



# BCarbon Stakeholder Meeting

November 2<sup>nd</sup>, 2023

# Agenda

- Subcommittee work + invitation to join- Melanie
- Comms subcommittee report- Jim
- Carbon Rho Red River Corridor Project- Brian Thomas
- RMC Commercial Timber Project- Jim
- Point Comfort Living Shoreline Feasibility- Lalise and Jim
- Methane Protocol Update- Jim
- Credit Issuance Updates- Miguel
- New Grant Updates- Miguel
- Conclusion & Discussion



# Subcommittees

- Living Shorelines: *next meeting 11/9 at 11:00 CT*
- Methane: *next meeting 11/6 at 3:00 CT*
- DEI
- Stacked Benefits
- Comms
- Forest
- Soil

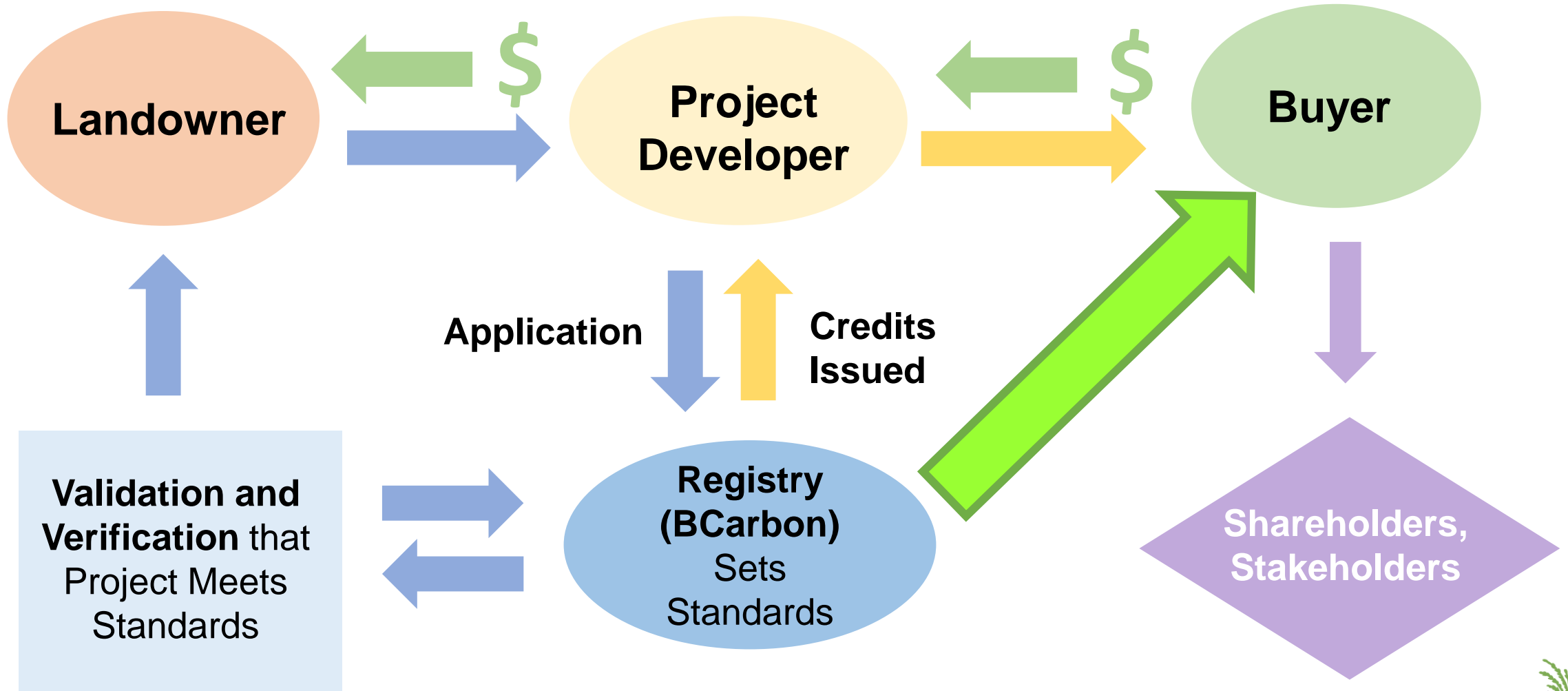
To join any subcommittee, please email  
[Sarah.Swackhamer@BCarbon.org](mailto:Sarah.Swackhamer@BCarbon.org)



A wide waterfall cascading down a green cliff into a riverbed filled with grey rocks. The surrounding landscape is lush and green, with a small wooden structure visible on the right-hand cliff. The sky is overcast.

# Presentation from Comms Committee Discussion

# The World of Carbon Credit Transactions

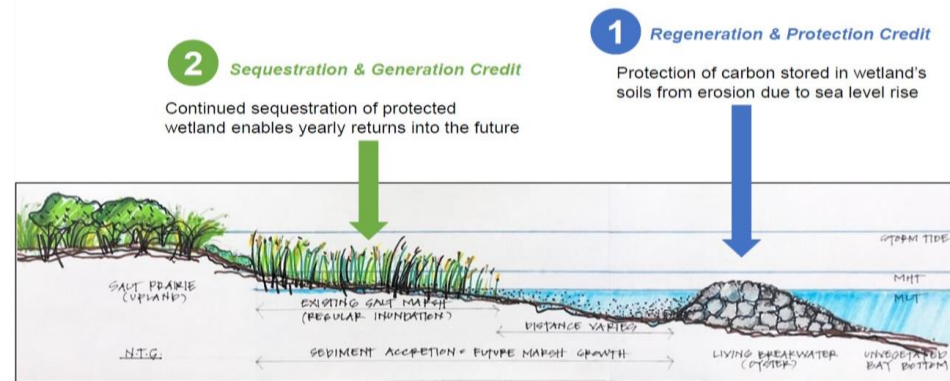


# Working With Buyer Knowledge of Credits

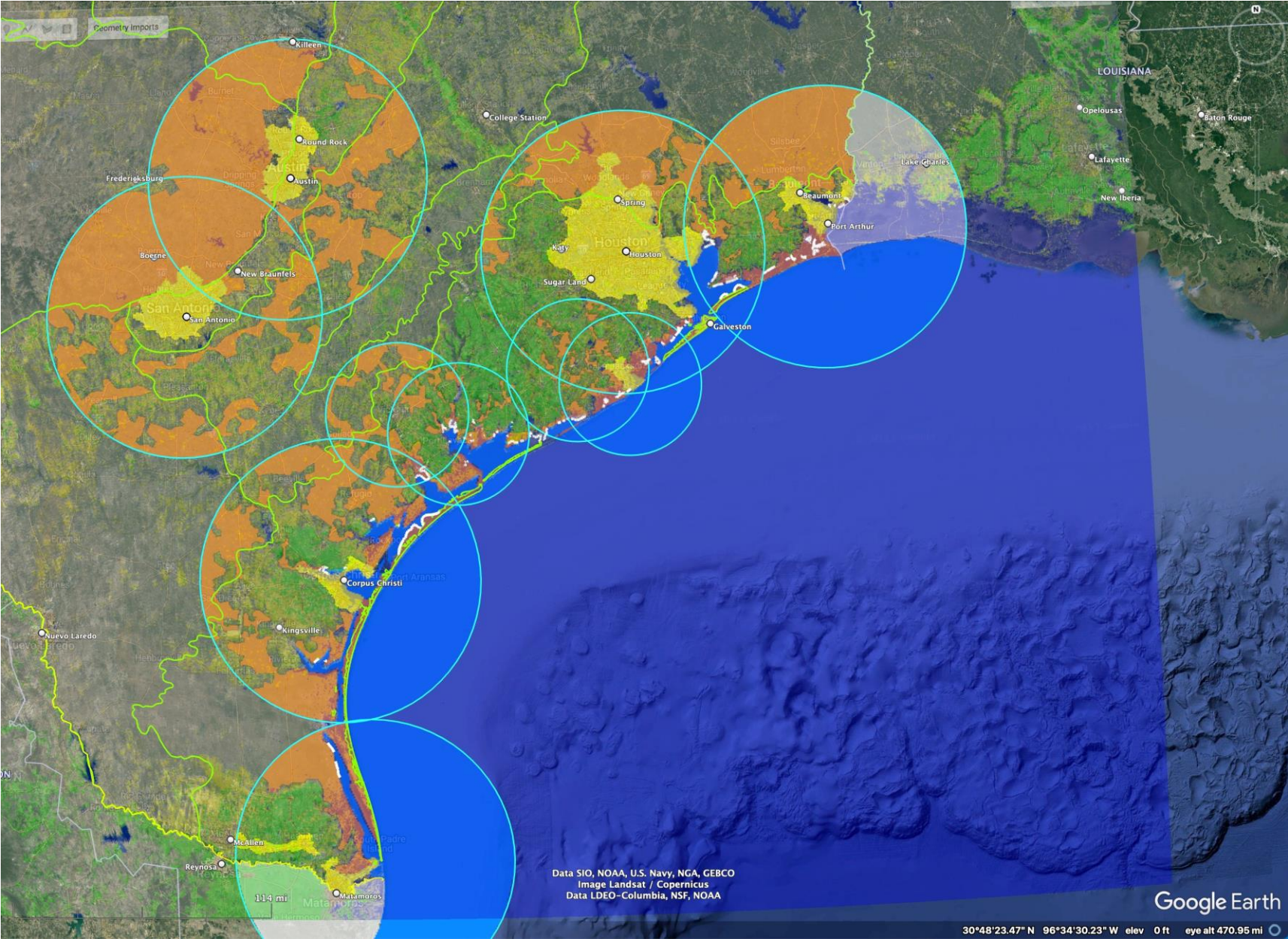
- Focus on credits that are **provable – Measured**
  - Drawdown credits
  - Physical improvement/protection credits



Two types of credits over a 50-year term

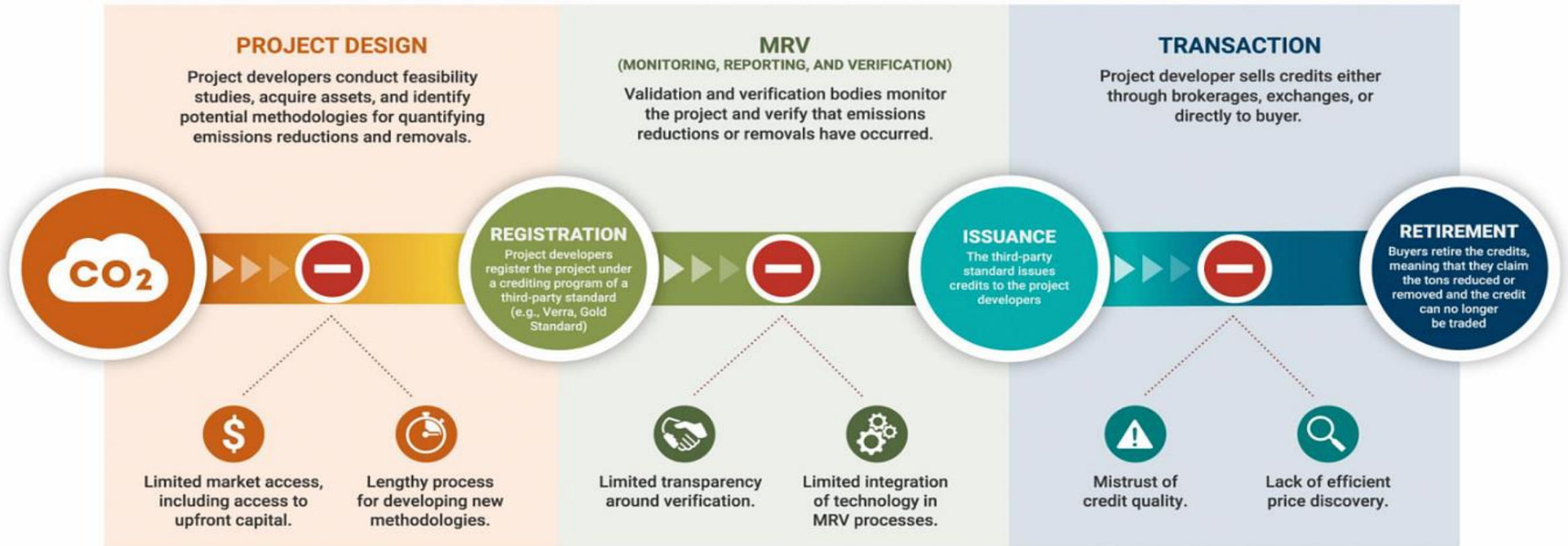


# “Buying “local”: Proximate Project Analysis



# Digital MRV – Opening Up Transactions

The voluntary carbon market (VCM) has a scarcity, trust & transparency problem.

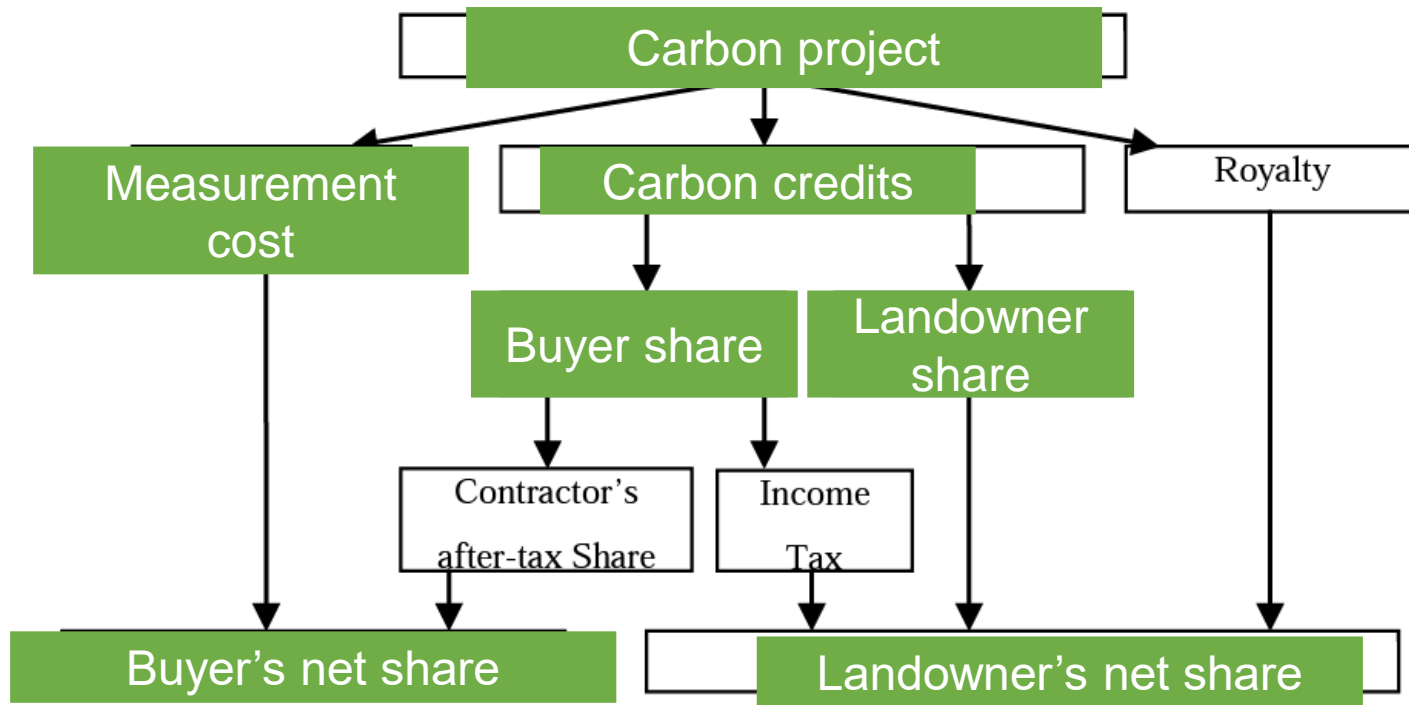




# Project “Pipeline” Problem

- With market down, new starts are few
- Very few companies thinking of longer-term needs
- Takes time to develop nature-based credits
- Companies might want to consider developing a “pipeline” of credits by working with landowners today for credits maturing 2028-2030 time period
- Can possibly hedge high pricing nearer to 2030

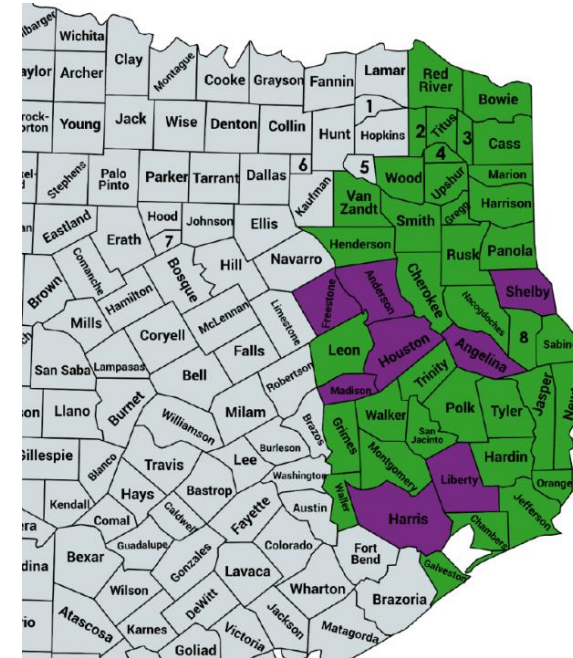
# Production Sharing Agreement: reducing cost, increasing certainty



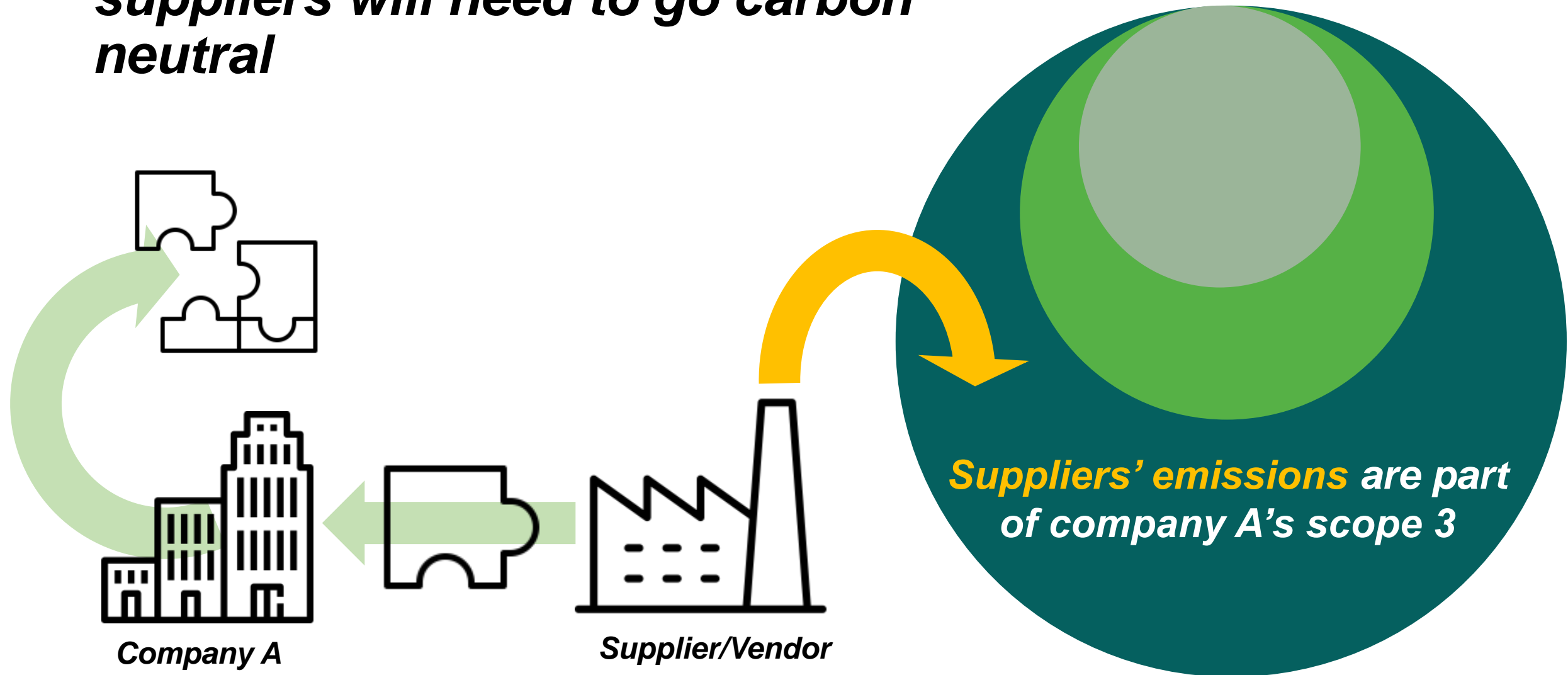
***What might it look like to apply a similar model of risk and profit sharing to the carbon market?***

# Potential Solution: Meeting Multiple Goals

- Carbon +
- Meeting DEI ESG Goals
  - Working with BIPOC landowners
  - Involvement of minority community in projects
- Meeting biodiversity Goals
  - Endangered Species
  - Species diversity



If Company A has a carbon neutral purchasing requirement, their ***suppliers will need to go carbon neutral***



# Potential Solutions – New/Targeted Protocols

## Existing Protocols

- Measured Soil
- Measured Forest
- Coastal Living Shoreline  
Blue Carbon
- Methane Capture and  
Reclamation (MCR)

## New Proposed Protocols

- DEI Small Landowner
- Commercial Timber
- Biochar
- Excellent Steward
- Biodiversity
- Indigenous Populations
- Photovoltaic + Soil

# Is Regulation The End Game?

- Government Control of Voluntary Carbon Market
- Commodities Future Trading Commission
- Securities and Exchange Commission
- U.S. Department of Agriculture
- State Mandated Disclosure Acts – CA, NY, etc
- Fixed Price For Carbon?



# Carbon Rho Red River Corridor Project

The logo for Carbon Rho features a large, bold, green letter 'C' enclosed within a thin black square frame. To the right of the 'C', the words 'CARBON RHO' are written in a smaller, green, sans-serif, all-caps font.

**C**ARBON RHO

Presentation by Brian Thomas

A graphic with a blurred background of tall grasses. A white rectangular box with a thin black border is centered in the upper half, containing the text 'NAVIGATING THE ENERGY TRANSITION'. Below the box, the text 'through the recovery and storage of carbon dioxide' is written in a smaller, italicized font.

**NAVIGATING THE  
ENERGY TRANSITION**

*through the recovery and storage  
of carbon dioxide*





**C**ARBON RHO

**NAVIGATING THE  
ENERGY TRANSITION**

*through the recovery and storage  
of carbon dioxide*



# WHY REMOVALS IN THE RED RIVER BASIN

**SULPHUR RIVER  
WMA (EST. 1957)**



# WHY REMOVALS IN THE RED RIVER BASIN



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	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts
	(278)	(281)	(282)	(285)	(286)	(289)	(289)	(293)	(294)
			Roentgenium	Copernicium	Nihonium	Flerovium	Moscovium	Livermorium	Tennessine

# RED RIVER PILOT PROJECT – KEY ATTRIBUTES

- Baseline Study of >26,420 Acres
- 15,823 Acre Forest Inventory
  - >968,000 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e)
  - Annual accrual rate of over 2.5 MTCO<sub>2</sub>e/acre
  - >39,000 MTCO<sub>2</sub>e of estimated annual removals
- High Value Removals via Afforestation
  - >40% of project consists of converted row crop or pasture
  - 140,000 seedlings planted in Q1 2023
- Strategic Credit Durability
  - Native mixed hardwoods provide highly resilient storage “sink”
  - Contractual structure extends beyond 50-years
  - Not geologic storage, but a nature-based storage analog



## Planting

Seedlings are planted in suitable areas along the Red River



## On-Track Afforestation Stands



## Failed Stands

Typical low inventory ARR tract.

## Endpoint

A diverse habitat of various aged trees that typically stores >100 tons/acre of carbon inventory.

# RED RIVER PILOT PROJECT – INTERIM CREDIT BASIS

- Interim Crediting for 12,183 Forested Acres
- 26,000 Interim Credits
  - Modeled annual accrual rate  $>2.5$  MTCO<sub>2</sub>e/acre
- Credit Allocation Incentivizes “Improvement”
- Imbedded Conservatism
  - Below ground pool omitted for crediting
  - Weighted interim crediting  $\sim 2$  MTCO<sub>2</sub>e/acre
  - $> 2.9$  MTCO<sub>2</sub>e/acre-year audited accrual
  - Approx. 15% of forest strata not credited
  - Scale will address statistical challenges



# RED RIVER PILOT PROJECT – CO-BENEFITS

- Nature-Based Resiliency (soil & water)
- Habitat & Biodiversity
  - Habitat: Up to 18 federal species of interest
    - Convergence of four ecoregions & central/Mississippi flyways
  - Afforestation: >4,500 acres (habitat restoration)
  - Riparian: >72 miles (Red River & tributaries)
- Aligned with at least four Sustainable Development Goals (SDGs)
- Unique Regional Land-use Pressures
  - Working lands: >18,000 acres under contract
  - Project Area: 65% of forest loss is from native timber

## Project Area Forest Loss & On-Going Conversion Risks

 **40%**  
of native OK  
forest loss  
since settlement

AR, OK, TX Among  
**TOP 15**  
States in Net Migration

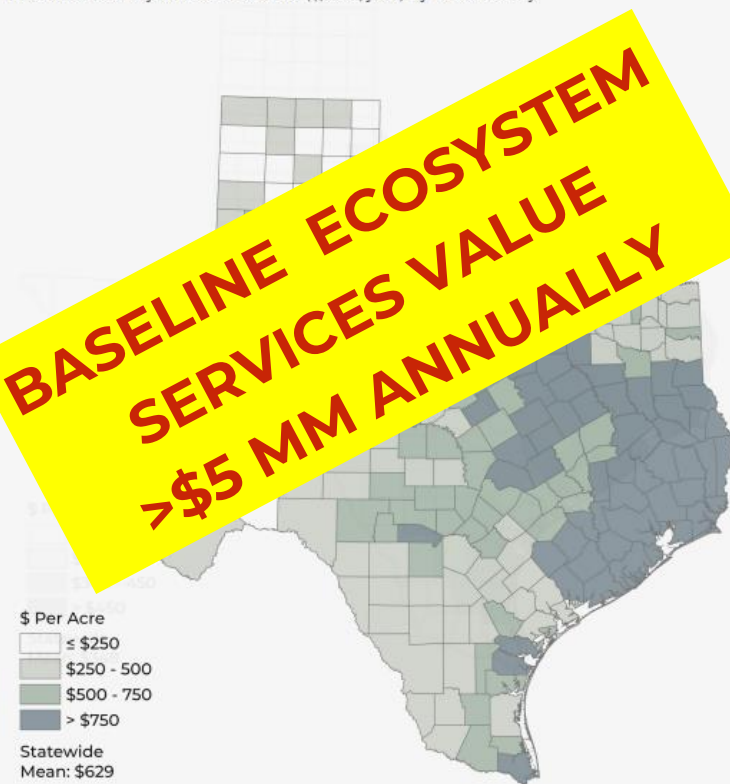
MORE THAN  
**650**  
ACRES A DAY  
of working  
land converted  
in Texas



SOURCE: <https://nri.tamu.edu/publications/research-reports/2022/texas-ecosystem-services-a-statewide-assessment/>

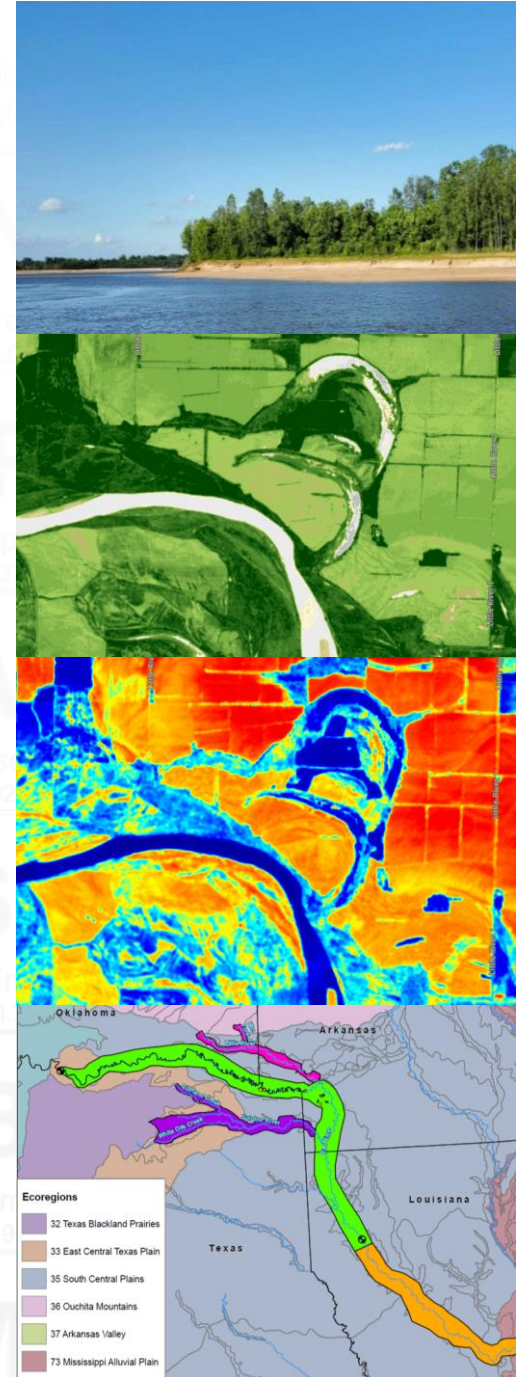
## TOTAL ECOSYSTEM SERVICES VALUE

Total annual ecosystem service value (\$/acre/year) by Texas county.



# RED RIVER PILOT PROJECT - SCALABLE

- 4-States Region and Beyond
  - Scale via intentional design and BCarbon’s protocol
  - Opportunity to co-invest in reforestation projects
  - Demonstrate USDA-ACEP compatibility
  - Proof of concept for regional conservation corridors
- Hybrid Monitoring of Ecological “Lift”
  - Remote sensing of change vs time
  - Under canopy monitoring
- Complementary Soil Carbon Projects
  - Afforestation monitoring
  - Orchards and similar open canopy land use
  - Integrate regenerative farming/ranching projects
- Water Resource Management
  - Future water stewardship project credit opportunities



# MEASUREABLE MARKETING - ADDRESSING GAPS

- Why Measurement Matters
  - Reliable and durable financial instrument
  - Build commodity confidence (e.g. soybeans)
- Support Buyer “Regenerative” Aspirations
- Part of Carbon Management Portfolio
  - Ideal “nature pillar” project
  - SMART goals can be aligned as project scales
- Opportunity as a BCarbon Stakeholder
  - Embrace challenges that will come
  - Educate on the opportunity to be different
  - Creating attribute-driven value for forest carbon



**A Ton More  
Than Just a  
Carbon Offset**  
(That's no bull)

[Buy Carbon Credits ↗](#)

A brown longhorn cow standing in front of a map of the United States, with the text "CARBON RHO LLC" overlaid on the map.

# ACKNOWLEDGEMENTS & LEARNING MORE

- Stakeholders and Committee Members

- Learn More

- Website [www.carbonrho.com](http://www.carbonrho.com)



- LinkedIn [LinkedIn - Carbon Rho, LLC](#)



- Email [info@carbonrho.com](mailto:info@carbonrho.com)

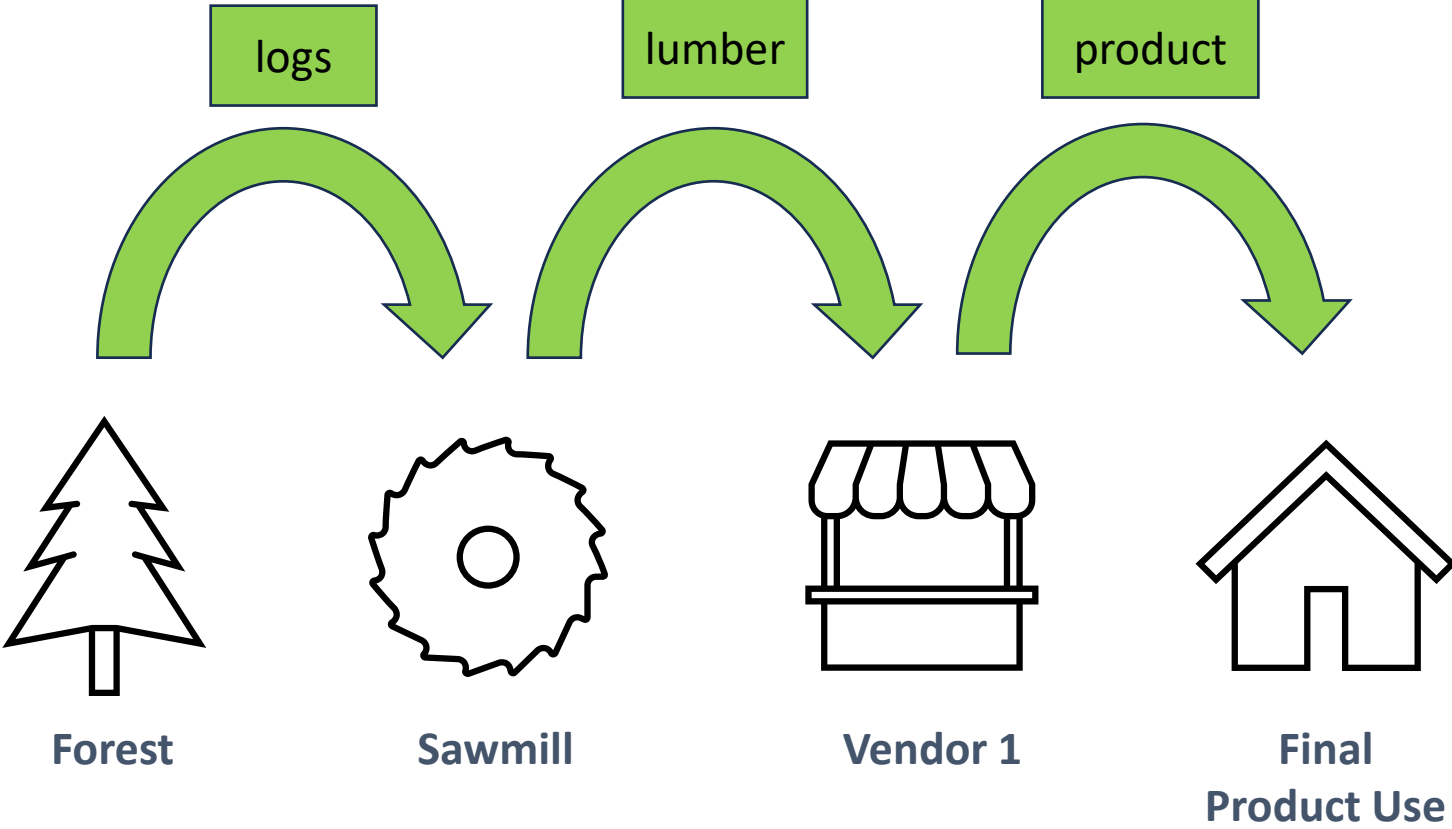





A photograph of a commercial timber plantation. The forest consists of numerous tall, slender pine trees with dark trunks and green needles. The ground is covered in a thick layer of brown pine needles, creating a textured, carpet-like surface. The trees are arranged in a regular, grid-like pattern, typical of a managed forest. The lighting is natural, suggesting an overcast day.

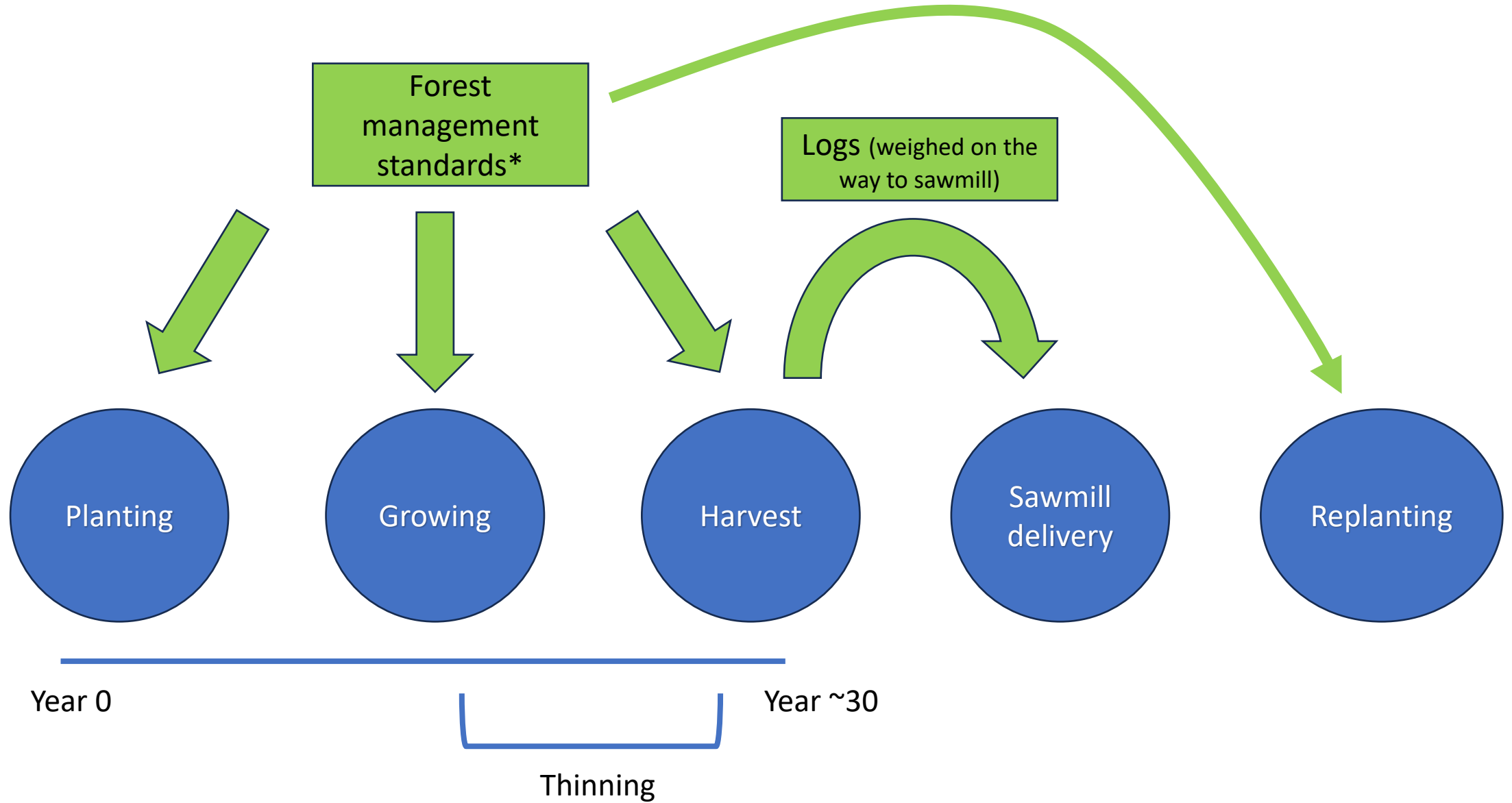
# RMC Commercial Timber Project

# Project Overview



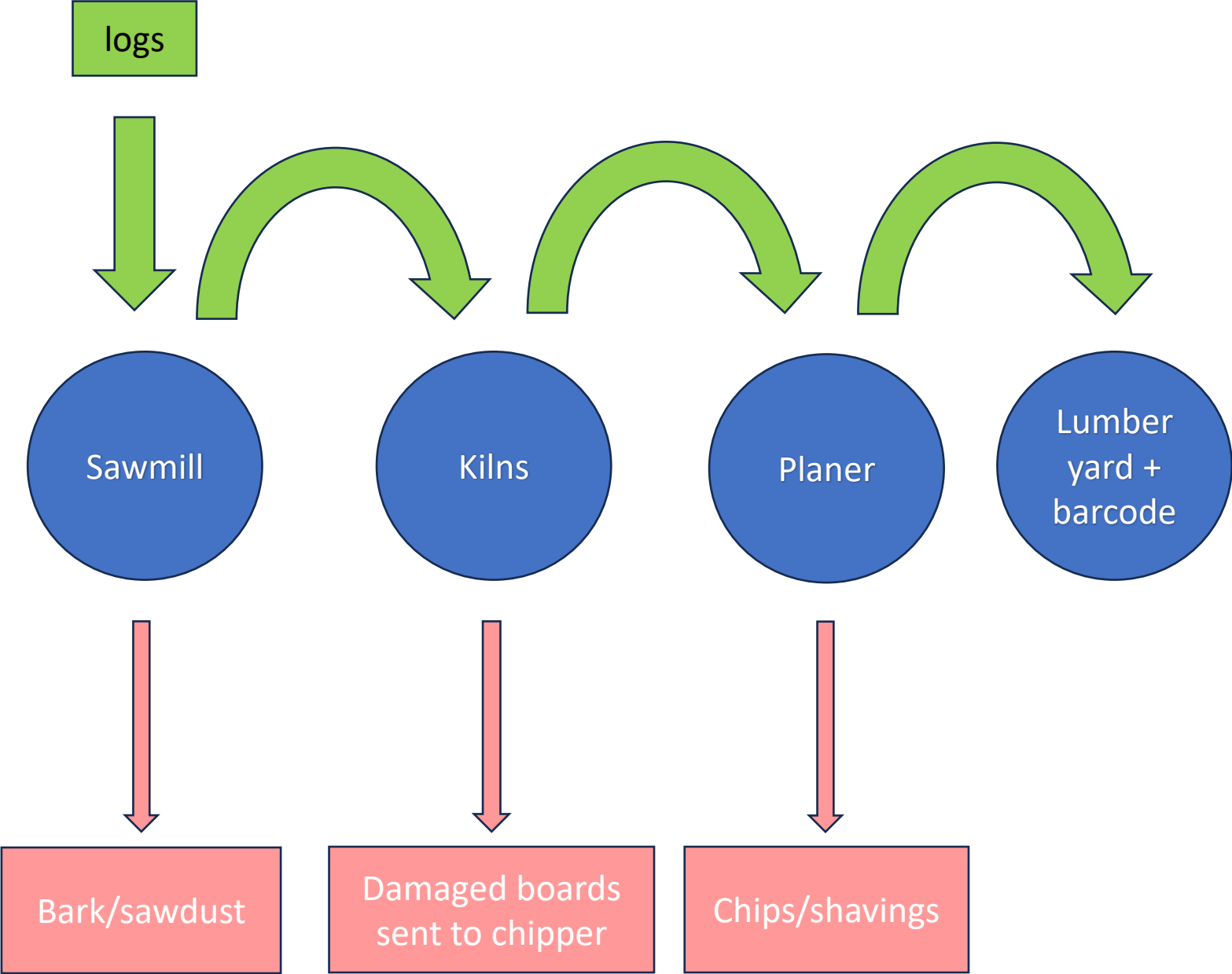
 Credit issuance?

# Forest- Larson & McGowin

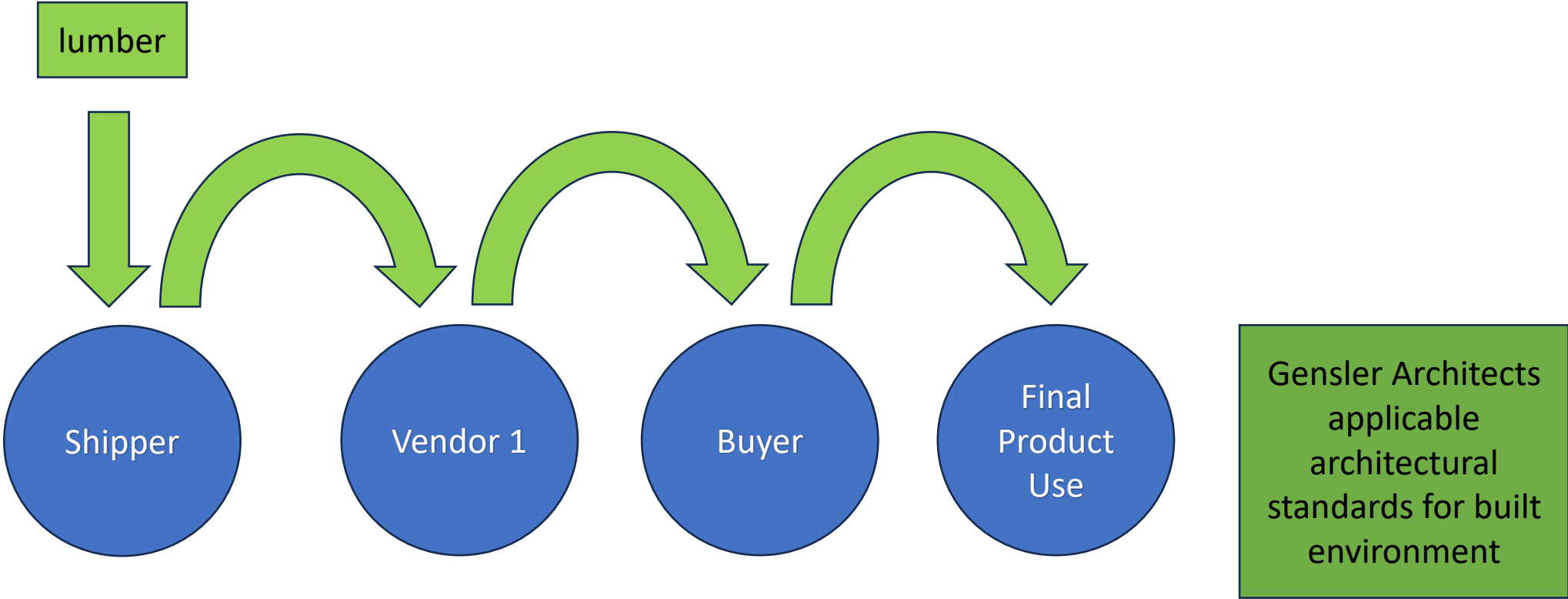


\*Algorithm changes to optimize both timber and carbon

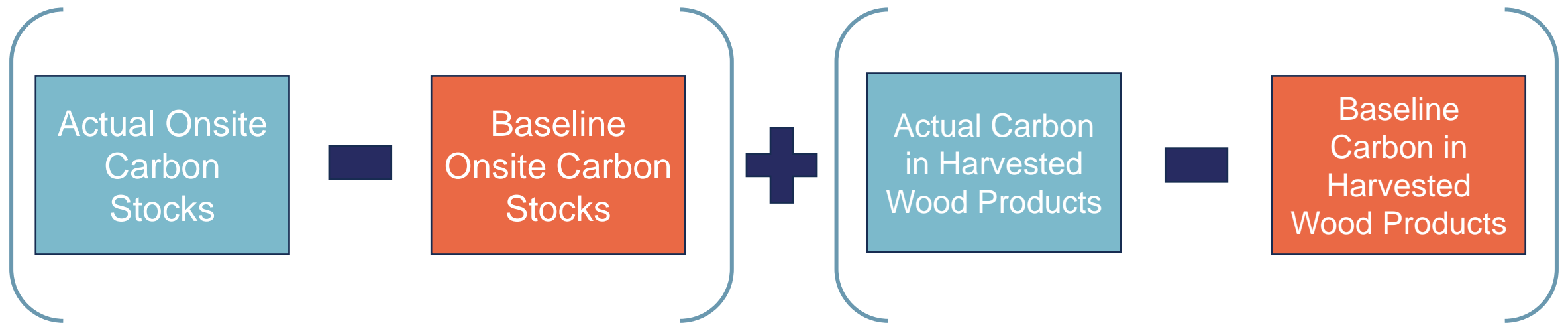
# Sawmill Facility



# Supply Chain to Final Use



# Carbon Credit Calculations in Other Protocols





**GREATER POINT COMFORT TX AREA  
LIVING SHORELINE FEASIBILITY STUDY**

# POINT COMFORT STUDY SUMMARY:

## 25 Projects within 30 mile radius of Point Comfort

- 3 within 5 miles
- 8 @ 5-10 miles
- 6 @ 10-20 miles
- 8 @ 20-30 miles

## ~60 miles concept shorelines total

- < .5 miles – 14+ miles range breakwaters length per project

## ~24,000 AC wetland protection total

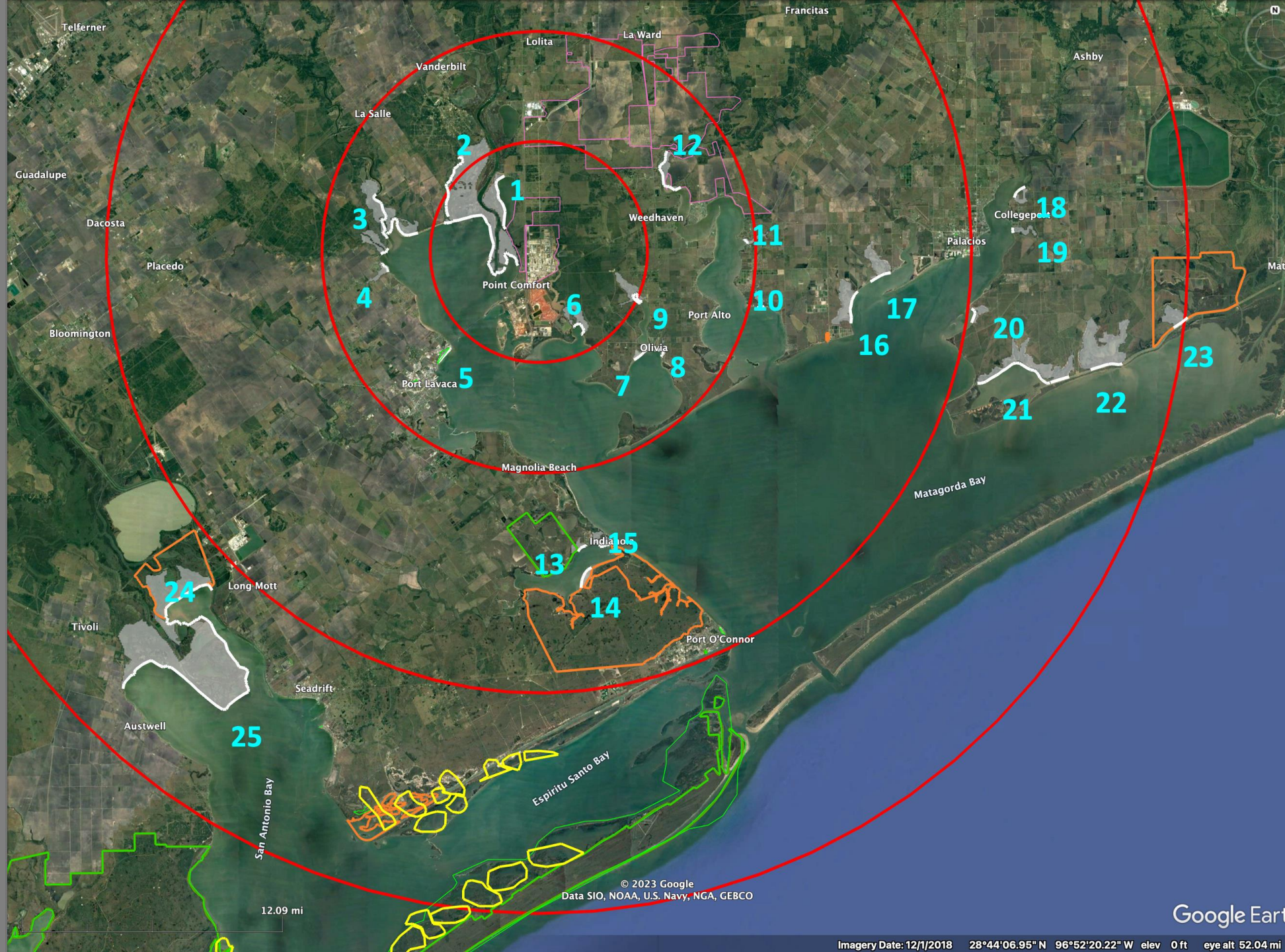
- ~60-7800 AC in size per project

## ~4.6 million stored tCO2e potential protection total

- 14,000-1.3 million tCO2e potential protection per project
- 140,000-150,000 tCO2e average (omit Guadalupe Delta)

## ~\$6-125/ton development cost, conservative

- \$30-35/ton average development cost





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## GUADALUPE DELTA



### SHORELINES:

~14 miles shorelines, conceptual  
 ~\$2.25 million/mile projected  
 ~\$31 million project

### SOIL CARBON:

~7800 AC  
 ~123-361 tCO<sub>2</sub>e/AC stored ~170t average  
 ~1.3 million tons stored

### CARBON DEVELOPMENT COST (tCO<sub>2</sub>e):

~\$23/ton



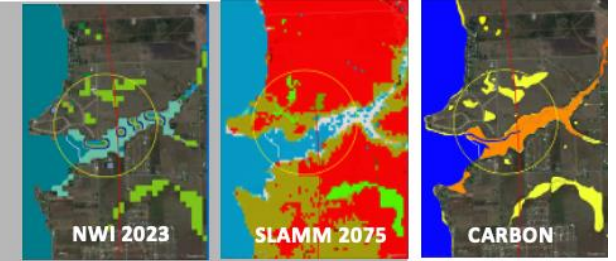
### CO-BENEFITS / PROJECT BIODIVERSITY:

- Combine with Guadalupe Delta WMA / Mission Lake project.
- Within 25 miles of Point Comfort.
- Whooping Crane potential: ~10 miles to Welder Flats (TPWD), Matagorda Island and Aransas NWR.
- Ed Rachal Foundation, Corpus Christi, land ownership in project area.



# 11

## FIVE-MILE DRAW – VAES BAY



### SHORELINES:

~.3 mile shoreline, conceptual  
 ~\$2 million/mile average  
 ~\$600,000 project

### SOIL CARBON:

~130 AC  
 ~229 tCO<sub>2</sub>e/AC typical  
 ~30,000 tCO<sub>2</sub>e stored

### CARBON DEVELOPMENT COST (tCO<sub>2</sub>e):

~\$20/ton



### CO-BENEFITS / PROJECT BIODIVERSITY:

- The two projects in Carancahua and Carancahua/Vaes Bays are within 6 miles of Point Comfort.
- Part of one of top 4 Audubon Texas Christmas Bird Counts (CBC).
- Five-Mile Draw, on the east side of Carancahua Bay, is 10 miles across Matagorda Bay from the Oyster Lake complex, an ICF priority sites for winter Whooping Crane expansion.
- Carbon noted @ eroding but still-visible marsh shoreline platform. Good restoration potential inside breakwaters.



# 16

## TURTLE BAY WEST

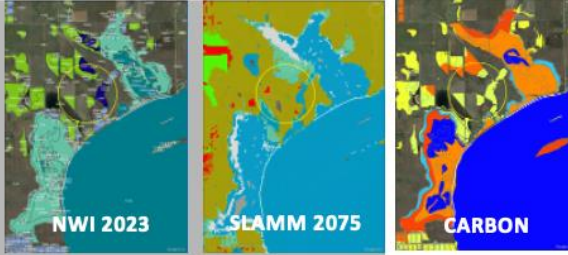
### SHORELINES:

- ~1.5 mile shoreline, conceptual
- ~\$1.5 million/mile average
- ~\$2.25 million project

### SOIL CARBON:

- ~520 AC
- ~229 tCO<sub>2</sub>e/AC typical
- ~119,000 tCO<sub>2</sub>e stored

**CARBON DEVELOPMENT COST (tCO<sub>2</sub>e):**  
~\$20/ton



### CO-BENEFITS / PROJECT BIODIVERSITY:

- The proposed companion projects along Turtle Bay are ~14 miles from Point Comfort.
- The Turtle Bay projects are less than 5 miles across Tres Palacios Bay from the Oyster Lake complex, an ICF crane expansion priority site. Turtle Bay is 11 miles from Matagorda Bay Peninsula.



# 19

## COLLEGEPORT SOUTH TRES PALACIOS BAY

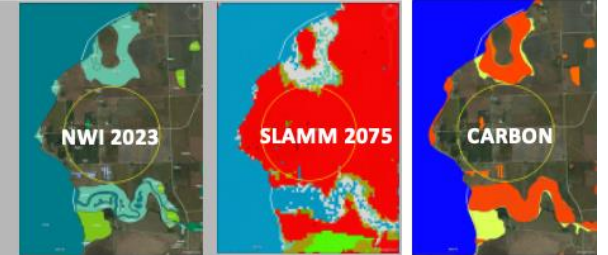
### SHORELINES:

- ~.25 mile shoreline, conceptual
- ~\$1.25 million/mile average
- ~\$.4 million project

### SOIL CARBON:

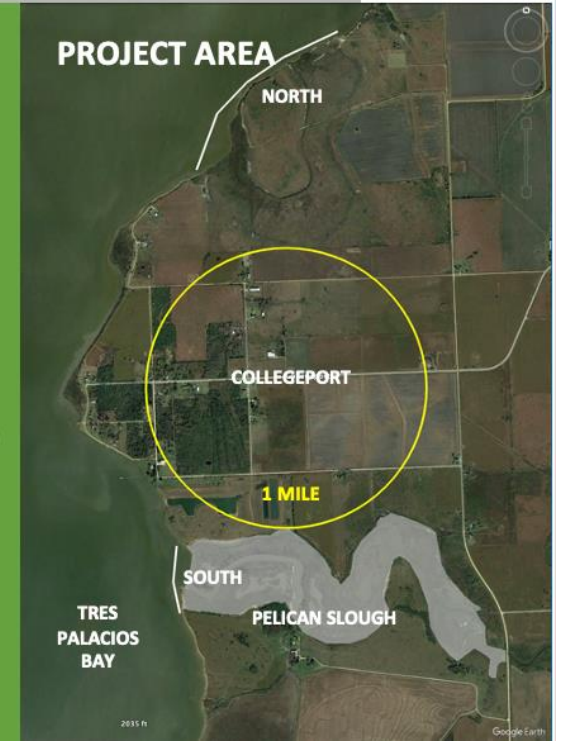
- ~190 AC
- ~353 tCO<sub>2</sub>e/AC typical
- ~67,000 tCO<sub>2</sub>e stored

**CARBON DEVELOPMENT COST (tCO<sub>2</sub>e):**  
~\$6/ton



### CO-BENEFITS / PROJECT BIODIVERSITY:

- The proposed Collegeport North and South companion projects along the inland reaches of Tres Palacios are upward of 20 miles from Point Comfort.
- However, they are directly inland (~3-4 miles) of priority ICF Whooping Crane expansion habitat at the Oyster Lake complex, and, like Carancahua Creek to the west, likely provide hop-skip habitats for cranes working their way inland, in this case into the large easterly Tres Palacios River watershed, Matagorda County.



# 21

## OYSTER LAKE NORTH SHORE

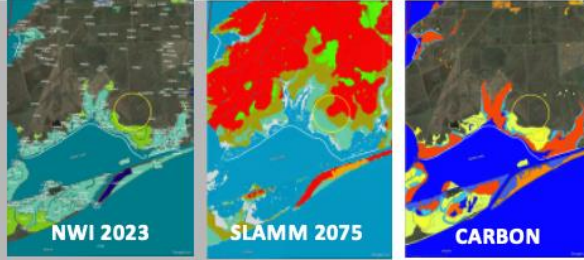
### SHORELINES:

~4.7 miles shoreline, conceptual  
 ~\$2 million/mile average, partial GIWW  
 ~\$10 million project (phase-able)

### SOIL CARBON:

~1500 AC  
 ~74-353 tCO<sub>2</sub>e/AC typical, 236t average  
 ~355,000 tCO<sub>2</sub>e stored

**CARBON DEVELOPMENT COST (tCO<sub>2</sub>e):**  
 ~\$28/ton



### CO-BENEFITS / PROJECT BIODIVERSITY:

- Oyster Lake is 20+ miles from Point Comfort in Matagorda County. The eastern portion of the project involves shore protection along the the GIWW. (See Mad Island Marsh projects.)
- The site is an integral part of the large ICF Priority Crane Expansion area for Matagorda Bay.
- Oyster Lake Park is a site on the Great Texas Coastal Birding Trail, CTC 008.
- Oyster Lake is one of the most popular protected kayak fishing spots in West Matagorda Bay.



# 23

## MAD ISLAND MARSH EAST (TPWD WMA)

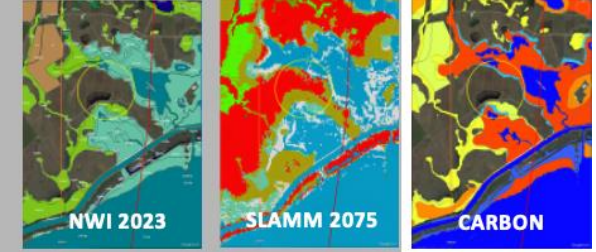
### SHORELINES:

~.8 mile shoreline, conceptual  
 ~\$2.5 million/mile average  
 ~\$2 million project

### SOIL CARBON:

~430 AC  
 ~361 tCO<sub>2</sub>e/AC typical  
 ~155,000 tCO<sub>2</sub>e stored

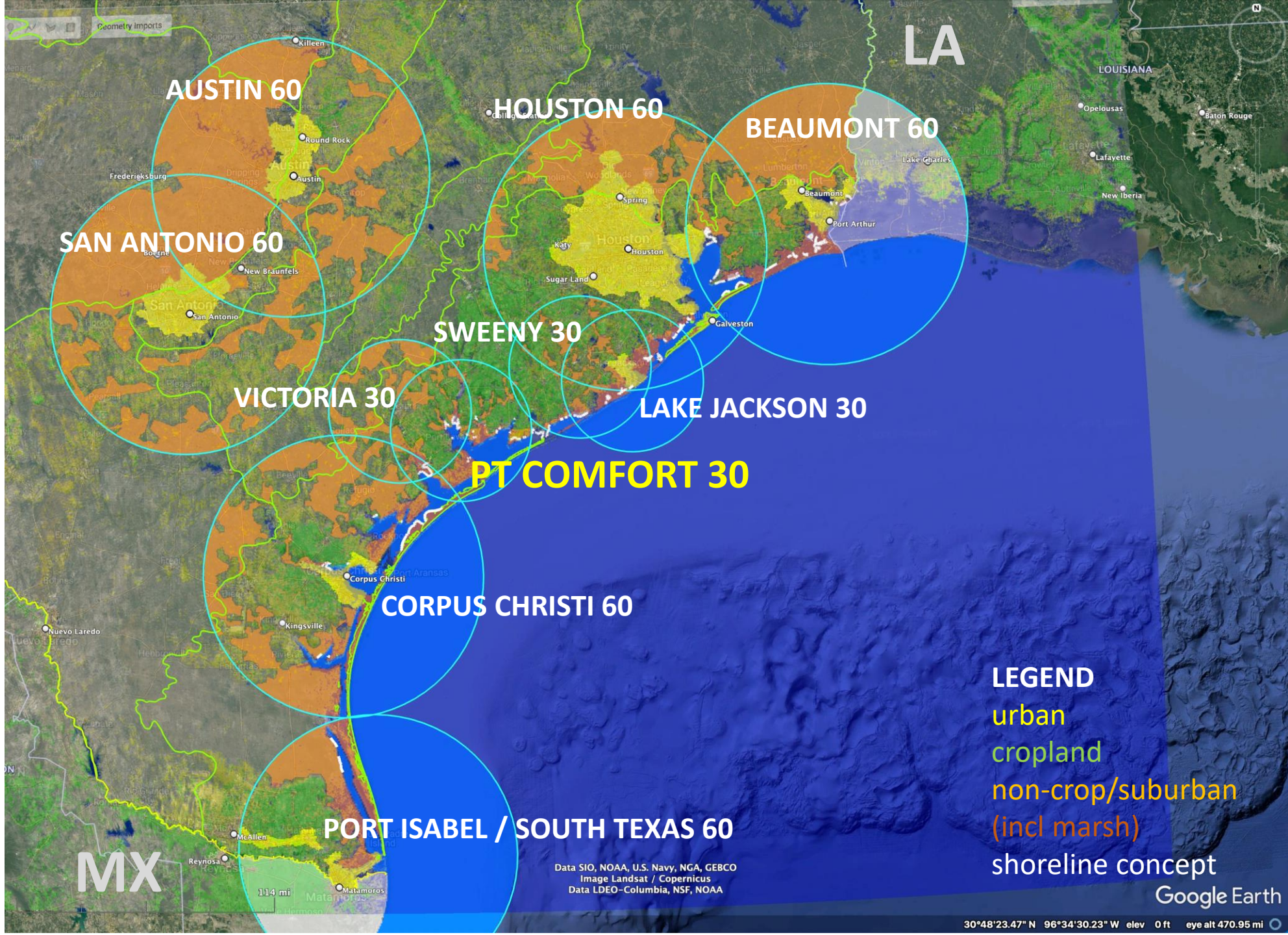
**CARBON DEVELOPMENT COST (tCO<sub>2</sub>e):**  
 ~\$13/ton



### CO-BENEFITS / PROJECT BIODIVERSITY:

- Companion Mad Island Marsh shoreline projects West and East (TPWD WMA) along the Matagorda Bay GIWW are 25-30 miles east of Point Comfort.
- Project is 3 miles from ICF Priority Crane Expansion sites. Nature Conservancy (TNC) land bounds TPWD WMA to west.
- These eastern inland sites along Matagorda Bay include the the richest soil carbon deposits within the project study area.
- TX Coastal Birding Trail CTC 007. Audubon Christmas Bird Count for Mad Island Marsh area typically leads the nation count, averaging 220-230 species.





**AUSTIN 60**

**HOUSTON 60**

**BEAUMONT 60**

**SAN ANTONIO 60**

**SWEENEY 30**

**LAKE JACKSON 30**

**VICTORIA 30**

**PT COMFORT 30**

**CORPUS CHRISTI 60**

**PORT ISABEL / SOUTH TEXAS 60**

**LEGEND**

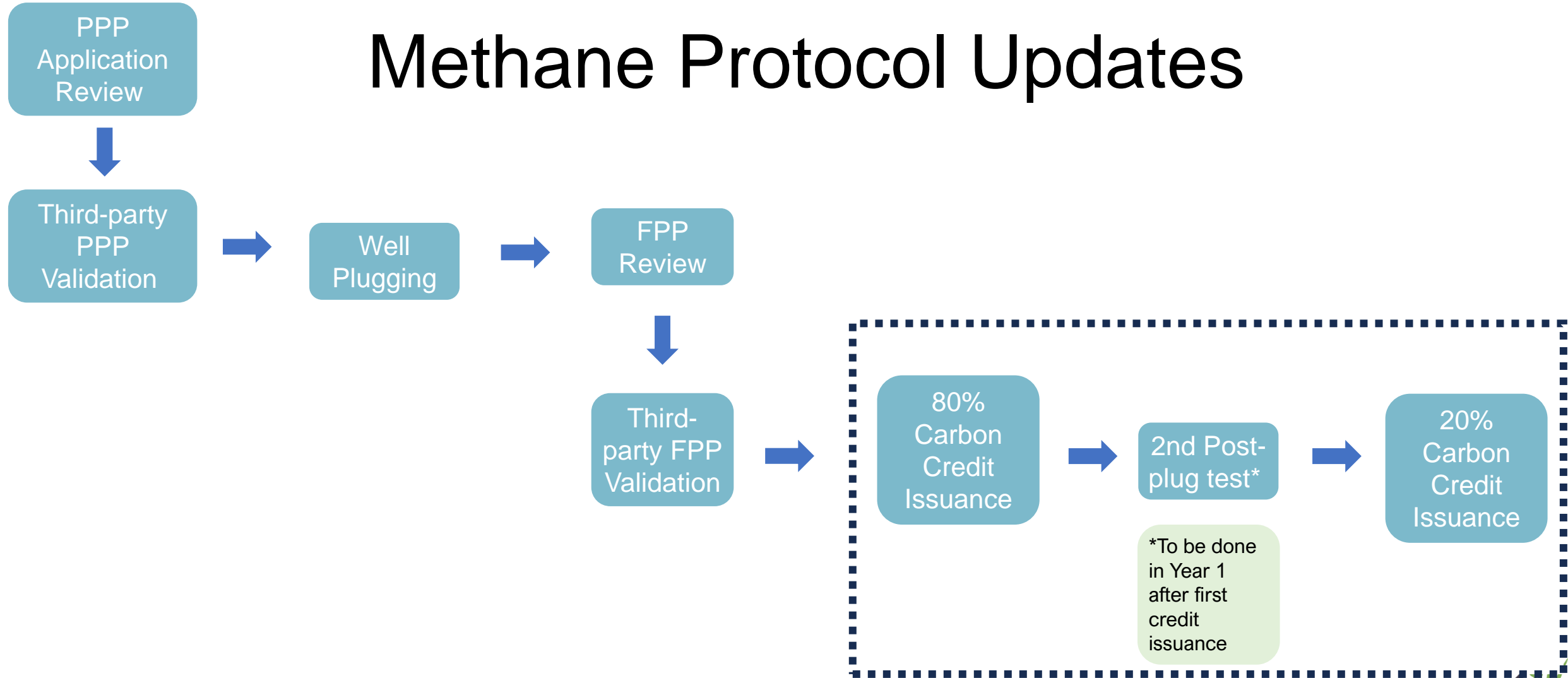
- urban
- cropland
- non-crop/suburban  
(incl marsh)
- shoreline concept

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat / Copernicus  
Data LDEO-Columbia, NSF, NOAA

Google Earth

30°48'23.47" N 96°34'30.23" W elev 0 ft eye alt 470.95 mi

# Methane Protocol Updates



A dense forest of birch trees with white bark and yellow autumn foliage. The trees are tall and slender, with characteristic white bark and dark lenticels. The ground is covered in a thick layer of yellow leaves and low-lying vegetation. The overall scene is bright and vibrant, capturing the peak of autumn.

# Application and Grant Project Updates

Miguel Gonzalez

# Applications & Grant Updates

- **2023 Pending and Processed Applications**

- 4 Soil – ND, MT, WV (Total acreage - 104,000)
- 3 Forestry – TX, MT, WV (Total acreage - 52,000)

- **Funded Grants**

1. Texas A&M AgriLife - Climate Smart Initiative [www.climatesmart.tamu.edu](http://www.climatesmart.tamu.edu)
  - Executed contract & Landowner Application
  - BCarbon's Role
    - Carbon Market Outreach and Advocacy material development
    - Grazing lands and Forestry Case Studies
2. Bia Echo – PVAMU/USBCSD
  - Landowner Visit, Cooperative Research, Buyer Engagement
  - USDA Forest Service IRA Proposal

USDA NRCS-FUNDED

## Texas Climate-Smart Initiative

HOME ABOUT TEAM APPLICATION & PARTICIPATION PRODUCER RESOURCES CONTACT



The Texas Climate-Smart Initiative is a five-year pilot project led by Texas A&M AgriLife Research and funded by USDA's Natural Resource Conservation Service. This groundbreaking initiative aims to foster climate-smart agriculture for all major Texas agricultural commodities and create market opportunities across the commodities.

 EN



# Upcoming Meetings



- Stakeholder Working Group –  
Thursday, December 7, 9 AM CT
- Methane Subcommittee –  
Monday, November 6, 3 PM CT
- Living Shoreline Subcommittee –  
Thursday, November 9, 11 AM  
CT

