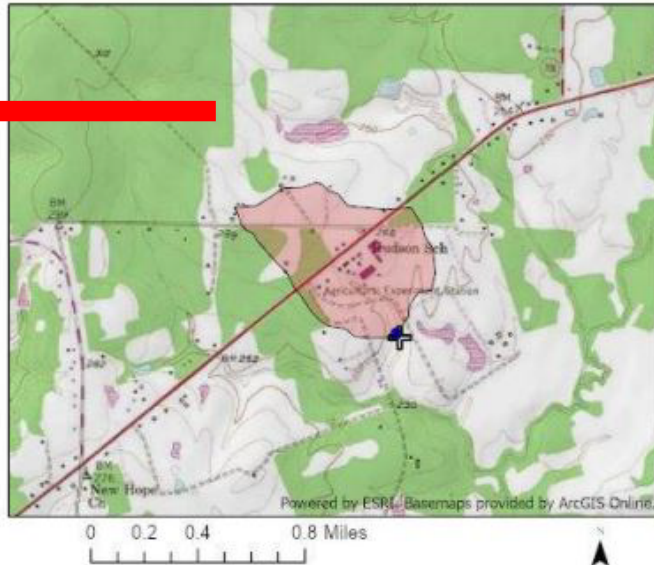
Recommended Minimum Culvert Diameter:

24 inches

Legend:

- User input point
- + Pour point
- Watershed

Note: Pour point is a point within 30 meters of the user-defined point that drains the most area of the watershed.



Culvert Sizing Chart

Acres Drained	Light Soils (Sands)			Medium Soils (Loams)			Heavy Soils (Clays)		
	Flat <5%	Moderate 5-15%	Steep >15%	Flat <5%	Moderate 5-15%	Steep >15%	Flat <5%	Moderate 5-15%	Steep >15%
Minimum Culvert Diameter in Inches									
5	18	18	18	18	18	24	24	24	24
10	18	18	18	24	24	30	30	30	36
20	18	18	18	24	30	36	36	36	42
30	18	18	18	30	30	36	36	42	48
40	18	18	18	30	36	42	42	48	48
50	18	18	18	30	36	48	48	48	
75	18	24	24	36	42				
100	24	24	24	36	48				
150	24	24	24	42					
200	24	30	30	48					
250	30	30	30						
300	30	36	36						
350	30	36	42						
400	36	36	42						



Plan My Land Operation

- Draw
- Sensitive Areas
- Soils
- Operational Considerations
- Regeneration
- Elevation Profile
- Culvert Size
- Plot Layout
- Import | Export
- Export Map to PDF

Search: Texas Forest Service Loop

Mouse Coordinates [Lat: 31.31141 Long: -94.82881]

Watershed Properties

Area (Acres): 124.315
 Mean Slope (%): 2.70
 Soil Texture: Sandy Loam
 Sand (%): 59.80
 Silt (%): 30.60
 Clay (%): 9.60
 Recommended Minimum Culvert Diameter: 24 inches

Project Name: Create Report

© 2022 Texas A&M Forest Service
 Accessibility, Site Policies & Public Notices

My Land Management Connector



Make Connections

- Landowner to Landowner
- Landowner to Service Provider
- Requires an account

The screenshot shows the homepage of the My Land Management Connector website. At the top, there is a blue header with the Texas A&M Forest Service logo on the left and 'Info Log In' on the right. Below the header, the main title 'My Land Management Connector' is centered, followed by the tagline 'Make connections. Enhance your piece of Texas.' Two main content areas are presented: 'Connect' and 'Find'. The 'Connect' section features an image of two people talking outdoors and a description: 'Find and connect with service providers that will help you steward your land. Link up with neighbors to share services and cut costs.' Below this is a blue button labeled 'START HERE'. The 'Find' section features an image of a person in a green shirt and cap looking up in a forest, with a description: 'Find a service provider that's right for you by reviewing credentials and references.' Below this is a blue button labeled 'SEARCH SERVICE PROVIDERS'. At the bottom of the main content area, there is a wide blue button labeled 'CONNECT WITH TEXAS A&M FOREST SERVICE'. The footer contains copyright information: '© 2019 Texas A&M Forest Service Accessibility, Site Policies & Public Notices' and social media icons for Facebook and Twitter.

Search

- Search for service providers
- Check credentials
- Find seedling and native plant nurseries
- Does not require an account

Landowner Steps: Sign up



Get Started



LOG IN

CREATE LANDOWNER ACCOUNT

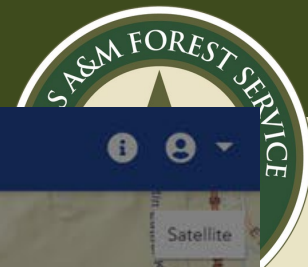
CREATE SERVICE PROVIDER ACCOUNT



BACK

This web application and all data herein are official State of Texas Resources and as such are available only for authorized purposes by authorized users. Usage may be subject to monitoring and security testing. Your email address, name and any other information you provide, will not be sold, and will not be shared outside of the "My Land Management Connector" application. User privacy is provided by applicable privacy laws.

Landowner Steps: Add Property



Add Treatment Area

A screenshot of a web-based map application. The map shows a rural landscape with roads like "Fyb Rd", "Rocky Creek", "Garmon Ranch Rd", "John Wesley Hardin Dr", and "Liberty Pkwy". A teal circle is placed on the map to indicate a property location. A modal window titled "Area #11" is open, containing a form with the following fields:

- Area Type (Select one) - dropdown menu
- Acres (Select one) - dropdown menu
- Services Requested - list of checkboxes:
 - Boundaries, Fences & Gates
 - Chemical (Herbicide) Vegetation Control
 - Consulting
 - Disease/Insect Management
 - Educational Resources
 - Estate/Tax Planning
 - Fertilization
 - Forest Certifications
 - Forest Farming

At the bottom of the modal are two buttons: "SAVE AREA" and "REQUEST ASSISTANCE". Below the modal, centered on the map, is a dark blue "UNDO" button. The map includes a scale bar for 0.6 miles and a "Satellite" view selector in the top right corner.

Esri, HERE, Garmin, INCREMENT P, NGA, USGS | Texas A&M Forest Service - Sustainable Forestry

Powered by Esri

© 2019 Texas A&M Forest Service
Accessibility, Site Policies & Public Notices





Service provider,

A landowner has added a new area to "My Land Management Connector" application that needs land management services. If you are interested in providing service to this landowner, you can view the area and service needs by visiting <http://TexasForestInfo.tamu.edu>, "My Land Management Connector" application, and then send the landowner a service request.

Area #13-11

Area Type: Timberland

Acreage: 10 - 29 acres

Services Needed:

Consulting

Fertilization

My Land Management Connector

Texas A&M Forest Service

Service Provider Steps: Sign up



Service Provider Sign Up

Full Name

Email

Confirm Email

Password

Confirm password

Credentials

Provider Type

Credentials Holder Full Name

Company

Website Address

Address

Service Provider Steps: Send Request



View Area(s) - 23 results

Send Request to Provide Service

Area 13 - 9

Area type: Pasture
Acreage: 100+ acres

Service(s) Needed:

Boundaries, Fences, and Gates

BACK

Powered by Esri

© 2019 Texas A&M Forest Service
Accessibility, Site Policies & Public Notices



Landowner Emails



Hello John Henry, ,

The service provider below would like to provide the following land management service(s) to your area **1038 - 1**:

- Consulting
- Tree Valuation

Please contact them for more information.

Michelle Moore

Michelle's Trees

567 Tree Lane

Dallas, TX 52525

555-556-8989

Michellestrees@abc.com

www.mmtrees.com

Credentials: Certified Burn Manager (TDA), Licensed Landscape Irrigator, SAF Certified Forester, Texas Accredited Forester, Texas Licensed Real Estate Broker/Sales Agent, Texas Oak Wilt Qualified (Texas ISA), Texas Pro Logger

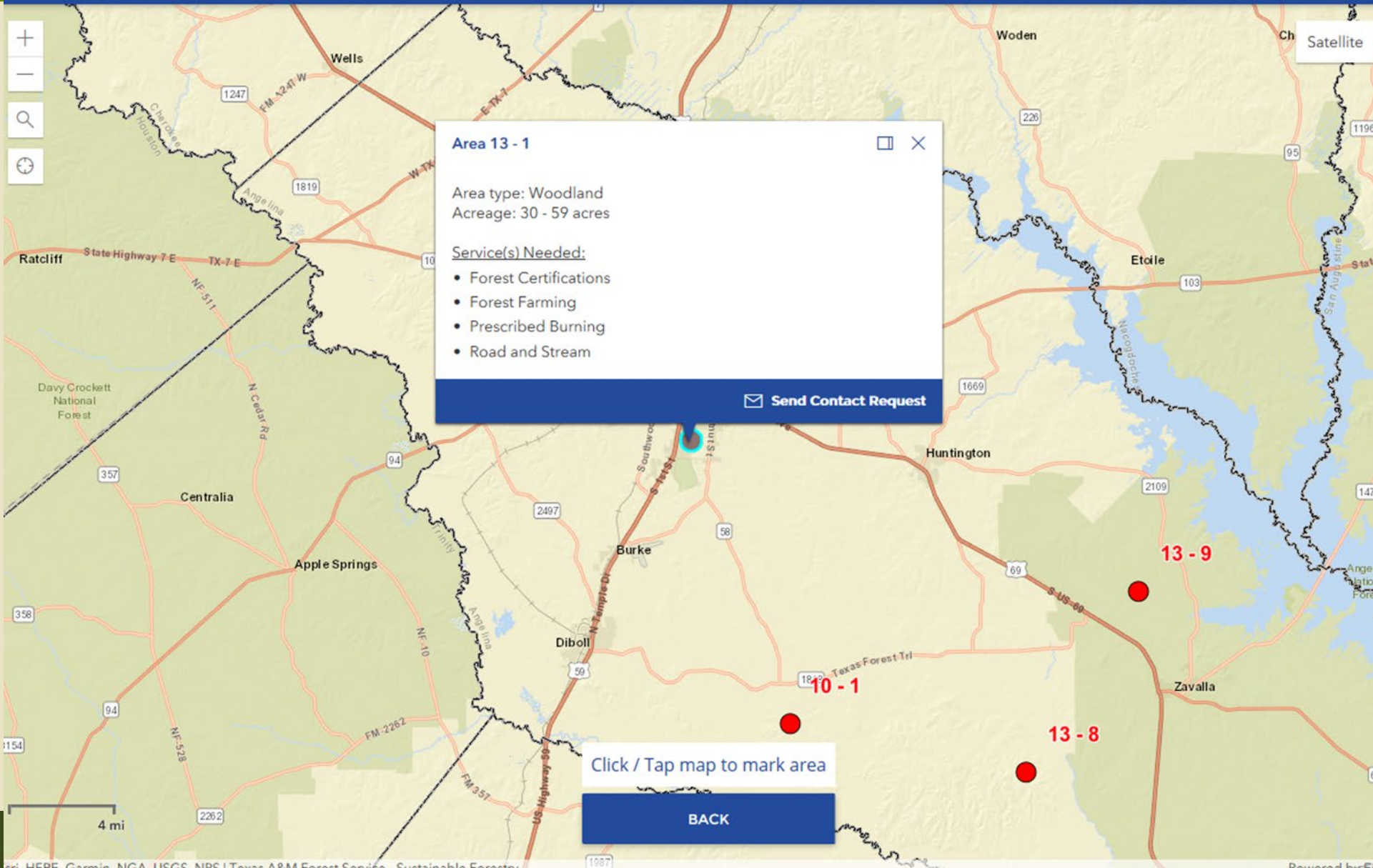
My Land Management Connector

Texas A&M Forest Service

Landowner Connections



View Treatment Area(s)



Landowner Connections Email



Hello [REDACTED]

A landowner would like to connect with you to potentially aggregate land management service(s) on your area shown below:

Area #13-1

Area Type: Woodland

Acreage: 30 - 59 acres

Services Needed:

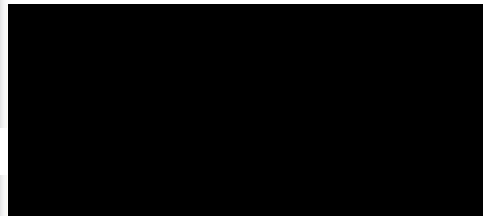
Forest Certifications

Forest Farming

Prescribed Burning

Road and Stream

Please contact the following landowner for more information.



My Land Management Connector

Texas A&M Forest Service

Service Provider Search



Service Provider Selection

Provider Type ^

- Certified Arborist
- Environmental Scientist
- Professional Forester
- Vendor
- Wildlife Biologist

Regions Served v

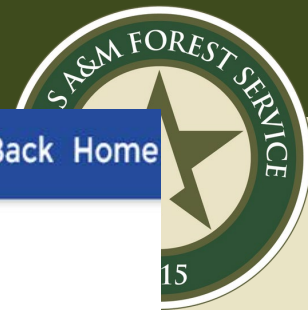
Services Provided v

[VIEW LIST](#)

[CHECK CREDENTIALS](#)

[PDF LIST](#)

[NEED TREES OR SEEDS?](#)



Service Providers

Chemical (Herbicide) Vegetation Control

Trees Bees Knees

Chris Christopherson
Certified Arborist, Professional Forester
123 Tree Street
Oakville, TX, 12345

 (111) 111-1111
 sickoaks@trees4lyfe.com
 billybob.com

Credential Holder Name: Chris Christopherson
Credentials: American Society of Consulting Arborists, Association of Consulting Foresters, ISA Certified Arborist, Licensed Landscape Irrigator, Licensed Pesticide Applicator, SAF Certified Forester, Texas Accredited Forester, Texas Oak Wilt Qualified (Texas ISA)

 Be the first to connect

Bob's Trees

Bob Tree
Professional Forester
123 ABC Ln
Conroe, TX 55815

 (546) 454-7678
 bbtree@tree.com
 www.bobstrees.com

Credential Holder Name: Bob Tree
Credentials: Certified Burn Manager (TDA), NRCS Technical Service Provider, SAF Certified Forester, Texas Oak Wilt Qualified (Texas ISA), Texas Pro Logger

 Be the first to connect

Michelle's Trees

Michelle Moore
Professional Forester
567 Tree Lane
Dallas, TX 52525

 (555) 556-8989
 Michelliestrees@abc.com
 www.mmtrees.com

Credential Holder Name: Michelle Moore
Credentials: Certified Burn Manager (TDA), Licensed Landscape Irrigator, SAF Certified Forester, Texas Accredited Forester, Texas Licensed Real Estate Broker/Sales Agent, Texas Oak Wilt Qualified (Texas ISA), Texas Pro Logger

 Be the first to connect

Consulting

Fernando's Landscaping

John Smith

Bob's Trees

Bob Tree

Michelle's Trees

Michelle Moore



Funding Connector

This website serves as a clearinghouse for information about various natural resource programs that offer financial assistance to Texas landowners who implement conservation practices.

Landowner Tools

Funding Connector



texasforestinfo.tamu.edu/fundingconnector/



Funding Connector

Financial Assistance for Land Stewardship in Texas

[About](#)

[Contact](#)

[Home](#)

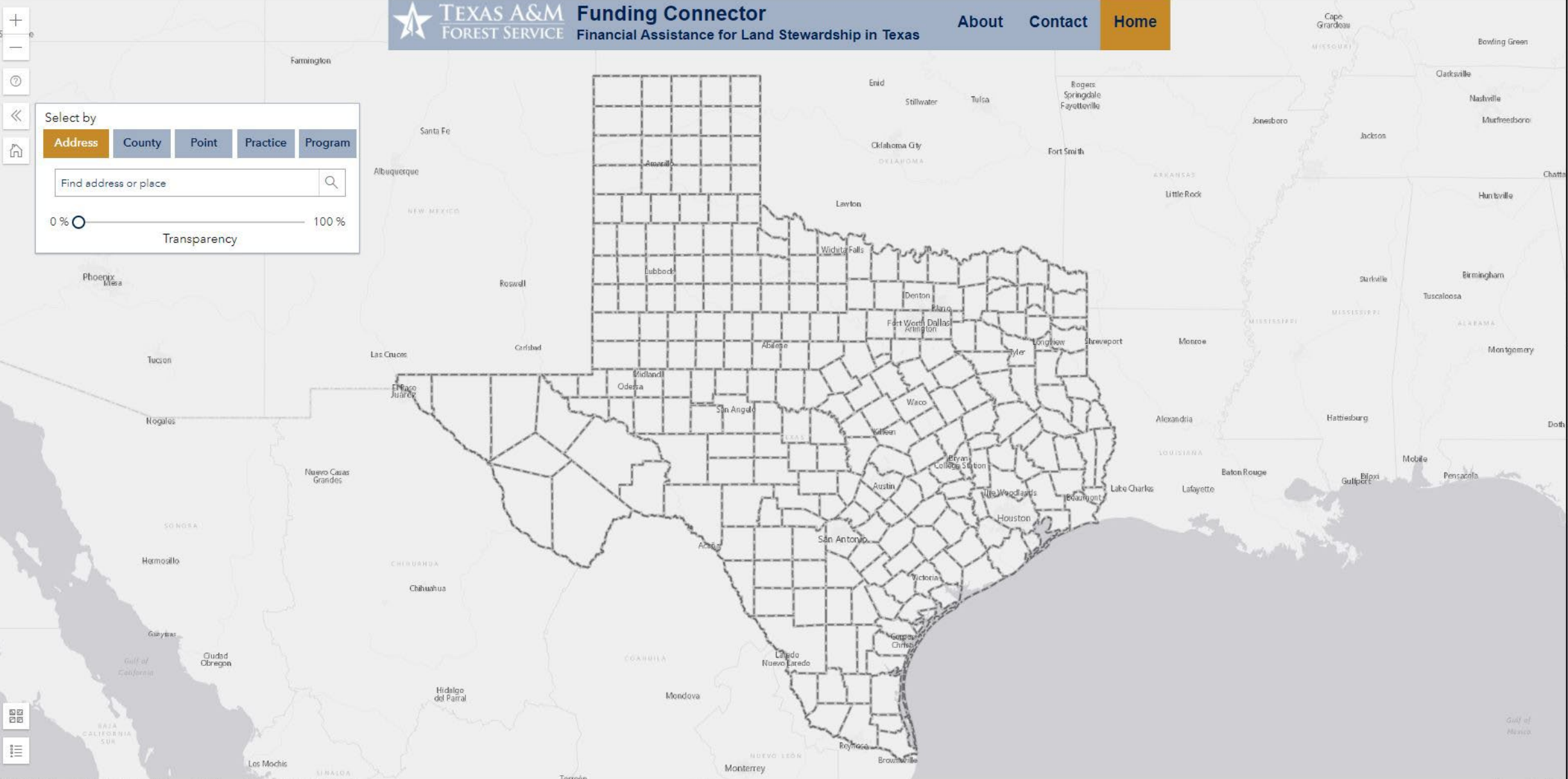


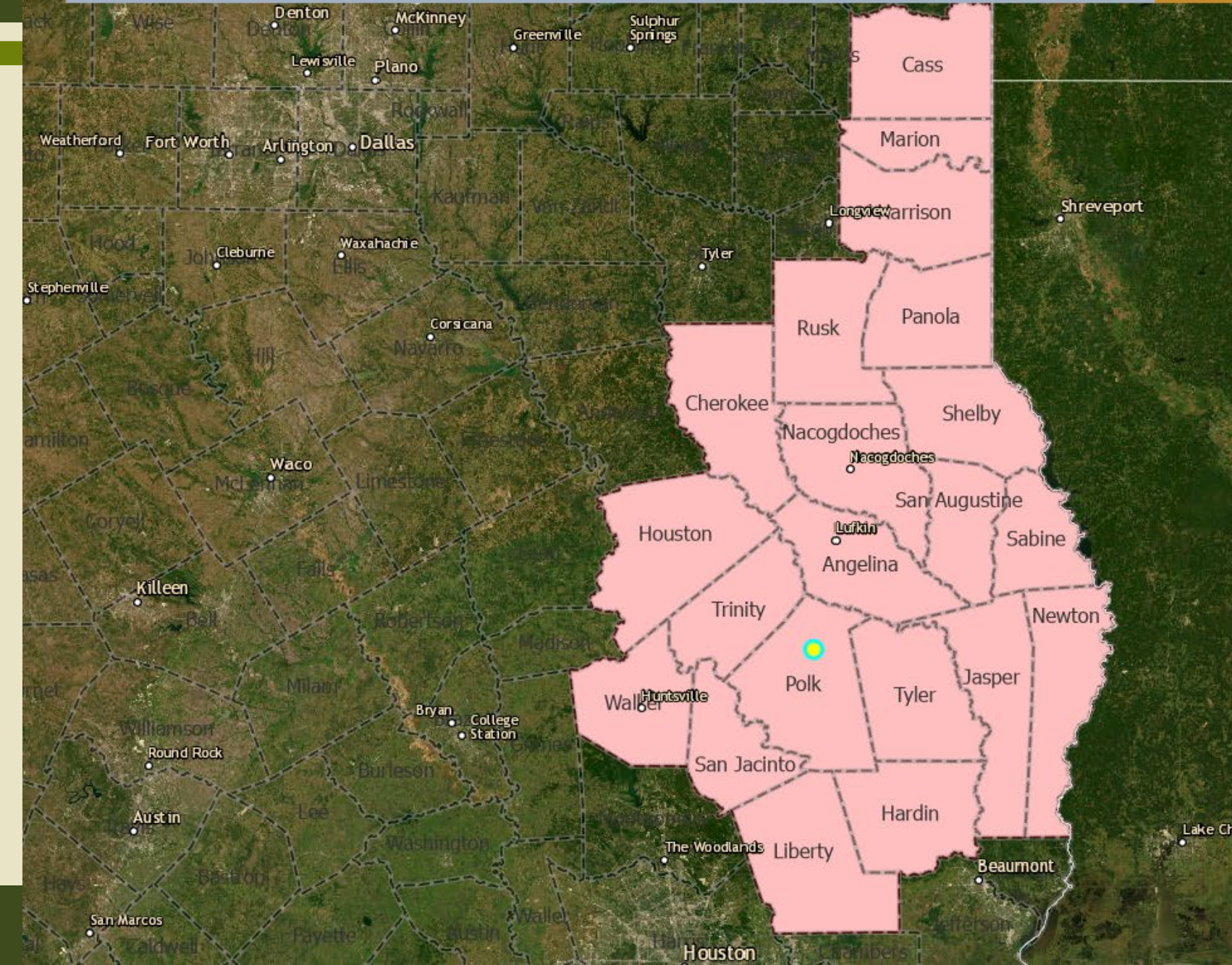
Select by

Address County Point Practice Program

Find address or place

0% 100% Transparency





Southern Pine Beetle Prevention Program

Organization	Texas A&M Forest Service
Description	The program provides cost shares for thinning pine stands to reduce Southern Pine Beetle (SPB) hazard. Cost-share applications must be received by February 1, 2023. Contact your local TFS office for more details or Allen Smith, Program Manager lasmith@tfs.tamu.edu , 903-297-5094 for more information.
Website	https://tfsweb.tamu.edu/SouthernPineBeetlePreventionCostShareProgram/
Program Area	All counties in east Texas are eligible but priority will be given to stands in the following 21 counties: Angelina, Cass, Cherokee, Hardin, Harrison, Houston, Jasper, Liberty, Marion, Nacogdoches, Newton, Panola, Polk, Rusk, Sabine, San Augustine, San Jacinto, Shelby, Trinity, Tyler and Walker
Practices	Thinning
Financial Assistance	<ul style="list-style-type: none"> \$50/acre for both individual and partnership/trust ownerships 50% of costs of services provided by private consulting forester, not to exceed \$5/acre

Funding Connector: Financial Assistance for Land Stewardship in Texas
Southern Pine Beetle Prevention Program

Organization

Texas A&M Forest Service

Description

The goal of this program is to improve forest health to minimize or prevent future infestations of the Southern Pine Beetle (SPB).

Link to Webpage

<https://tfsweb.tamu.edu/SouthernPineBeetlePreventionCostShareProgram/>

Project Area

Angelina, Cass, Cherokee, Hardin, Harrison, Houston, Jasper, Liberty, Marion, Nacogdoches, Newton, Panola, Polk, Rusk, Sabine, San Augustine, San Jacinto, Shelby, Trinity, Tyler, and Walker counties.

Practices

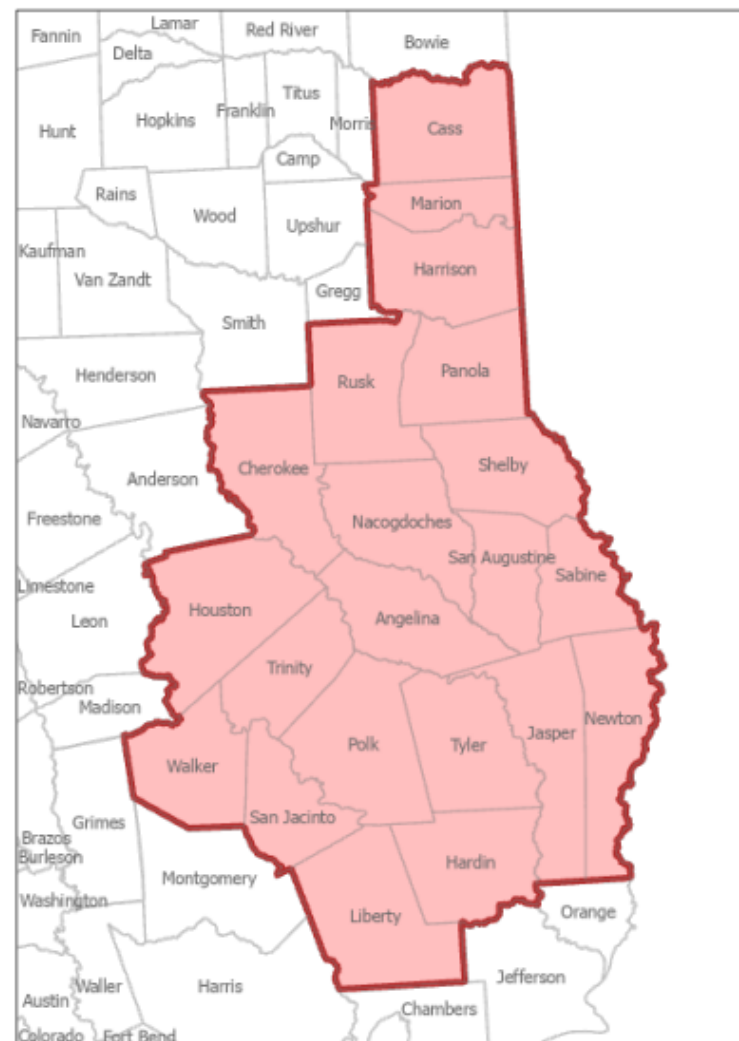
Thinning

Financial Assistance

- \$50/acre for both individual and partnership/trust ownerships
- 50% of costs of services provided by private consulting forester, not to exceed \$5/acre
- Maximum cost share allowed per federal fiscal year (October 1 - September 30) is \$5,000 for all approved cases

Eligibility

- Must own a minimum of 10 contiguous acres of pine species
- Stand must be a minimum of 120 sqft basal area
- Stand must be a minimum of 70% pine
- Stand must be located within one of 21 priority counties
- Stand must be thinned to 80 sqft basal area or less
- Thinning must be completed within 12 months



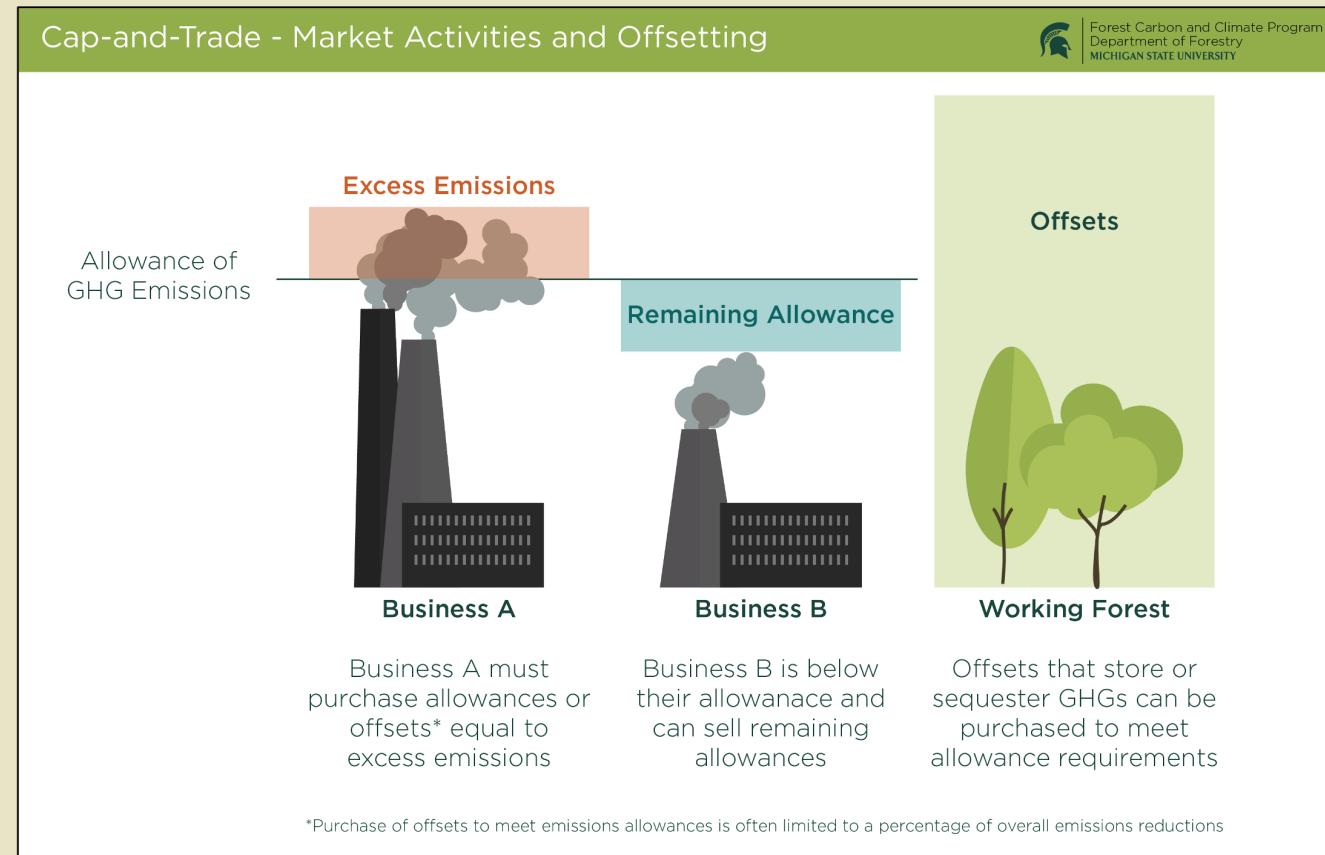


Carbon Markets

- Not currently listed under Funding Connector, but there are additional resources and opportunities for forest landowners within the private sector
- Carbon Markets are an option for some forest landowners
- Revenue can be generated off the land from carbon sequestration projects

Two Types of Carbon Markets

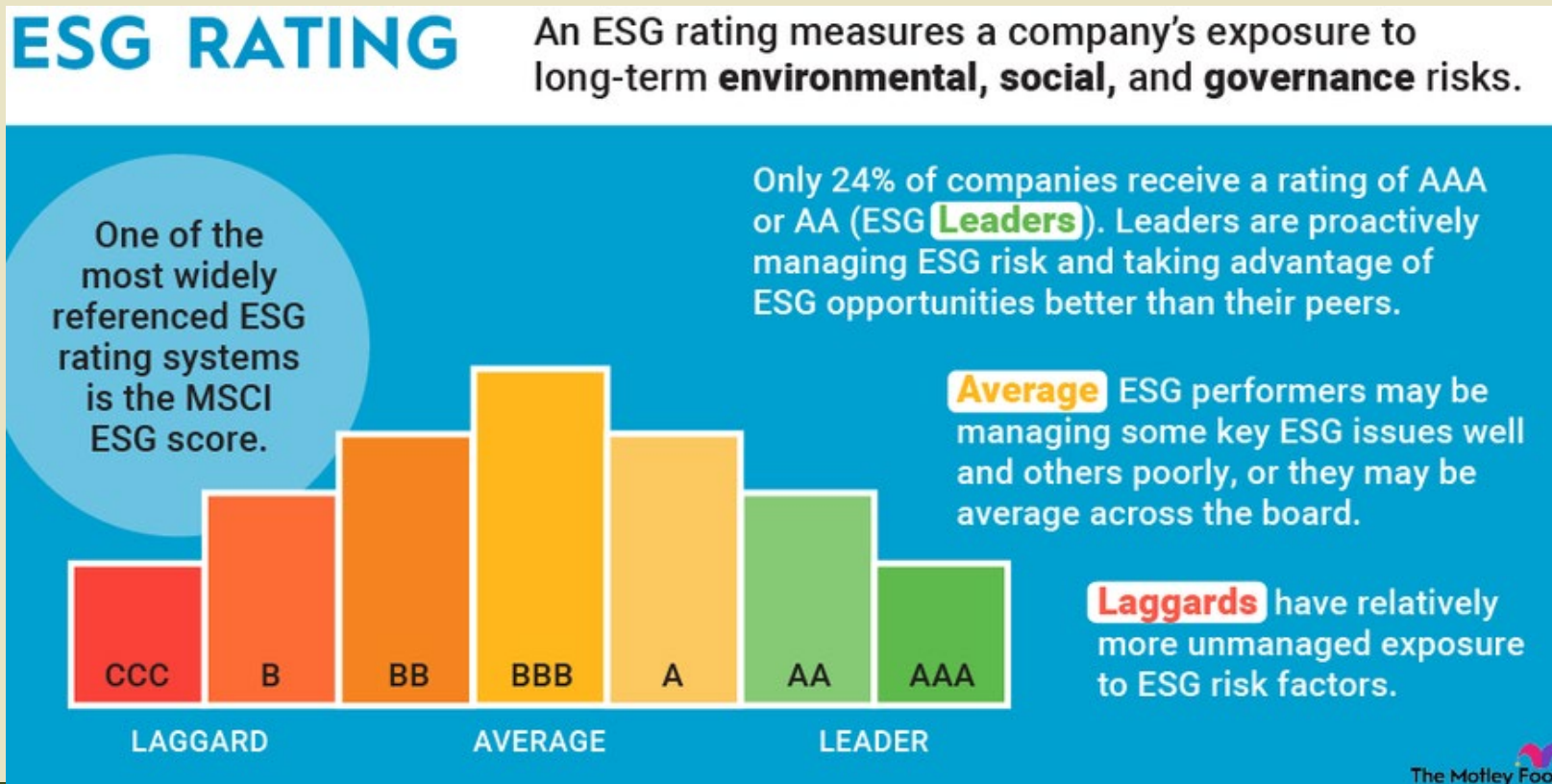
- Compliance Markets (Cap and Trade)- government regulated
- Voluntary Carbon Markets- participation is voluntary, no federal regulation





Who's Buying Carbon Credits

- Largely corporations who want to offset their carbon emissions to improve their ESG rating





ESG Rating Explained



What is a Carbon Credit?

- A tradable certificate or permit representing the right to emit one tonne (1.1 ton) of CO₂ or equivalent amount of a different greenhouse gas
- Average person is responsible for about 10 tonnes of carbon emissions/year





How Carbon is Stored

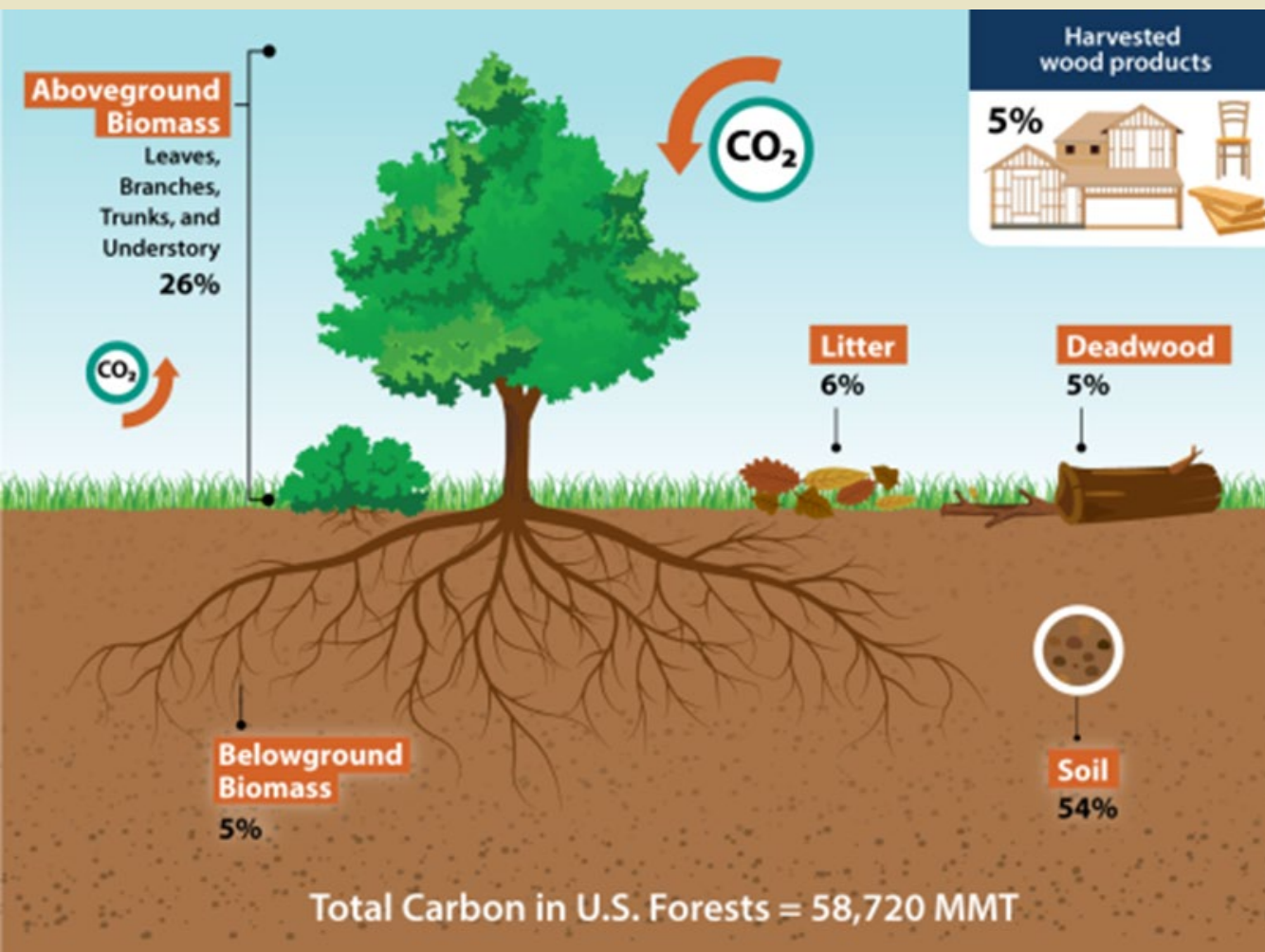
Physical/Mechanical

- Direct air capture technology

Nature Based Solutions

- REDD+ Reduce emissions from deforestation & degradation (reductions)
- IFM- improved forest management (reductions and removals)
- A/R- afforestation and reforestation (removals)
- Soil Carbon, Forest Carbon, Blue Carbon

Why Forests



Cost-effective methods to mitigate climate change through

- Decreasing GHG emissions and
- Increasing carbon sequestration in an ecosystem

Low-hanging fruit

- Conservation, restoration, and improved management in forests, grasslands, agricultural lands, and wetlands.

Forestry has co-benefits,

- Biodiversity / habitat
- Air filtration
- Water filtration
- Flood control



Carbon Credit Cycle

1. Develop project using registry protocols
2. Have project validated and verified
3. Credits are issued
4. Credits are sold
5. End buyer takes ownership of credit and retires credit. (Prevent reselling)
6. Credits can be generated and sold yearly

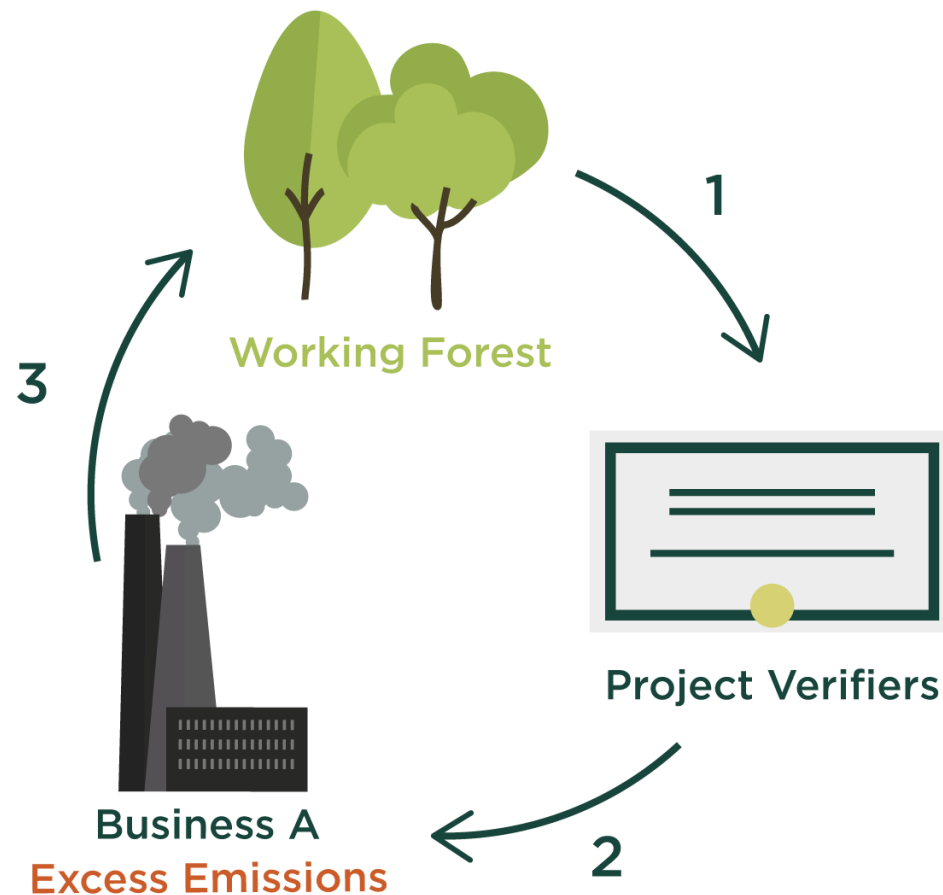


Photo Courtesy of Michigan State University Department of Forestry



Carbon Registry

- The voluntary carbon market requires the use a registry
- Several large registries on the block
- Various protocols for diff projects
- Helps legitimize/verify/record credits



Gold Standard



What does a project look like in E. Texas

- Depends on landowner's objective: Fiber production or conservation
- Different programs have different acreage requirements
- Contracts generally stay with the land. Contracts can last 10yrs up 65yrs+
- Depending on protocol, E.TX. Forests generate ~2 credits/ac/yr



Carbon Market Summary

- ESG pressure and goals support a healthy voluntary market place for IFM and A/R carbon credit based projects
- Landowner works with a project developer and registry to develop, implement, verify, sell credits, and maintain project for length of contract
- Not all credits are created equal
- One way to sustainably manage forest land while providing for multiple ecosystem benefits. Good fit for long term conservation or long rotation fiber production



Questions

Eric Wannlund
Staff Forester
Texas A&M Forest Service
ewannlufs.tamu.edund@