

Attachment No. 13

LAND RECLAMATION of the Bison Pipeline

TRANSCANADA'S BISON PIPELINE in
Montana 04/12/2011

Pictures: Bob Zellar – Billing Gazette
Lincoln Star Journal

A cattleguard damaged during installation of the Bison high pressure gas pipeline in southeast Montana 04/12/2011



Blowing and blown soil on Robert Rusley's property on the Bison high pressure gas pipeline right of way in southeast Montana. 10/27/2010

152



10/27/2010 02:54

A pipeline sign lies fallen in a trench left after the soil over the Bison pipeline sunk in spring on Robert Rusley's property in southeast Montana 04/12/2011



One sign has fallen while another leans in the soft soil on the Bison high pressure gas pipeline right of way in southeast Montana 04/12/2011



Janelle Reiger walks on a concrete creek crossing damaged during installation of the Bison high pressure gas pipeline in southeast Montana 04/12/2011



Janelle Reiger stand in a trench left after the soil over the Bison pipeline sunk this spring on Wade Klauzer's property in southeast Montana 04/12/2011



Wade Kllauzer stands by a trench left after the soil over the Bison pipeline sunk this spring on his property in southeast Montana 04/12/2011



A pipeline sign lies fallen in a trench left after the soil over the Bison pipeline
sunk this spring on Robert Rusley's property in southeast Montana
04/12/2011



Water erosion on Wade Klauzer's property on the Bison high pressure gas pipeline right of way in southeast Montana 04/12/2011



Janelle Reiger walks by a trench left after the soil over the Bison pipeline sunk this spring in southeast Montana 04/12/2011



TAXES

Forbes

Carrot Vs. Stick: The Inflation Reduction Act's Energy Tax Provisions

Nana Ama Sarfo

Contributor

The United States, unlike its peer countries, does not have a carbon tax. The long-running question is whether the country needs one.

Some carbon tax advocates were hoping to see such a measure in the Biden administration's recently enacted Inflation Reduction Act, but the new law leaves that question unanswered. Rather than implementing a carbon tax, the administration has decided to expand several clean energy tax credit programs and offer new tax credits.

Some may see this as a missed opportunity for the U.S. to align its carbon policy with that of other countries and put a price on carbon emissions.

But the reality is that carbon taxation — specifically carbon pricing — is not a guaranteed solution to the global climate crisis. There is no globally agreed-upon price floor, so prices fluctuate considerably between countries.

Meanwhile, international bodies such as the IMF and OECD are warning that current carbon prices are generally too low to seriously offset emissions. The current global average is \$6 per metric ton of CO₂. The IMF says it should be \$75 per metric ton by 2030.

However, the Biden administration's decision to encourage emissions reduction through green technology provides a different approach that

bypasses carbon pricing concerns while promoting environmentally sustainable technologies.

But the real proof will be in the results: The White House has set a target for the United States to halve emissions from their 2005 level by 2030.

The White House had contemplated a carbon tax in the fall of 2021. At the time, lawmakers were negotiating over the administration's now-defunct Build Back Better bill, and both the White House and some congressional Democrats were interested in a minimum price of \$15 per metric ton of carbon.

The Inflation Reduction Act is a pared-down version of the Build Back Better bill — which later died in the Senate — and its climate provisions do not veer into carbon pricing. Notably, the act dramatically increases the section 45Q tax credit for various forms of carbon capture, utilization, and sequestration projects.

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For example, the credit for carbon capture and storage from industrial and power generation facilities has increased from \$50 per metric ton to \$85 per metric ton. In the case of direct air carbon capture and storage, the credit more than tripled, from \$50 per metric ton to \$180 per metric ton.

The Inflation Reduction Act also makes it much easier for carbon capture, utilization, and sequestration projects to qualify for a 45Q credit. Previously, direct air capture facilities had to remove 100,000 metric tons of CO₂ to qualify.

Now, the threshold has been reduced to 1,000 metric tons. The law also makes it easier for facilities to benefit from the credit because they can receive it as a direct payment, rather than as a reduction in their tax liability.

Another big change involves investment tax credits and production tax credits for solar, electric, and wind power. The law earmarks \$10 billion in ITCs for the creation of clean technology manufacturing facilities, such as those for electric vehicles, wind turbines, and solar panels. And a new clean electricity ITC under section 48E provides a credit of up to 30%, plus 10% bonuses, for facilities that are placed in low-income communities or meet other parameters.

On the production side, some of the Inflation Reduction Act's offerings include a new 10-year production tax credit for clean hydrogen under section 45V, which offers a credit of up to \$3 per kilogram of clean hydrogen. And a new credit for clean electricity production under section 45Y offers a credit of 1.5 cents per kilowatt of clean electricity. Other major credits include a nuclear power production tax credit under section 45U and a new clean fuel production credit under section 45Z.

All told, these are sweeping changes that could significantly transform America's green energy sector. They also present an interesting test case for whether the Biden administration's carrot-vs.-stick approach of incentivizing green production, rather than taxing carbon emissions, will further the country's goals.

Nana Ama Sarfo

Ethanol, Carbon, and Climate Change: Challenges and Opportunities

Geoff Cooper
Renewable Fuels Association

April 24, 2015

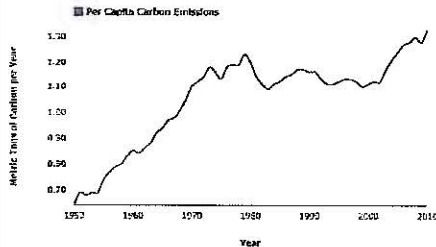
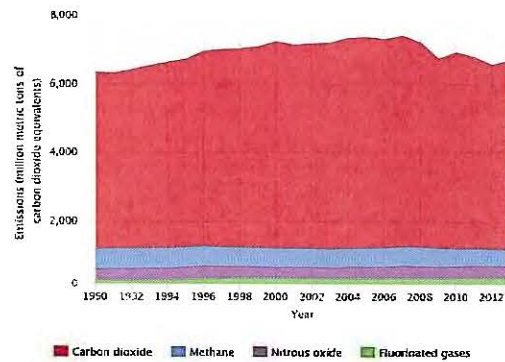


1

GHG Emissions and Climate Change

- *Majority position* in scientific community is that anthropogenic GHGs are contributing to climate change
- Many nations adopting or exploring policy measures to curb GHG emissions
- Social awareness of climate change is growing; but economic concerns (e.g. energy prices) still dominate
- Politics of climate change (and its causes) are evolving
- U.S. emissions trending lower, but global emissions trending higher

U.S. Greenhouse Gas Emissions by Gas, 1990-2013

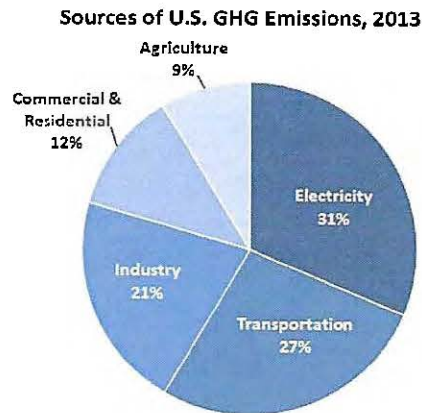


Sources: EPA and DDE (CDIAC)



2

Sources of U.S. GHG Emissions



Source: EPA

- 80-85% of GHG emissions are related to fossil fuel combustion
 - Coal = ~30%
 - Natural gas = ~30%
 - Petroleum = ~40%
- Transportation-related GHG emissions are trending down since 2007, but continue to represent 25-30% of total emissions



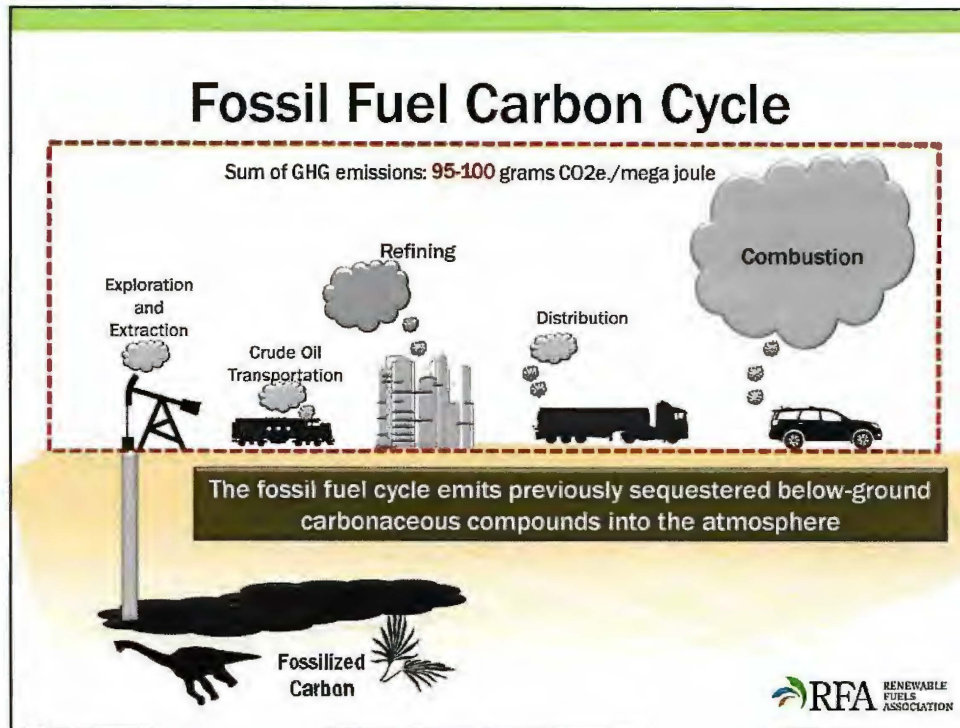
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Replacing fossil fuels with bioenergy reduces GHG emissions

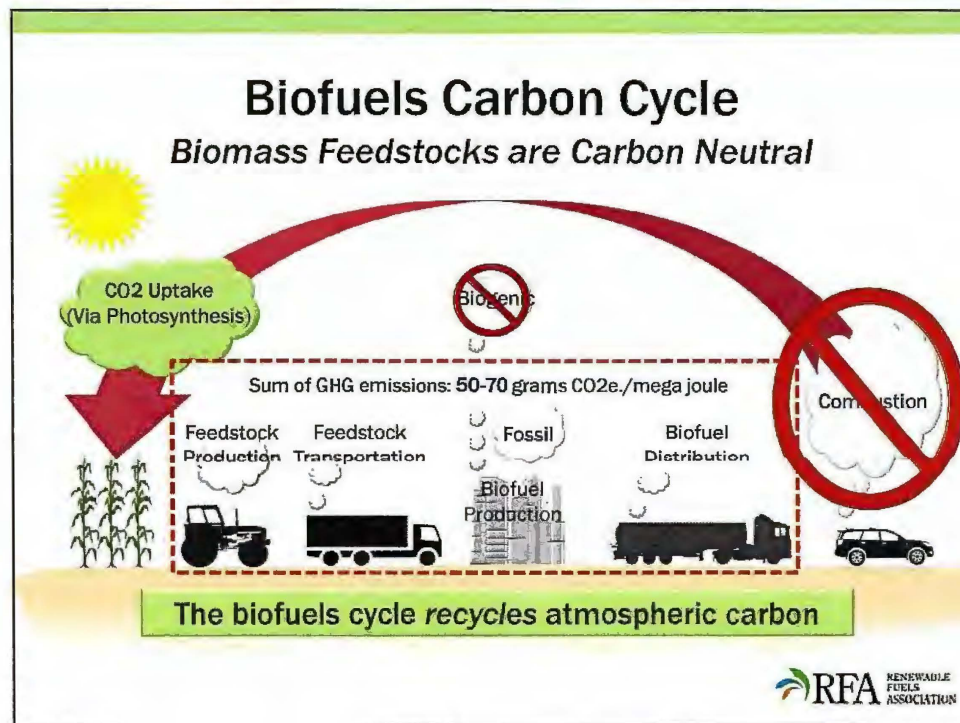
- On a full lifecycle basis, objective analyses generally show that substituting bioenergy for fossil energy reduces GHG emissions
 - Biomass absorbs CO₂ from atmosphere via photosynthesis
 - Combustion of biomass releases stored CO₂ back into atmosphere
 - In this way, bioenergy essentially “recycles” atmospheric carbon in a fairly rapid process
- Emissions related to growing, harvesting, converting biomass to energy are accounted for via lifecycle analysis
 - GREET model is typically used to estimate lifecycle GHGs



4



5



6

GHG reduction has been recognized as a benefit of using ethanol for more than two decades

- As early as late 1980s, ethanol was promoted as a means of reducing GHG emissions
 - 1989 EPA fact sheet: *Ethanol can "...minimize the accumulation of greenhouse gases (since these "renewable" feedstocks draw carbon dioxide out of the atmosphere as they grow)."*
 - 1997 EPA Administrator Carol Browner: *"Expanding the use of renewable fuels can help clean up our air and lower emissions of harmful greenhouse gases."*
 - 1998 RFA Outlook: *"Because ethanol is renewable, it is the only transportation fuel that helps reduce emissions of CO2, a greenhouse gas."*
 - Early analyses showed modest GHG reductions (15-25%)
- **But there was no price on carbon or economic incentive for supply chain to use ethanol for GHG reduction**



7

2000s: GHGs enter the policy realm

- 2005/06: Early discussions of California LCFS
 - Would require incremental reductions in GHG emissions from fuels sold in the state
- 2006/07: Discussions of expanded RFS
 - Would require renewable fuels to meet certain GHG criteria
- 2007 Supreme Court ruling on *Mass. v. EPA*
 - Found GHGs are an air pollutant
 - EPA must determine if GHGs endanger human health
- These developments initially seemed positive for ethanol
 - Regulatory requirements would establish an economic value for reduction of GHG emissions
 - By ~2006, most analyses showed ethanol cut GHGs by 25-40%



8

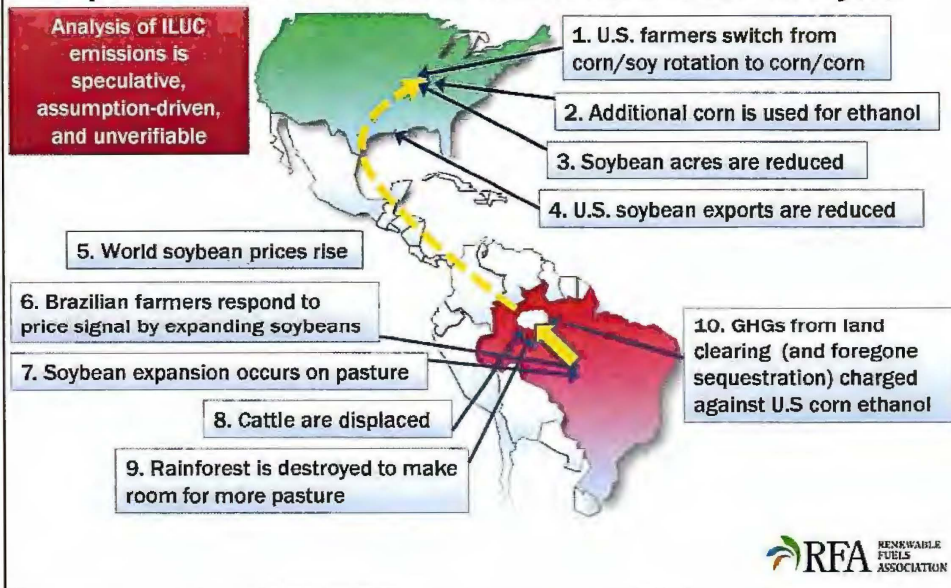
Enter “Indirect Land Use Change”

- Fall 2004: Delucchi (UCD) paper for EPA-OTAQ
 - “...conventional transportation LC models ignore (or treat too simply) changes in land use...”
- 2005-07: UCD/UCB raise profile of ILUC in academic/NGO circles
- Dec. 2007: **ILUC inserted into EISA in an 11th hour deal**
- Feb. 2008: **“Use of US Croplands for Biofuels Increases GHGs Through Emissions from Land Use Change” (Searchinger) published in Science**
- Spring 2008: Environmental NGOs pile on
- April 2009: **CARB adopts LCFS with ILUC penalty**
- May 2009: **EPA releases RFS2 proposed rule with ILUC penalty**



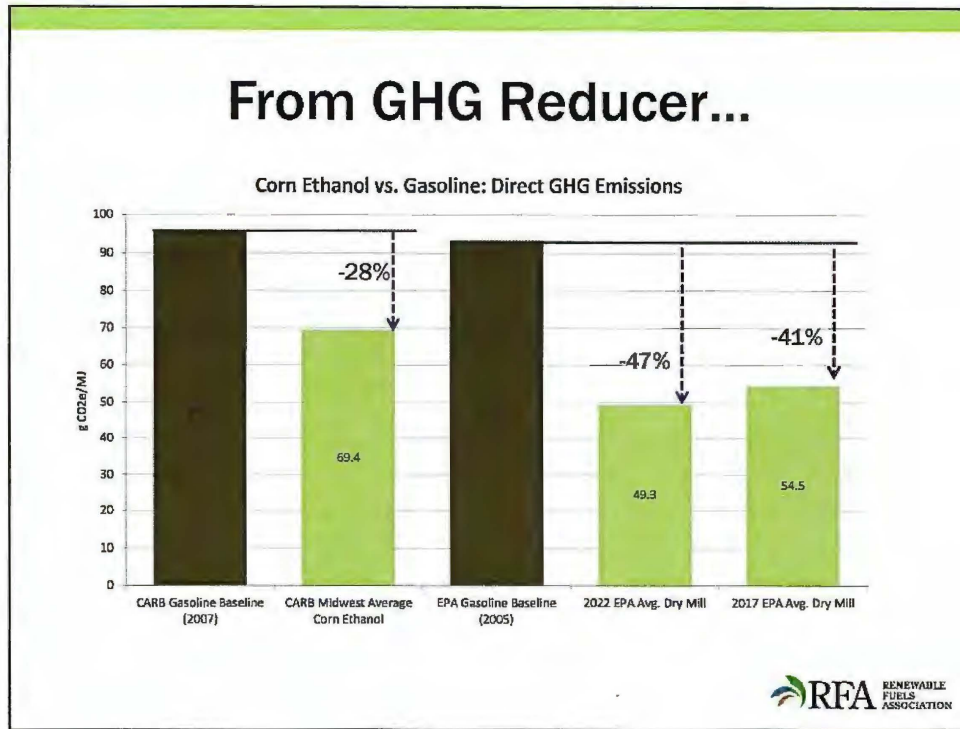
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Ethanol’s GHG Benefits are Only Questioned when Highly Speculative ILUC Emissions are Added to the Lifecycle



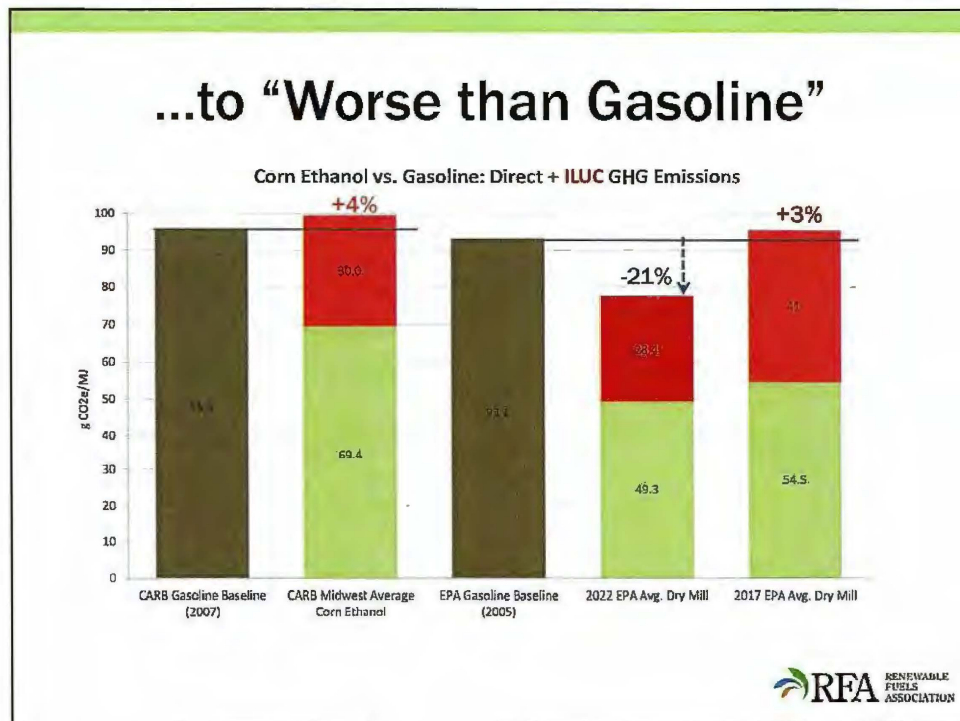
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From GHG Reducer...



11

...to "Worse than Gasoline"



12

Correcting the Record

- During and after LCFS and RFS rulemakings, RFA initiated an aggressive initiative to restore the understanding of ethanol's GHG benefits
- Political and legal efforts
- Regulatory/technical efforts
 - Pushed both EPA and CARB to allow producers to petition for individual pathways
 - Worked with Argonne to update GREET model
 - Hired modeling experts to evaluate ILUC models
 - Called for fairness/consistency in LCA approaches



13

Direct Emissions: Fixing the GREET Model

- Version of GREET used by EPA and CARB contained outdated assumptions on ag emissions and ethanol plant energy use
 - RFA/Argonne survey of industry (2007)
 - Mueller survey of dry mills (2008)
 - Mueller & Kwik survey of dry mills (2012)
 - Worked with USDA to get updated on-farm energy use and fertilizer data
 - All data shared with Argonne, EPA and CARB
- Argonne accepted these data and has released new versions of GREET every year since 2010
 - Latest GREET model shows a 34% GHG reduction for “Average Corn Ethanol” even with ILUC (44% without)
 - CARB is finally updating its GREET model based on Argonne changes



14

Attacking the ILUC Concept

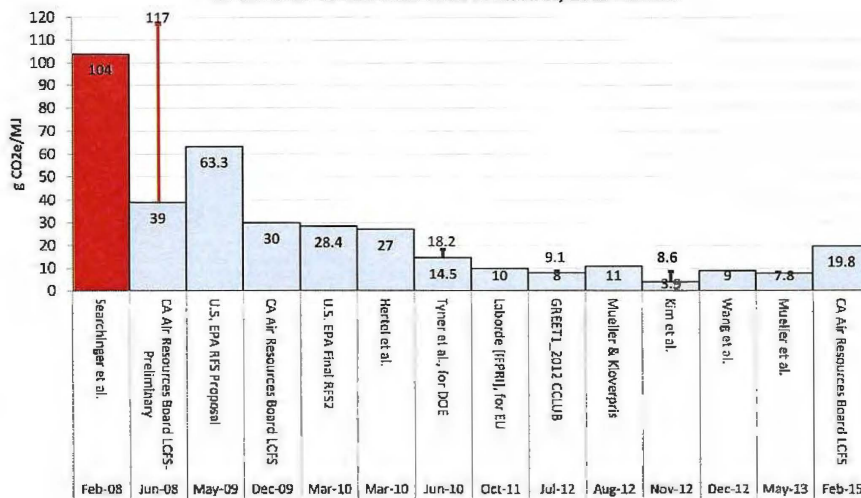
- RFA evaluated Purdue's GTAP model used by CARB and found numerous flaws and problems
 - Numerous reports/comments shared with CARB/Purdue
 - Supported projects at Purdue/Argonne to improve the model
- EPA's ILUC model not publicly available
 - Successfully pushed for peer review
- Orchestrated numerous letters from academic community opposing use of ILUC model results in regulations
- Aggressively supported and publicized research showing ethanol's true impacts on land use



15

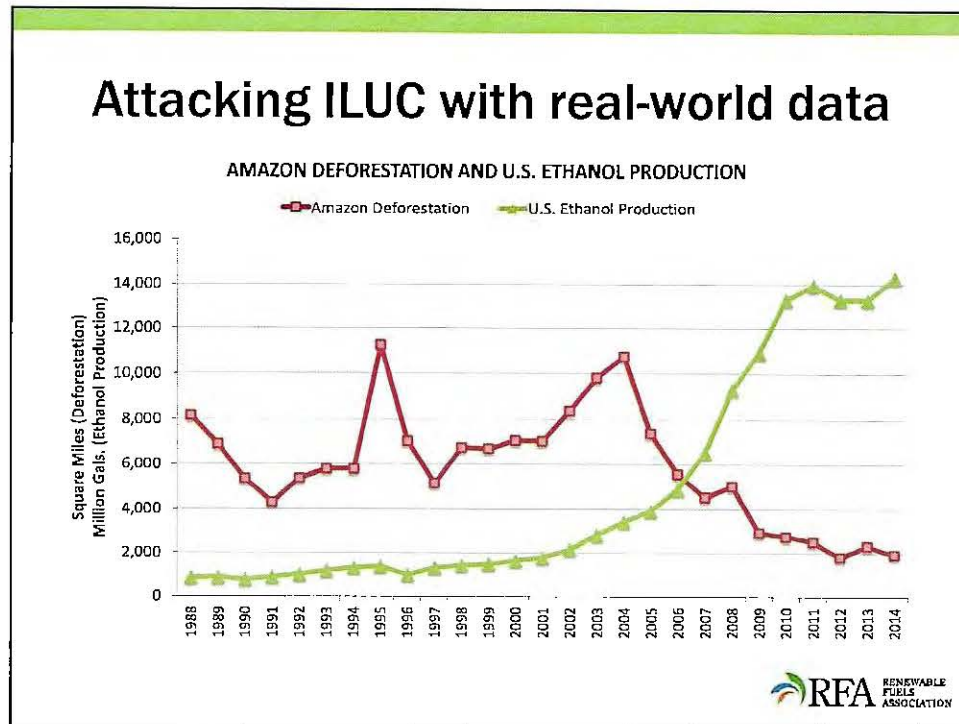
ILUC results

CORN ETHANOL LUC EMISSIONS ESTIMATES, 2008-PRESENT



16

Attacking ILUC with real-world data



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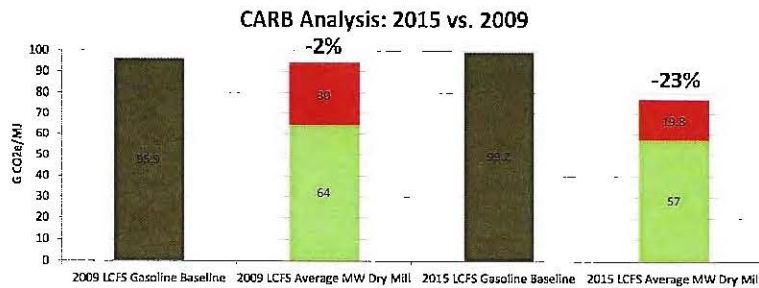
Attacking ILUC with real-world data

- Most modeling exercises predict ILUC associated with expanding ethanol from 2-3 BG to 15 BG
- Industry is now producing 14-15 BG...so let's look backward and see what really happened with land use
- ISU/CARD study (Babcock/Iqbal) examined land use patterns from 2002-04 to 2010-12 period
 - "...the primary land use change response of the world's farmers in the last 10 years has been to use available land resources more efficiently rather than to expand the amount of land brought into production."
 - This finding is not new. ...But this finding has not been recognized by regulators who calculate indirect land use."
- Data from study being used to calibrate GTAP model

18

Current Status of LCFS Carbon Scoring

- Updates to CARB’s modeling approach results in much better CI scores for ethanol:



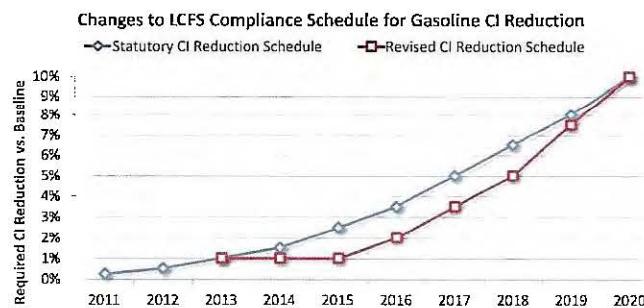
- ...but improvements still needed, especially on ILUC
- CARB beginning to understand that they need corn ethanol to facilitate compliance



19

What’s Next for LCFS?

- The LCFS has endured so far in large part because of grain ethanol (**60% of credits to date**)
- CARB froze 2014-2015 required GHG reduction at 2013 levels (**1% vs. baseline**)
 - Will increase to 2% reduction in 2016



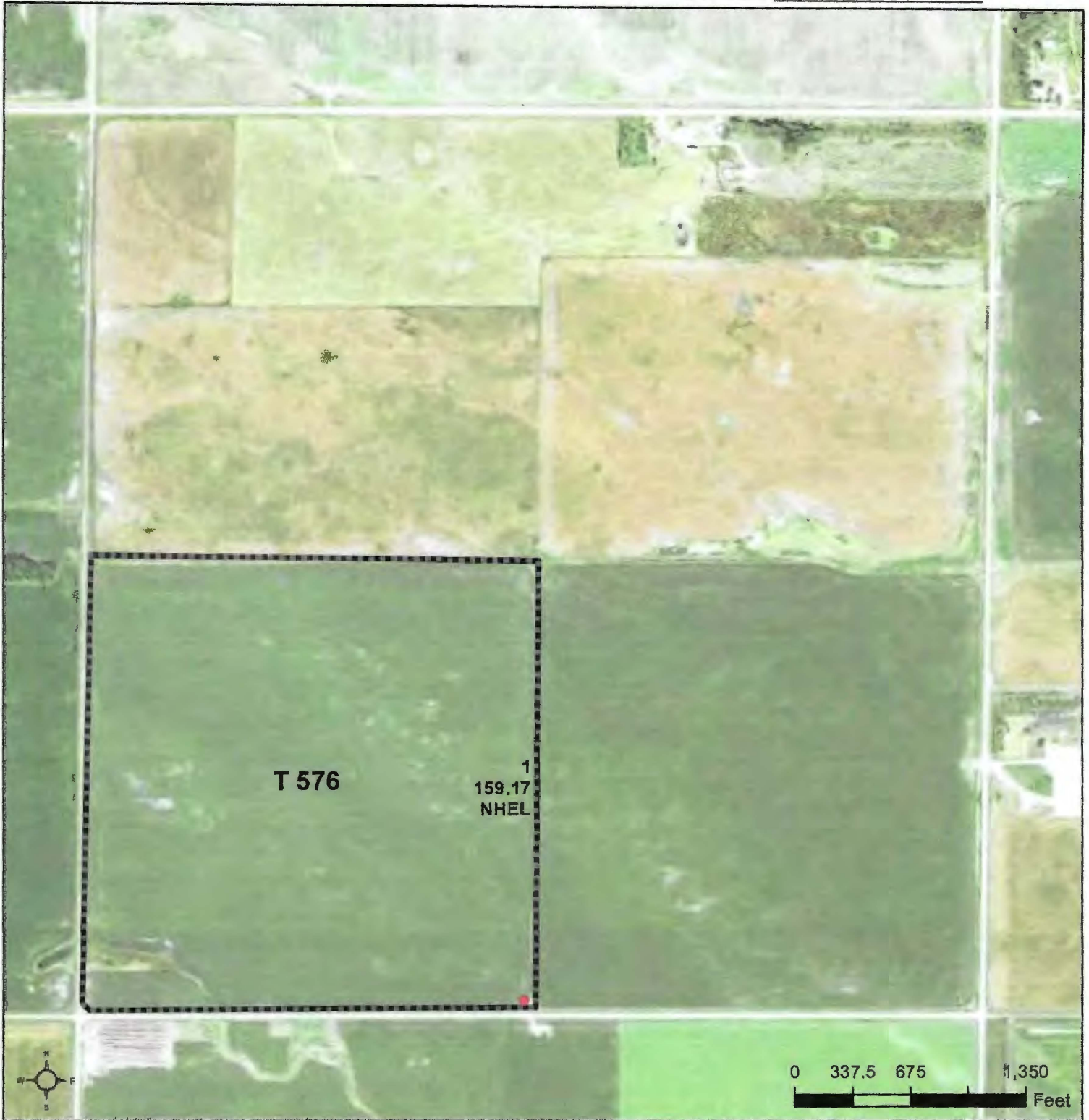
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United States
Department of
Agriculture

McPherson County, South Dakota

Producer(s) Name LAPKA FARMS INC.
Shares _____
Cell Phone # _____



Common Land Unit

PLSS

- Cropland
- Tract Boundary

Wetland Determination Identifiers

- Restricted Use
- Limited Restrictions
- Exempt from Conservation Compliance Provisions

Unless otherwise noted, crops listed below are:

Non-irrigated Intended for Grain	Producer Initial _____
Corn = Yellow	Date _____
Soybeans = Common	
Wheat - HRS or HRW	
Sunflowers = Oil or Non	

2023 Program Year

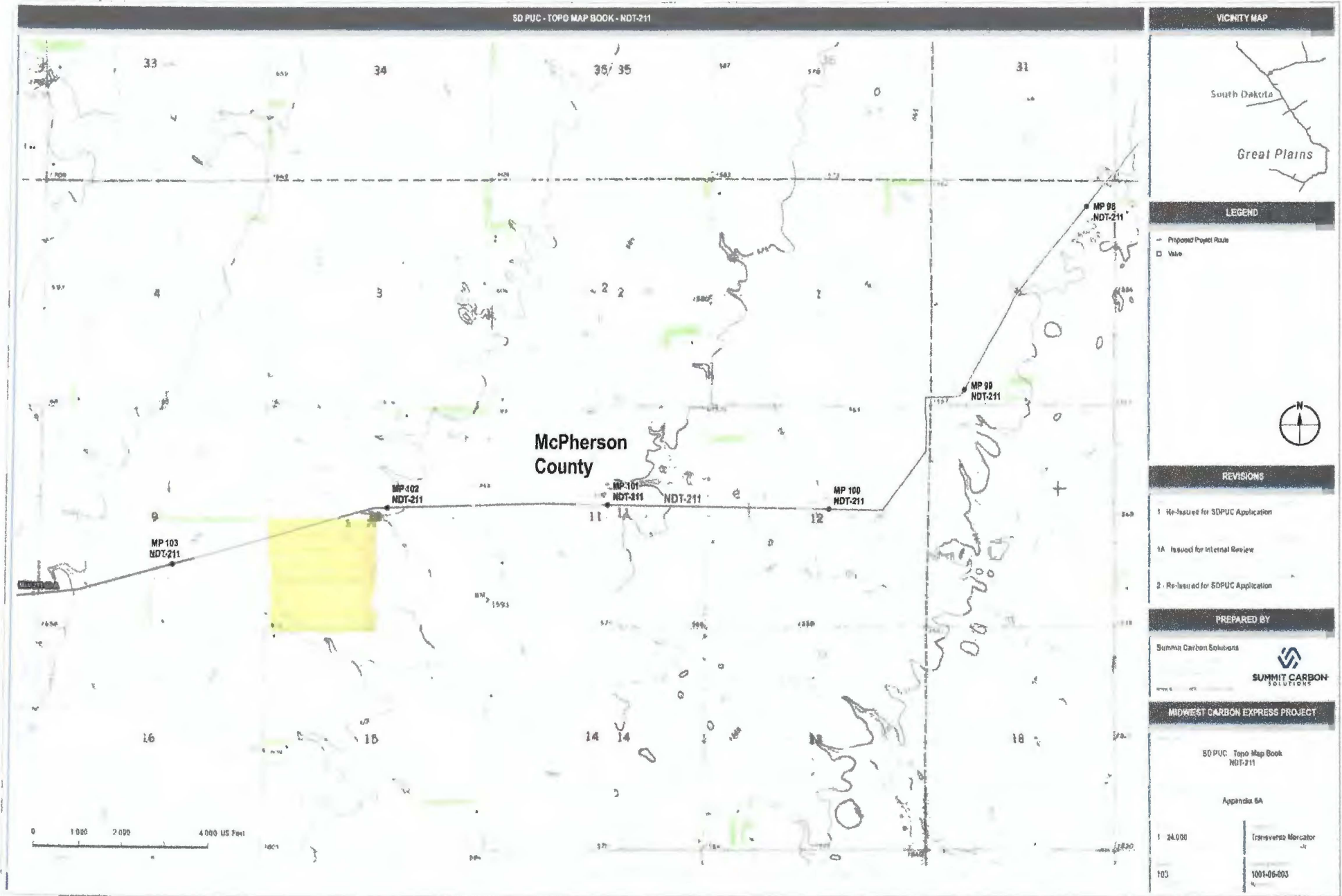
Map Created March 17, 2023

Farm 539

10-127N-67W-McPherson

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).

Cross (tenant)
of
10-127-67



The following receipts from Schaff Angus Valley show the high value of our herd bull inventory.

Map description for your map.

Lappa Farms



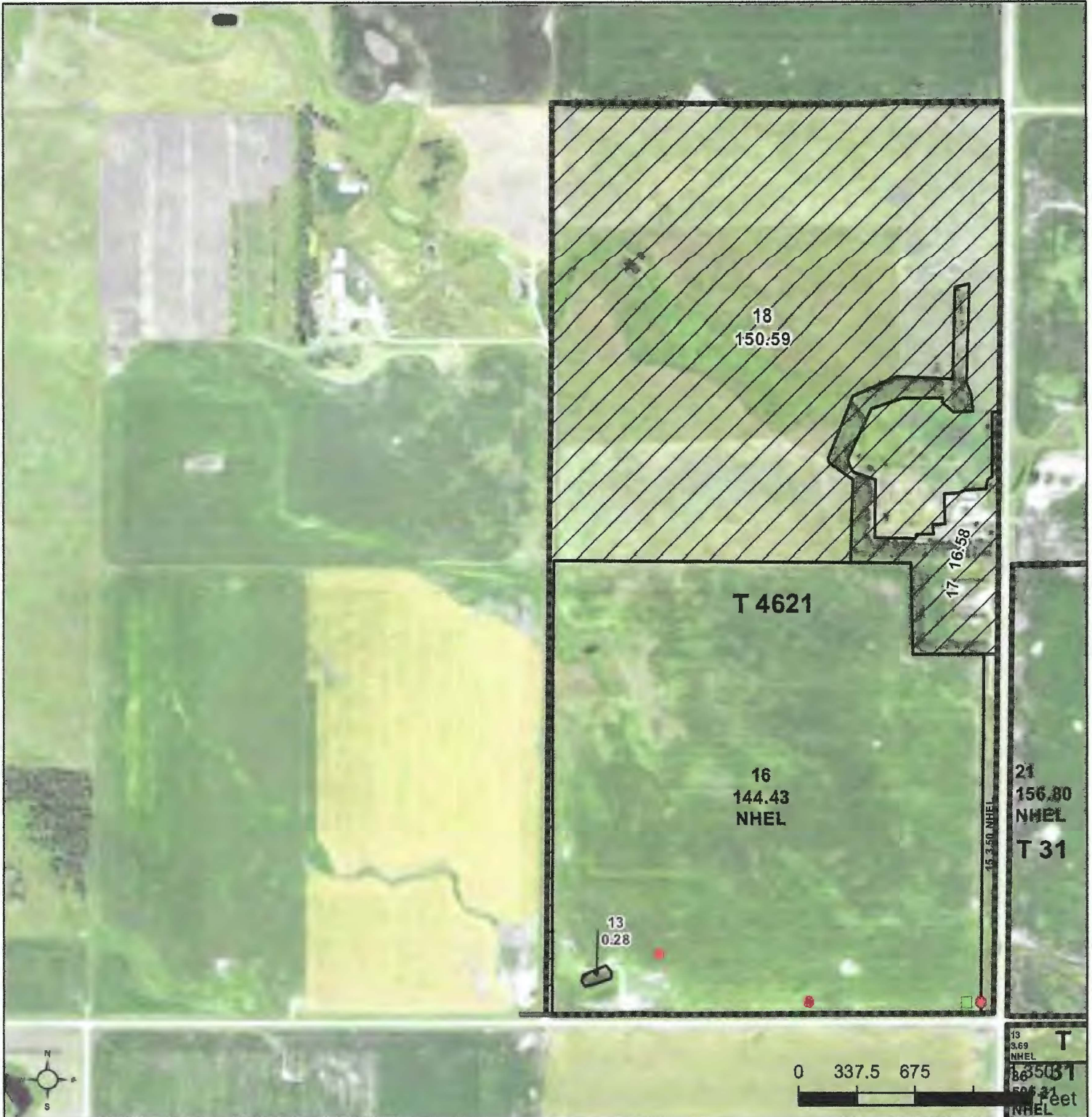
362nd Ave

17-127-67

3 pics attached
go with this map

Earth

1000 ft



Common Land Unit Tract Boundary
 Non-Cropland
 Cropland

Wetland Determination Identifiers

- Restricted Use
- Limited Restrictions
- Exempt from Conservation
- Compliance Provisions

Unless otherwise noted, crops listed below are:
 Non-irrigated Intended for Grain
 Corn = Yellow
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Producer initial _____
 Date _____

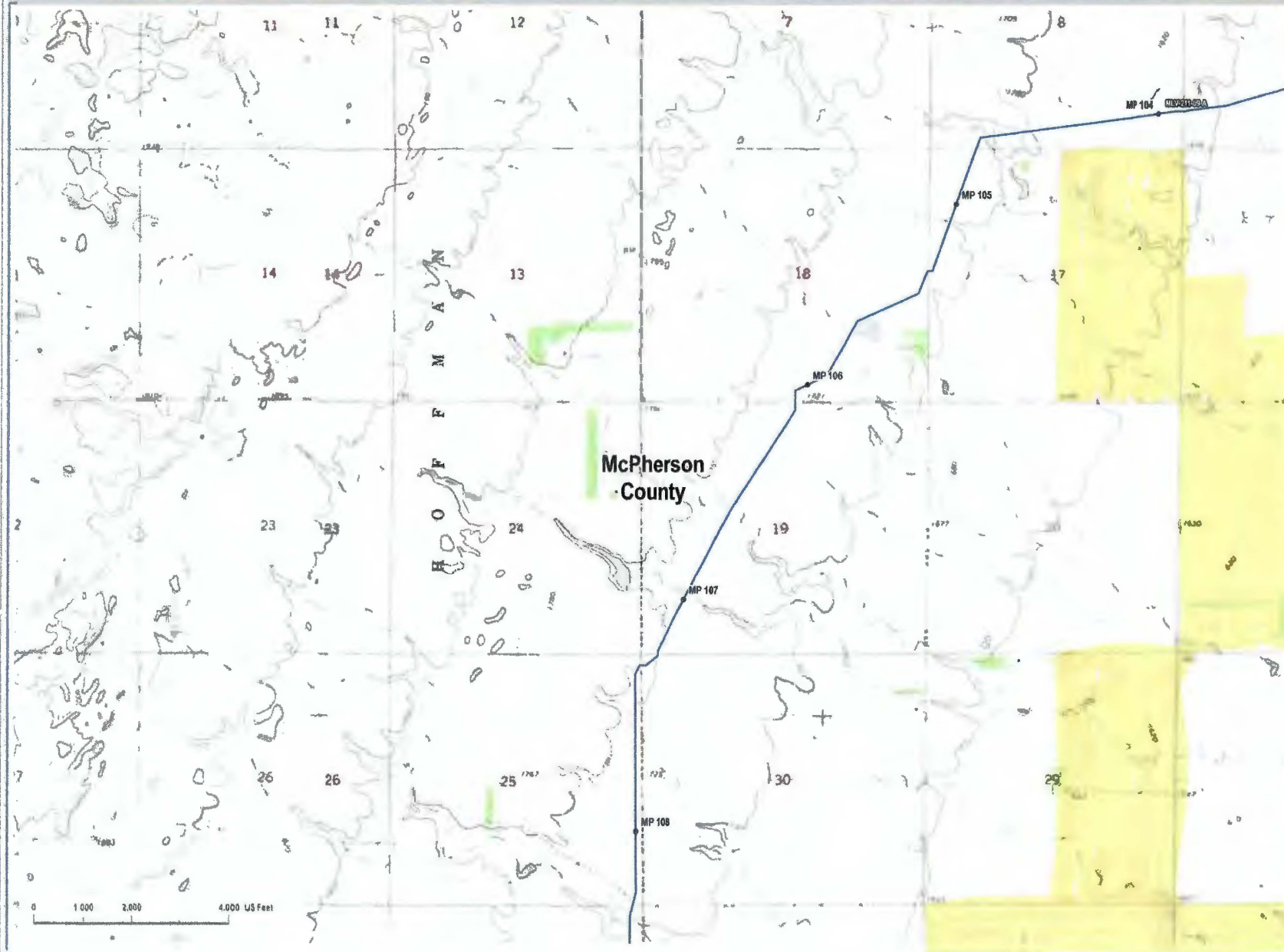
2023 Program Year
 Map Created March 17, 2023
Farm 5041

17-127N-67W-McPherson

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Yellow Shaded Lapka Farms Property

SD PUC - TOPO MAP BOOK - NDT-211



VICINITY MAP



LEGEND

Proposed Project Route




REVISIONS

Revision	Issued By	Checked By
1A - Issued for Internal Review		
2 - Re-issued for SDPUC Application		
3 - Re-issued for SDPUC Application		

PREPARED BY

Summit Carbon Solutions



SUMMIT CARBON SOLUTIONS

MIDWEST CARBON EXPRESS PROJECT

SD PUC - Topo Map Book
NDT-211

Appendix BA

Scale	1" = 24,000'	Projection	Transverse Mercator
Sheet	104	Zone	NAD 1983 UTM Zone 15N
Sheet	104	Drawing Number	1001-06-003



Picture 1X from map on section 17-127-67 looking northwest



Picture 2X from map on section 17-127-67 looking northeast



Picture 3X from map on section 17-127-67 looking southeast