
Final Report for ATIP TX REAP REDA Grant No. 50-0820-782265608 on all 5 Tasks covering May 1, 2019 through September 30, 2020

**Overall Project
(100% Complete)**

We are pleased to submit our Final Report, summarizing our work from May 1, 2019 through the extension of time including September 30, 2020.

**Task 1: Identify and analyze business opportunities [REDA covers biomass inventory, not other services], available capital and technical training;
(100% Complete)**

This Task was considered the most essential to the project, in that all other Tasks were dependent on having the geospatial inventory of (1) biomass feedstock resources in the region (funded by REAP REDA), and (2) those companies that could provide ancillary services in support of the bioeconomy cluster, especially those that would secure and process biomass feedstock inventories (funded by TX RBDG). We have incorporated all publicly available data into the various layers of an Environmental Sciences Research Institute (ESRI) Geographic Information System (GIS) database in the ArcGIS Pro version. Each layer is properly identified as to data source, data timeframe, and credit to organizations and individuals that have provided the data.

This geospatial database is available in two formats:

- (1) A publicly-available exploratory version available on a website (<https://arcgis.com/apps/webappviewer/index.html?id=e4e4ae3e65304d3593a03819f3915ece>) is accessible to anyone having this URL link; our intention is to make this widely available. This web map allows users to become familiar with GIS data layers which they can view and probe/mine the underlying attribute tables of each layer for specific data on each entry (e.g., manure production, food waste, municipal solid waste, sewage sludge, and service providers to the region in the financial, educational, workforce, economic development, local & state government sectors). This version has been carefully prepared to avoid specific identifications of dairy names and contact information, honoring the sensitivity of the dairies in the region to being exploited by those opposed to any concentrated animal operations based on environmental concerns.
- (2) The most robust detailed and data-analysis-ready version is available only through the ATIP Foundation. Containing all information that is in the public website database, as well as data obtained from other sources, this version also includes more data on contact information for biofeedstock providers and corporations that intend to process these feedstocks. In many cases these data are deemed business confidential, thus, specific information has been withheld from the public version of the database. More importantly, for corporations desiring to develop strategic positions in this region to process biomass and produce bioenergy and valuable co-products, the ATIP Foundation will use this database interactively with corporations under contract with the Foundation or the Stephenville

Economic Development Authority (SEDA) to evaluate optimal locations for accessing biomass and delivering product and co-products at least economic expense. Additional services offer access to local/state/and federal connections necessary to obtain permits for operation, strategic planning on fiscal resource acquisition, as well as access to several economic development organizations in the region that can facilitate all local arrangements as well as local political support.

Task 2: Begin the engagement process with related feedstock stakeholders to initiate feedstock supply agreement planning and documentation to attract business development. (100% Complete)

At the outset, at our earliest meetings, the initial feedback we received in launching our outreach to feedstock stakeholders, inclusive of Mr. Darren Turley, Executive Director, Texas Association of Dairymen, was expressions of skepticism, regarding the bioeconomy. Jeff Sandford, President of SEDA, explained that years previous, a company had come to Erath County with promises made that never materialized, leaving community leaders jaded about the potential.

We worked diligently in the first few months, working with the Economic Development Corporations and Chambers of Commerce to conduct extensive briefings, that were supported by former Stephenville Mayor Kenny Weldon. Mr. Weldon had attended the National Forum in 2016 in Mineral Wells that ATIP conducted, in partnership with the Federal Biomass Research & Development Board, with support from the US Departments of Agriculture & Energy.

The real breakthrough came when we recruited and brought company UCIN #7 (Unique Company Identifier Number; see REAP REDA ATIP Status of Corporate Interest.pdf) to Stephenville in December 2019 for 3 days of presentations and meetings with community leaders and dairymen.

UCIN #7 was one of the first companies ATIP recruited to consider establishing business operations in the region. By the time they agreed to come visit, ATIP had introduced them to the possibility of securing a USDA Loan Guarantee, assisted them to secure legal counsel and a lender, helped them develop their application, and introduced them to Chris Cassidy at USDA Rural Development. Their presentations and discussions in Erath County changed the mindset and opened the door to cooperation and support from the dairies, as well as Darren Turley and the State Association.

As a result, we have developed a list of 72 dairies (see Coded Dairy List TX REAP REDA.pdf) in the region and have included comprehensive data in our GIS Database on the availability, tonnage, and location of dairy manure, as well as other biowaste sources that can be converted to energy. The process of engaging and interacting with the dairies was tasked to the SEDA, a known and established entity in the region, who agreed to take the lead in the 4-county area for coordinating outreach with both biomass producers, and potential corporate recruitment to the region.

In July 2020, SEDA reached out to dairies and provided a document from the Foundation that (1) detailed the opportunity for dairies to provide biomass for bioenergy conversion and (2) also

provided illustrations of the GIS database developed for the project (see attached “TX Letter to dairies and animal operations July 2020 with overview of geospatial inventories of biomass and service providers.pdf”). In November 2020, SEDA followed up with an update on the opportunities for dairies that also included a “survey” seeking dairy responses (see “Update to TX dairies (ATIP, SEDA) and survey for collaboration, Nov. 2020.pdf”). Responses were held in strict confidence by SEDA for further partnership discussions between interested dairies and technology providers establishing facilities in the region (see “Email Confirming Outreach [RE_ Documentation for SEDA].pdf”).

We have also recruited and have the support of Tarleton State University; Ranger, Hill and Weatherford Colleges; and the Texas Agri-Life Research Center to be aware of our engagement with biomass producers, and the workforce training needed to support the bioeconomy locally.

We have also worked with municipalities and counties, relative to municipal waste. These data are also part of the GIS database.

During the year we also hosted visits with other corporate prospects and have a second company (UCIN#14) and a third company (UCIN#27) committed to establish operations within Erath County, and a number of additional prospects. A fourth company (UCIN#3) has already established a training facility in the region -- not for the purpose of converting biomass, but for precision agriculture using unmanned aerial systems (UAS) for multiple agricultural uses.

Task 3: Assess infrastructure and logistics for collecting and processing dairy wastes. This process will involve determining whether piping systems are available, manure pits, lagoons, and how the dairy material will be collected and transported. Road infrastructure and availability of vehicles and trained workforce also will need to be assessed. (100% Complete)

We conducted extensive outreach to stakeholders that supported our assessment of the infrastructure and logistics within the region. This included physical infrastructure, supply chain capacity and capability, and workforce development. Given the sensitivity of dairies to disclose environmental data, this information is retained by SEDA for partnership discussions between dairies and technology providers.

We directly engaged (1) the North Central Texas Workforce Board; (2) the University of Texas at Arlington; (3) Tarleton State University; (4) Ranger, Hill and Weatherford Colleges; (5) Texas State Technical College; (6) Dallas College; (7) Stephenville & Mineral Wells ISDs; (8) the North Central Texas Council of Governments; (9) the Texas Department of Transportation; (10) Erath, Palo Pinto, Parker, and Hood Counties; and (11) the cities of Granbury, Mineral Wells, Stephenville, and Weatherford.

We have compiled information on the type of dairy operations and manure management systems, with approximately 65% using free stall systems and flush manure, with 35% operating dry lot operations. Specific information is retained by SEDA for partnership discussions between dairies and technology providers.

We have documented logistics for manure collection, incorporating the information into our GIS Database.

We have engaged education & workforce development, resulting in (1) the workforce board approving Agri-business as a demand occupation in the region, making funds from the Workforce Innovation and Opportunity Act (WIOA) available to the Community Colleges to provide training; (2) introduced relevant nationally recognized industry certifications to the Independent School Districts, including helping Mineral Wells Independent School District (ISD) to secure a \$170,000 Jobs and Education for Texans (JET) Grant to purchase training equipment; (3) we have briefed ISDs and are making our GIS Database available to support Career Awareness Programs in the 8th and 9th grade; (4) Tarleton State University is evaluating the support their Science & Engineering Programs can provide; (5) Tech Labs, a Houston based company that represents the entities that provide the nation's leading nationally recognized industry certifications and the nations primary manufacturers of educational training devices and equipment has identified the primary stackable certifications that can be utilized; and (6) the Texas Department of Agriculture is committed to provide introductions to the commodities markets in Texas.

**Task 4: Engage with six identified industry segments of stakeholders through a series of community stakeholder meetings, industry segment specific forum, and ongoing steering committee meetings; Provide education and training on the technology, processing, and material quality including beneficial use for market creation and utilization in the immediate area as well as for export from the region.
(100% Complete)**

The primary focus of this task was to engage the six (6) primary stakeholder sectors ATIP identified and engaged in the 2016 and 2017 national forums ATIP conducted under partnership agreements with the Biomass Research & Development Board and the US Department of Agriculture. The goal was to provide education and training on the technology, and processing and material quality, including beneficial uses for utilization and market development in the area and for export.

We began work on this Task by identifying the primary thought and opinion leaders in each of the 6 sectors on a county wide basis, primarily working with and through the Economic Development entities in each of the four (4) counties. We next conducted briefings in each of the four counties, organized and hosted by our economic development partners, attended by leaders from all 6 sectors; in essence "mini-forums" similar to the national forums we conducted.

We then engaged the leaders who attended from each of the six sectors to assist us to more fully engage organizations in those sectors. The following summarizes the primary outcomes achieved on an individual sector basis.

1. Economic & Workforce Development

We aligned the Economic Development Corporations, Chambers of Commerce, Regional Education Service Centers, Independent School Districts, Community College Systems, and local workforce boards that serve and/or are adjacent to our 4-county region.

As examples:

- We conducted numerous briefings in the counties, organized by the EDCs and Chambers to educate the businesses in the region on the bioeconomy; our Initiative; and the opportunities to provide businesses and support to bioenergy companies.

In doing so, we developed a handout that compared bio companies with manufacturers. Essentially stating that much like a manufacturer, a bioenergy company moves biomass from the field to the digester (logistics); converts the biomass to a product (manufacturing & production), primarily energy and commodities; and moves the product to the market (logistics).

We found it effective in helping companies from banks to insurance agencies understand that biobased companies need the same things any other primary wealth-generating company needs.

- We partnered with Ft Worth ISD to engage 14 school districts and Community Colleges, the Regional Education Service Center, and the local workforce board in the North Central Texas Region to develop the role each should play in developing the workforce needed for the growing unmanned & autonomous systems (UAS) sector. That sector directly supports the needs of precision agriculture. It is also becoming ubiquitous in virtually all other sectors that support the bioeconomy, such as Manufacturing and Logistics. Ft Worth ISD has been funded by a \$750,000 grant from the Texas Education Agency.
- We partnered with the North Central Texas Council of Governments (NCT/COG), who organized a Task Force to support the growth of the unmanned aircraft systems (UAS) Sector in our region. The Task Force has over 180 members and nearly 300 participants, working with both business & industry to identify the skills, competencies, certifications and degrees they deem important. That information is shared with the education & workforce participants as they shape their roles in supporting the needs of the industry.
- We engaged the national organizations that provide nationally recognized industry certifications in the sectors critical to the bioeconomy, in partnership with Tech Labs that represents most of them in Texas.

2. Business & Industry

We utilized the Chambers of Commerce and Economic Development Corporations in the region to engage business and industry within the county they serve. This included multiple briefings and conference calls with their various Councils & Committees, relevant to the bioeconomy. We also worked with and through the NCT/COG to engage the business & industry partners in their Task Force.

3. Financial Services Sector

We engaged local banks in the 4-county region to create awareness of the work we are doing and the opportunity to become a USDA Guaranteed Lender. We informed the North Central Texas Government Guaranteed Lenders Association of the opportunities.

We developed a partnership with FoodShed, an Angel Investor Group in Texas that invests in Agriculture-related businesses and enterprises. They indicated a lack of quality “deal

flow.” Through our partnership with them, they have agreed to circulate information on our prospects to both their members, and to the syndicate that has been established to link all of the Angel Investor Groups in Texas.

4. Elected and Appointed Officials

We briefed and engaged elected and appointed officials at local/municipal, county, regional, state and federal levels. These included city and county leaders in all four counties; the Mineral Wells Regional Airport Board; the leadership of the North Central Texas Council of Governments; the Texas Workforce Commission; the Texas Education Agency; the Texas Department of Agriculture; the Texas Commission on Environmental Quality; the US Department of Labor, and the US Department of Education. All above listed entities are involved in, or contributing to, our work in some manner.

5. Supply Chain

We briefed organizations that represent the primary sources of biomass in the region, as well as the primary sectors that comprise the supply chain; particularly those components that are needed to move biomass from “farm to conversion to market.” We documented within the geospatial database the existing roads, rails, airports, transmission lines, etc., necessary to move biomass and the resultant products and/or commodities.

6. Academia

We briefed and engaged a significant number of higher education institutions within the region. We focused on (1) identifying research they are doing that relates to or supports the bioeconomy; (2) discussed the potential for research they might do; (3) educated them on the resources available from the seven (7) federal agencies that comprise the Biomass Research & Development (BR&D) Board, to include research outcomes, market assessments, and patented technology discoveries; and (4) discussed opportunities to engage them in other aspects of our work.

As specific examples of the above: (1) we learned that a researcher at UTAs College of Engineering has four (4) grants from the National Science Foundation to develop enabling technologies for the UAS sector; (2) we are working with Tarleton State to expand their research well beyond biochar; (3) we have introduced the Institute to the ability to conduct joint research with a USDA Lab; and (4) have worked with UTA’s College of Business to develop an Entrepreneurial Program to support Bioeconomy startups.

TASK 5: Work directly with partnering businesses, technology companies, and biodigesters /biochar manufacturers to provide technical assistance, connecting to regional markets, supplementing with information to determine project feasibility, supporting workforce needs, and other business planning aspects.

(100% Complete)

The primary focus of this task was to work directly with businesses, technology companies, and biodigesters/biochar manufacturers to provide technical assistance, connecting them to regional markets, supported by information to determine project feasibility, demonstrating the ability within the region to support the company’s workforce needs and other business aspects.

We based our work on the system Wes Jurey developed and utilized during a successful 30-year career in managing and directing economic development entities.

As one example, he ran operations in El Paso Texas from 1990-2001. During that tenure, despite the region losing 22,000 jobs in the garment industry to Asia, the net job gain during that period was in excess of 30,000 jobs. During his 30-year career, the average time between first contact with a prospect to announcement was 3 years.

In comparison, we have secured a number of prospects and announced 3 confirmed in one year.

We initially spent time, pre-COVID-19, engaging prospective businesses at regional and national events; post COVID we have done so virtually. We provided information about (1) the feasibility of locating in the region; (2) our technical assistance; (3) the understanding of the bioeconomy and the support we have developed within the region; (4) USDA Loan Guarantee assistance; (5) our GIS Database; and (6) our connectivity to state and federal resources.

Working with the economic development entities, we established a formal system for prospect cultivation and joint client management, consistent with the operations of the Governor's Office of Economic Development.

That process is as follows:

1. We identify companies as a "Suspect", based on the following definition: A company that has been briefed by ATIP (on the Bioeconomy in general) and the work we are doing to support business opportunities, and then indicates they plan to establish operations or expand current operations in the next three years, and they will also consider relocation to the North Central Texas region.
2. We identify companies as a "Prospect", based on the following definition: A company that has worked with us, utilizing our GIS data base, to thoroughly assess the opportunities, and has then said they will consider the region as a prospective location, and will sign an MOU and/or Non-Disclosure Agreement (NDA) to work with us.
3. We identify companies as a "Client", based on the following definition: A company that has provided us with all of their site selection criteria; we have distributed the criteria to the 4 EDCs, who have provided ATIP with applicable sites; we have shared those dates with our Prospect, who then selects one or more sites and engages with the relevant EDCs.
4. We identify companies as a "Project", based on the following definition: A Company that has identified a site; and is engaged with the EDC in conducting due diligence on the site, and all other relevant issues (I.e. workforce, incentives, policy, etc.).
5. We identify companies as a "Finalist", based on the following definition: A company that has communicated with the EDC that their site is one of the final 2-3 locations they are looking at in the US.

To date, we have three companies committed to begin operations in this area (listed as "finalists" below), and one already established.

Based on that Criteria, we currently have:

3 Finalists

1 Projects

6 Clients
4 Prospects
47 Suspects

See attached "REAP REDA ATIP Status of Corporate Interest. pdf" for details. Note that these data have been limited appropriately to avoid any confidentiality issues with companies, should this document be obtained by anyone under FOIA or FOIA-like authority.

In our assessments, we focused on the fundamentals important to all businesses --- access to (1) suppliers and service providers; (2) capital; (3) infrastructure; (4) technology; (5) supportive public policy; and (6) a skilled trained workforce. We also focused on the three areas from which jobs are created: (1) New business startups; (2) growth of existing businesses; and (3) recruitment of businesses external from the region.

1. New Business Startups

We worked with the local Chambers of Commerce and Economic Development Organizations to support the growth of startup businesses, creating awareness through entrepreneurial programs, and attending conferences (pre COVID-19) to identify individuals or organizations interested in establishing a business a startup business in our region.

As one example who has agreed to allow us to identify them, UCIN #7, a startup, has committed to establish a facility in Erath County to convert manure to energy.

2. Growth of Existing Businesses

We worked with the Chambers and EDCs to identify local companies that have the ability to expand. We expect over time for this to yield results; however, at the present time, we have been unable to identify any existing bioeconomy businesses in the region.

3. Recruitment of Businesses External from the Region.

We have identified fifty – five (55) businesses that have indicated an interest in considering the region to establish a facility or services related to renewable energy and biobased processes. To date, one has committed. As described above, we have developed a specific management system to cultivate and elevate interests from "will consider" to "will announce relocation or expansion."

By my signature, I attest to the work accomplished.

Respectfully submitted,



Wes Jurey, President & CEO
ATIP Foundation

Attachments:

REAP REDA ATIP Status of Corporate Interest.pdf

Coded Dairy List TX REAP REDA.pdf

TX Letter to dairies and animal operations July 2020 with overview of geospatial inventories of biomass and service providers.pdf

Update to TX dairies (ATIP, SEDA) and survey for collaboration, Nov. 2020.pdf

Email Confirming Outreach [RE_ Documentation for SEDA].pdf

	A	B	C	D
1	Commitment to TXREAP Presence	Criteria: Suspect, Prospect, Client, Project, Finalist	Unique Company Identifying Number	Notes:
2	P	P	1	project consultant, biochar producer
3		S	2	Biochar Retort Extraction Device- Andrew Wells the project's sponsor has constructed a continuous retort where biomass enters and exits simultaneously. The team was tasked with creating an extraction mechanism that cools and collects biochar without letting air into the pyrolysis chamber. Biochar Retort Extraction Device
4		F	3	precision agriculture
5	C	C	4	Biochar Producer, looking for ownership/partnership
6		S	5	Research digesters and Fermenters, academic collaboration, commissioned research, equipment hire
7		S	5	Research digesters and Fermenters, academic collaboration, commissioned research, equipment hire
8	P	P	6	finance; private commercial real estate lender
9	F	F	7	Biomass processing project developer
10		C	8	biochar producer
11		C	8	biochar producers
12		S	9	marketer, producer
13		P	10	education, business development consultant
14		S	11	biogas upgrading systems to purify biogas to renewable natural gas, CO2 recovery
15		S	12	full-service pipe system supplier local and district biomass heating, digester fermentation heating
16		S	16	activated carbon production
17	PJT	PJT	14	Biogas, Soil amendment, compost producer, Biochar purchaser
18		P	15	State Agency, technical assistance
19	C	C	16	biochar producer, biochar system technology provider
20		S	17	biochar producer
21		PJT	18	biochar and biochemical producer
22		C	19	research, demonstration production, user facility
23		S	20	Dewpoint, emission, oxygen analysis; gas calorimeter, flowmeter

	A	B	C	D
24		S	21	biogas and LFG upgrading, gas desulfurization, biosolids thermal hydrolysis
25		S	22	dairy solids separation, bedding composting, sand separation, manure mumping
26		S	23	Industrial Energy Services, Renewable Energy and Environmental Controls for Biogas and Wood Waste
27		S	23	Industrial Energy Services, Renewable Energy and Environmental Controls for Biogas and Wood Waste
28		S	24	dairy manure handling systems, drum composter
29		S	25	project developer work limited to work for the University biogas project, consults on other related issues
30		S	26	a leading global supplier of environmental solutions and engineered products tailored to meet customers' industrial process requirements. We offer a complete portfolio of air pollution control technologies, drying and curing systems, and material handling equipment.
31		S	26	a leading global supplier of environmental solutions and engineered products tailored to meet customers' industrial process requirements. We offer a complete portfolio of air pollution control technologies, drying and curing systems, and material handling equipment.
32	C	C	27	Biogas Engineering, technology provider
33		S	28	biogas system equipment, service provider
34		S	28	biogas system equipment, service provider
35		S	28	biogas system equipment, service provider
36		P	29	project developer for Indiana site, feedstock
37		PJT VT	30	General environmental service, waste water cleanup, nutrient products
38		S	31	biogas cleanup to RING, prototype development, design engineers, material development adsorptive, reactive and catalytic materials for applications that include decontamination, chemical defense and demilitarization
39		S	32	biobased polymers
40		P	33	research , education, consulting
41		P	34	project finance, tax, contract, legal services
42		S	35	Engines, Generators, Power Transmissions
43		C	36	Lender
44		S	37	biogas system equipment, service provider
45		S	38	biogas system equipment, service provider
46		S	39	biogas producer, soil health initiative
47		S	40	Public Benefit Corporation, project development, market biogas/biochar with corporate partner offset
48		S	41	renewable energy company, retrofitting in WI for pipeline injection
49	C	C	42	Biogas
50		S	43	biogas system equipment, service provider. OWS has developed innovative and patented designs for biogas plants, with a pretreatment, digester concept and post-treatment adapted to each type of feedstock.
51		S	44	biochar producer
52		S	45	biogas system equipment, service provider
53		S	45	biogas system equipment, service provider
54	C	C	46	biochar/fertilizer producer
55	C	C	46	biochar/fertilizer producer
56	C	C	47	Biochar Producer
57		C	48	low pressure compressor pumps to bring biogas to larger clean and compress facility, gas cleanup equipment

	A	B	C	D
58		P	49	biochar producer, related to Tigercat equipment manufacturer
59		P	49	biochar producer, related to Tigercat equipment manufacturer
60		S	50	electrical control out building containerized
61		S	51	waste bins, biomass handling management systems
62		S	52	Product depackaging for repurposing organics, biogas feedstock, animal nutrition, compost
63	C	PJT	53	biochar producer
64		S	54	
65		C	55	biochar producer, minerals, microbes
66		P	55	all bioeconomy services, get more information at website
67		P	55	all bioeconomy services, get more information at website
68		PJT	56	Protein product/animal
69		P	57	education, business development consultant
70		P	58	sewer sludge, digestate, biomass waste drying; pelletizer, pumps, conveyors
71		C	59	biochar and bioenergy producer
72		S	60	grinders, biomass material size reduction
73		P	61	They provide gas upgrading technology for project developers and are focus on larger animal agriculture biogas projects, keep on list and send updates, will send clients our way
74		P	61	They provide gas upgrading technology for project developers and are focus on larger animal agriculture biogas projects, keep on list and send updates, will send clients our way

Unique Dairy Code Number	County
D1	ERATH
D2	ERATH
D3	ERATH
D4	ERATH
D5	ERATH
D6	ERATH
D7	HAMILTON
D8	ERATH
D9	HAMILTON
D10	ERATH
D11	ERATH
D12	ERATH
D13	ERATH
D14	ERATH
D15	ERATH
D16	ERATH
D17	ERATH
D18	ERATH
D19	COMANCHE
D20	ERATH
D21	COMANCHE
D22	ERATH
D23	ERATH
D24	COMANCHE
D25	ERATH
D26	ERATH
D27	ERATH
D28	ERATH
D29	ERATH
D30	ERATH
D31	COMANCHE
D32	COMANCHE
D33	HAMILTON
D34	COMANCHE
D35	ERATH
D36	HAMILTON
D37	ERATH
D38	ERATH
D39	COMANCHE
D40	ERATH
D41	ERATH
D42	ERATH
D43	ERATH
D44	HAMILTON

D45	ERATH
D46	ERATH
D47	ERATH
D48	COMANCHE
D49	ERATH
D50	ERATH
D51	ERATH
D52	ERATH
D53	ERATH
D54	COMANCHE
D55	ERATH
D56	ERATH
D57	ERATH
D58	ERATH
D59	ERATH
D60	ERATH
D61	COMANCHE
D62	ERATH
D63	ERATH
D64	ERATH
D65	COMANCHE
D66	ERATH
D67	ERATH
D68	ERATH
D69	COMANCHE
D70	COMANCHE
D71	COMANCHE
D72	ERATH

An Opportunity for Dairies and other Animal Production Operations in Northcentral Texas**BACKGROUND**

We have appreciated the initial discussions we have had with some of you at various times over the past 18 months in the work we are doing at the ATIP Foundation on “Advancing the Bioeconomy in Northcentral TX” utilizing renewable and/or waste feedstocks principally from agricultural operations (dairies, poultry, swine, beef). This project specifically is funded by USDA Rural Development by the divisions of Rural Business Development, and Renewable Energy for America Program, and we are conducting this in concert with the economic development authorities in Erath, Palo Pinto, Parker, and Hood counties. We are beginning our extensive update briefings to fifty-four (54) corporations from across the U.S. that have been following this project to determine whether they will establish a bioeconomy business in this region; thus far at least two already formally committed to build operations in the region.

YOUR OPPORTUNITY

Our purpose for contacting you today is to request an opportunity to brief you specifically on the status of the project and to gauge your interest in participating with these businesses in converting animal and agriculture wastes to bioenergy and other useful co-products.

SUPPORT PROVIDED

We have amassed an extensive Geographic Information System (GIS) database that illustrates exactly how much biomass is produced and where it is. This is important information for these businesses in determining where their facility should be located. Now, with the approaching closing of these current grants, the time is right to arrange a private briefing with you to demonstrate where the projects stand, and to gauge your interest in further participation. We also would like to know specifically what your needs are as you look for additional business opportunities for your operation.

The GIS Database we have developed documents the available sources of biomass in each region, as well as suppliers & service providers, and other resources important to business startups, expansions and relocations. We are working with State agencies, municipal and county governments, the financial services sector, economic development corporations and local workforce boards, academic institutions, and the supply chain from sources of biomass to end user of resultant goods and services, to ensure the region is supportive of and knowledgeable about the bioeconomy.

Again, we would appreciate an opportunity to brief you on the status of this project at your convenience. Please contact Dr. Rick Brenner, Director of ATIP Foundation, directly at rbrenner@atipfoundation.com or call him at (410) 980-1943 for scheduling.

WE LOOK FORWARD TO HEARING FROM YOU

We have enclosed a brief description of the GIS Database, and a summary of the support the ATIP Foundation can provide to these biomass conversion businesses, and to you as a provider of biomass. Our team will be in touch in follow up to our invitation, and we look forward to scheduling a virtual meeting with you.

Regards,

A handwritten signature in blue ink, appearing to read 'Wes Jurey'.

Wes Jurey
President & CEO
wesjurey@gmail.com

A handwritten signature in blue ink, appearing to read 'Rick Brenner'.

Rick Brenner, Ph.D.
Director
rbrenner@atipfoundation.com

A handwritten signature in blue ink, appearing to read 'Todd Campbell'.

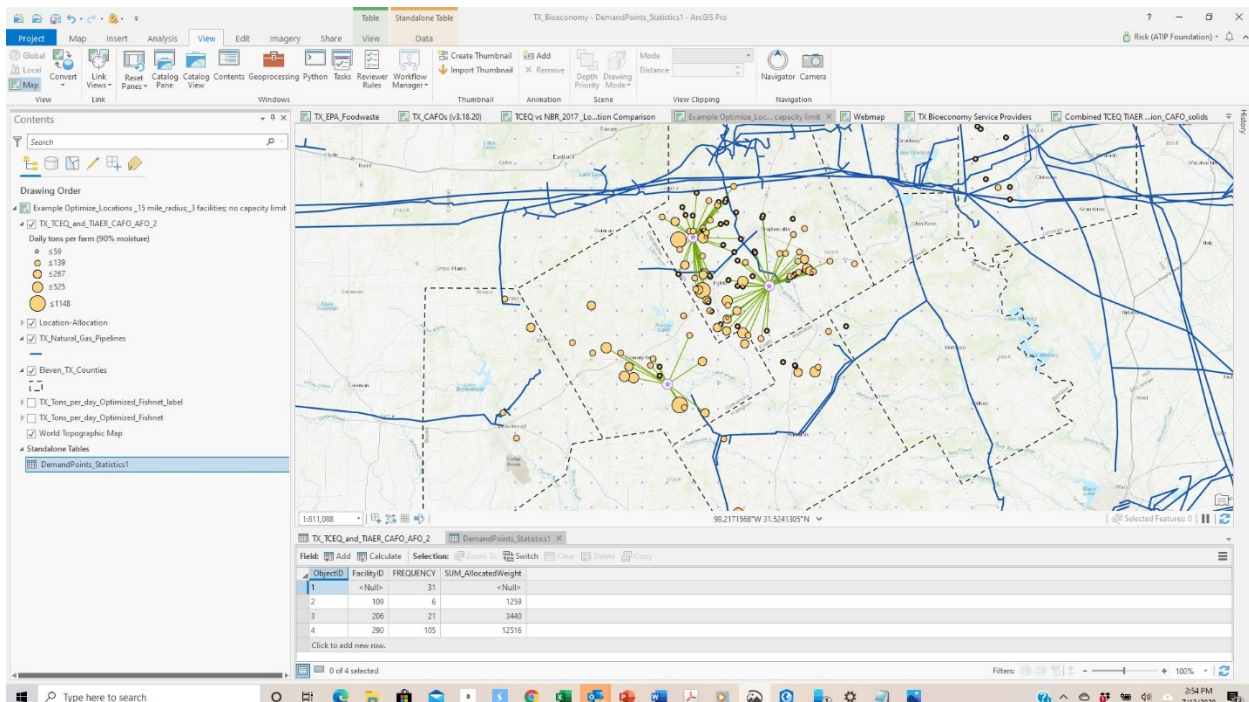
Todd Campbell
Of Counsel to Foundation
cew.todd@gmail.com

ATIP Foundation: *Advancing the Bioeconomy in Northcentral Texas* Examples of geospatial inventories

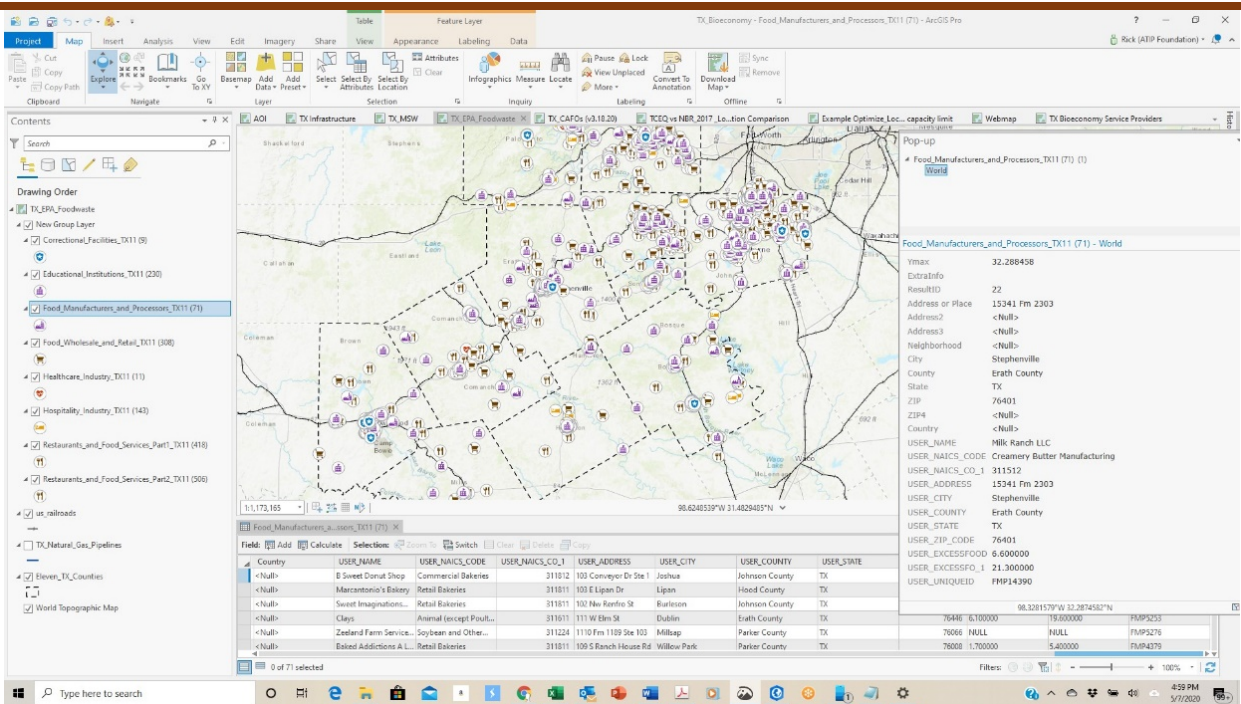
We have created a geospatial inventory of biomass feedstocks suitable for biodigesters, biorefineries and pyrolysis or torrefication processes, as well as bioeconomy service providers (six economic sectors) in the 4-county area of northcentral Texas dairy region (Erath, Palo Pinto, Parker, and Hood counties).

These ArcGis Pro database layers include the farm/source-specific comprehensive inventory of animal wastes (daily tons per farm), woody biomass and sewage sludge (landfill and municipal utilities), EPA’s food waste database that estimates (low and high volumes in tons/year) at each facility in the region under the categories of correctional facilities, educational institutions, food wholesaler and retailers, healthcare industry, hospitality industry, and restaurants and food service facilities. These data are presented in various configurations that we view as being profoundly useful to companies in evaluating opportunities for renewable fuel / biobased production from these wastes.

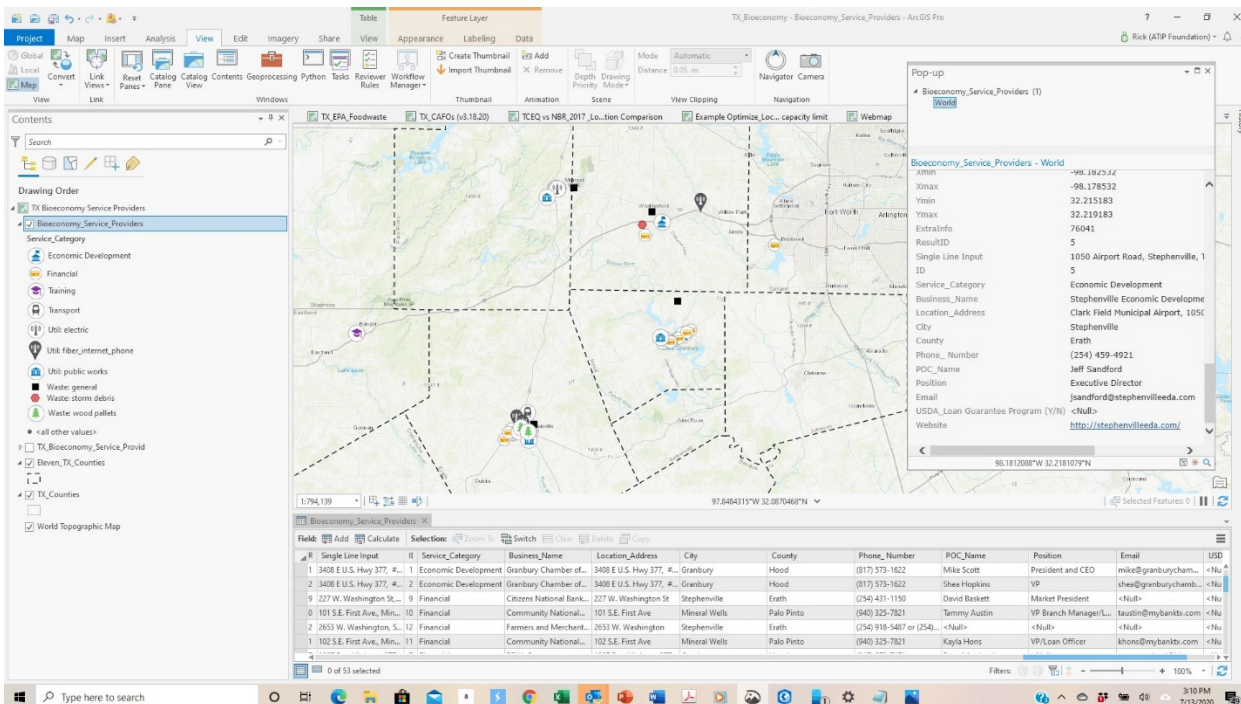
Below are representative screenshots from these geospatial databases, chosen to illustrate some of the resource inventories needed for businesses to engage in “advancing the bioeconomy.” These include animal waste biomass, food waste biomass, service providers to the bioeconomy and local economic development authorities, and one illustration of a comprehensive map of resources for advancing the bioeconomy; all these categories and maps are in each of the three region-based databases.



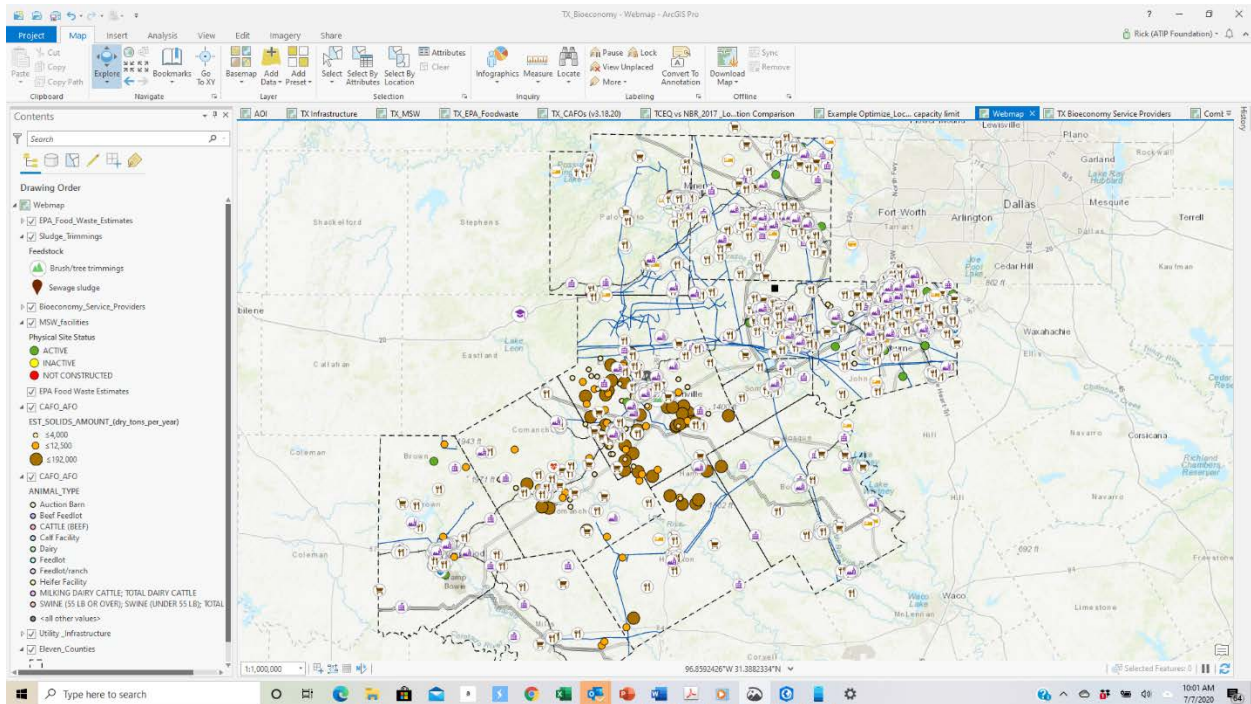
Geospatial inventory of biomass from animal production facilities in northcentral TX, showing theoretical optimal location for 3 manure processing facilities each with a reach of 15 miles. Natural gas pipelines shown in blue.



Geospatial inventory of estimates of food wastes in northcentral Texas, with pop-up box showing details on a single entry.



Northcentral TX bioeconomy service providers and Economic Development Organizations.



Geospatial webmap of “advancing the northcentral TX bioeconomy” showing compilation of data layers as described in Content pane to the left of the map.

Update: An Opportunity for Dairies & other Animal Operations in Northcentral Texas

BACKGROUND

In July, the Stephenville Economic Development Authority (SEDA) and the Foundation reached out to you on the ATIP Foundation's "Advancing the Bioeconomy in Northcentral TX" utilizing renewable and/or waste feedstocks principally from agricultural operations (dairies, poultry, swine, beef). This project specifically is funded by USDA Rural Development by the divisions of Rural Business Development, and Renewable Energy for America Program, and we are conducting this in concert with all economic development authorities in Erath, Palo Pinto, Parker, and Hood counties. The Foundation and SEDA continue our extensive update briefings to fifty-four (54) corporations from across the U.S. that have been following this project to determine whether they will establish a bioeconomy business in this region; thus far at least two already formally committed to build operations in the region within the next 6-12 months.

YOUR OPPORTUNITY

The Foundation would like to brief you specifically on the status of the project and answer any questions you might have about participating with these businesses in converting animal and agriculture wastes to bioenergy and other useful co-products and what that may mean for your operation. Please contact Jeff Sandford or Ashleigh Feuerbacher at (254) 459-4921 or email at jsandford@stephenvilleeda.com for scheduling.

SUPPORT PROVIDED

This project has amassed an extensive Geographic Information System (GIS) database that illustrates exactly how much biomass is produced and where it is. This is important information for these businesses in determining where their facility should be located. This database is now available for you to peruse at <https://arcgis.com/apps/webappviewer/index.html?id=e4e4ae3e65304d3593a03819f3915ece>

And we would be happy to guide you through it. We also would like to know specifically what your needs are as you look for additional business opportunities for your operation.

The GIS Database also identifies suppliers & service providers, and other resources important to business startups, expansions and relocations. We are working with State agencies, municipal and county governments, the financial services sector, economic development corporations and local workforce boards, academic institutions, and the supply chain from sources of biomass to end user of resultant goods and services, to ensure the region is supportive of and knowledgeable about the bioeconomy.

WE LOOK FORWARD TO HEARING FROM YOU

We have enclosed a brief description of the GIS Database illustrating the support the ATIP Foundation can provide to these biomass conversion businesses, and to you as a provider of biomass.

Regards,

Jeff Sandford
Executive Director
Stephenville Economic Development Authority

Wes Jurey
President & CEO
ATIP Foundation



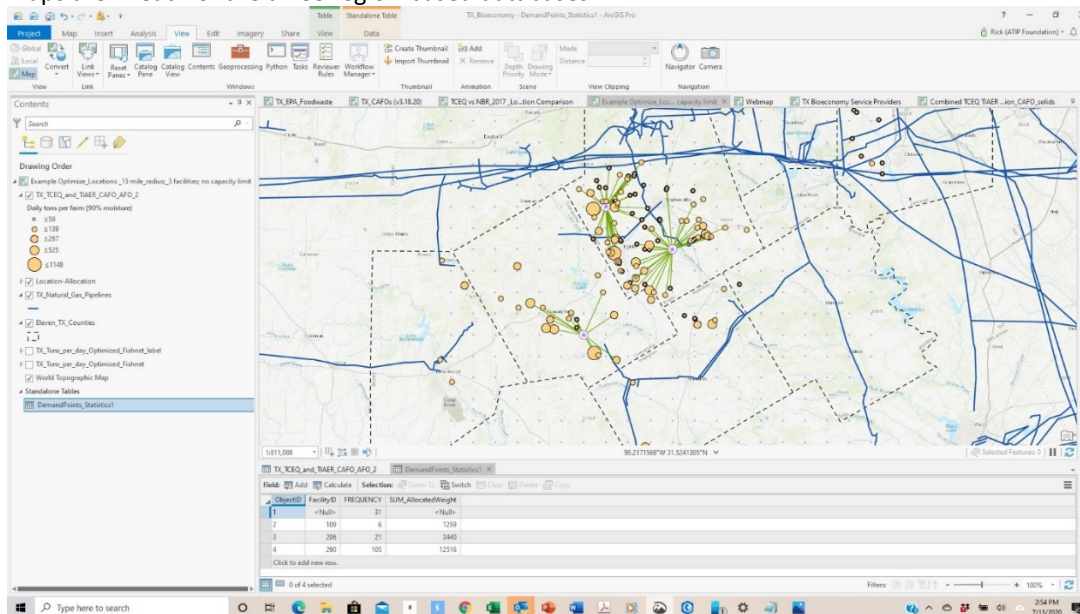
ATIP Foundation: *Advancing the Bioeconomy in Northcentral Texas* Examples of geospatial inventories and access to database

We have created a geospatial inventory of biomass feedstocks suitable for biodigesters, biorefineries and pyrolysis or torrefication processes, as well as bioeconomy service providers (six economic sectors) in the 4-county area of northcentral Texas dairy region (Erath, Palo Pinto, Parker, and Hood counties). This GIS web application is now fully functional and available for your use in perusing and understanding the various inventories that represent business opportunities in advancing the bioeconomy by converting waste materials into bioenergy and other co-products. To access the database, click the link below, or copy and paste it in your browser.

<https://arcgis.com/apps/webappviewer/index.html?id=e4e4ae3e65304d3593a03819f3915ece>

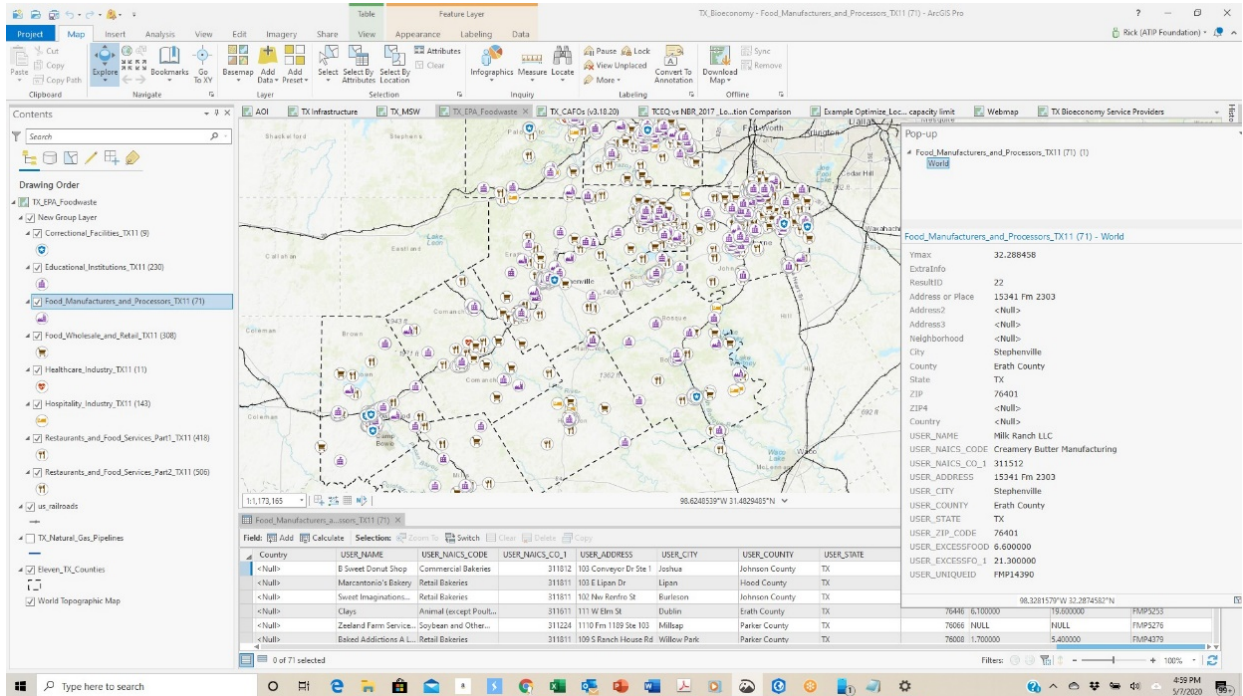
These ArcGIS Pro database layers include the farm/source-specific comprehensive inventory of animal wastes (daily tons per farm), woody biomass and sewage sludge (landfill and municipal utilities), EPA's food waste database that estimates (low and high volumes in tons/year) at each facility in the region under the categories of correctional facilities, educational institutions, food wholesaler and retailers, healthcare industry, hospitality industry, and restaurants and food service facilities. These data are presented in various configurations that we view as being profoundly useful to companies in evaluating opportunities for renewable fuel / biobased production from these wastes.

Below are representative screenshots from these geospatial databases, chosen to illustrate some of the resource inventories needed for businesses to engage in “advancing the bioeconomy.” These include animal waste biomass, food waste biomass, service providers to the bioeconomy and local economic development authorities, and one illustration of a comprehensive map of resources for advancing the bioeconomy; all these categories and maps are in each of the three region-based databases.





Geospatial inventory of biomass from animal production facilities in northcentral TX, showing theoretical optimal location for 3 manure processing facilities each with a reach of 15 miles. Natural gas pipelines shown in blue.

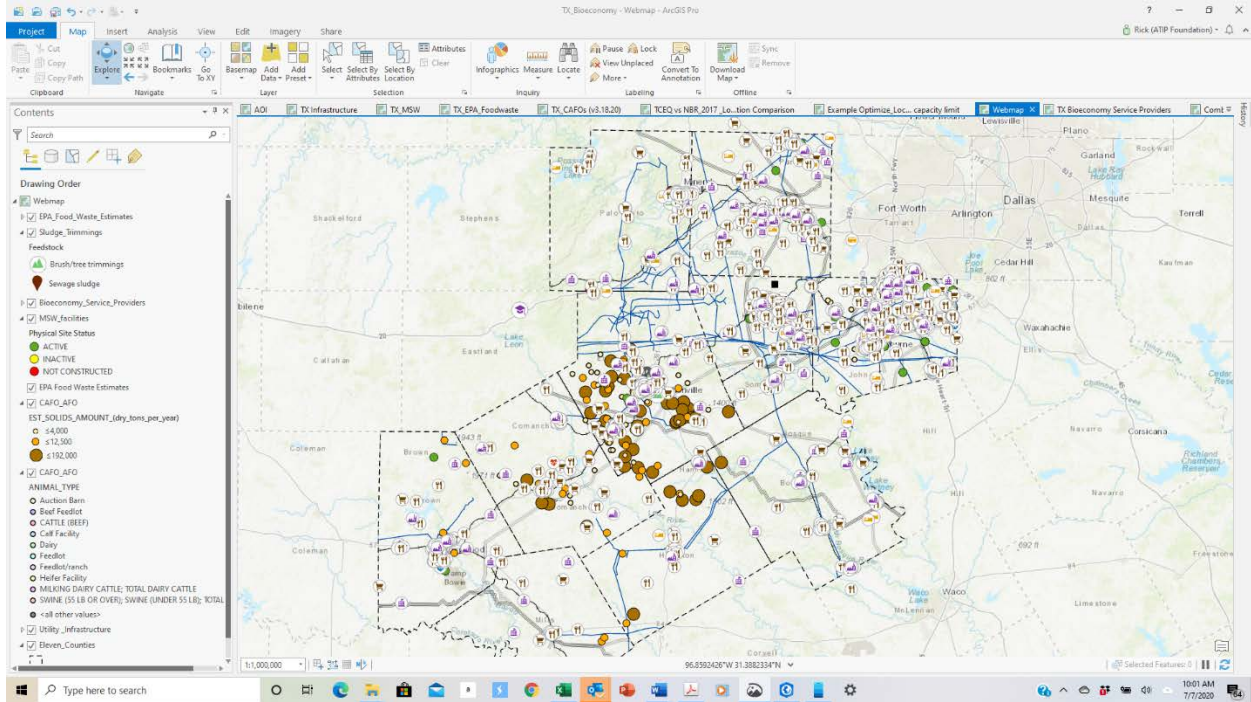


Geospatial inventory of estimates of food wastes in northcentral Texas, with pop-up box showing details on a single entry.



Field	Add	Calculate	Selection	Zoom To	Clear	Print	Copy																
Single Line Input								Service_Category	Business_Name	Location_Address	City	County	Phone_Number	POC_Name	Position	Email	USD						
1	3408 E.U.S. Hwy 377	...	1	Economic Development	Granbury Chamber of...	3408 E.U.S. Hwy 377	...	Granbury	Hood	(817) 573-1622	Mike Scott	President and CEO	mike@granburycham...	<Nu...									
2	3408 E.U.S. Hwy 377	...	2	Economic Development	Granbury Chamber of...	3408 E.U.S. Hwy 377	...	Granbury	Hood	(817) 573-1622	Shea Hopkins	VP	shea@granburycham...	<Nu...									
9	227 W. Washington St.	...	9	Financial	Citizens National Bank...	227 W. Washington St		Stephenville	Erath	(254) 431-1150	David Basket	Market President	<Null>	<Nu...									
0	101 S.E. First Ave.	Min...	10	Financial	Community National...	101 S.E. First Ave		Mineral Wells	Palo Pinto	(940) 325-7821	Tammy Austin	VP Branch Manager/L	taustin@mybanks.com	<Nu...									
2	2653 W. Washington, S.	...	12	Financial	Farmers and Merchant...	2653 W. Washington		Stephenville	Erath	(254) 918-5487 or (254...	<Null>	<Null>	<Null>	<Nu...									
1	102 S.E. First Ave.	Min...	11	Financial	Community National...	102 S.E. First Ave		Mineral Wells	Palo Pinto	(940) 325-7821	Kayla Hons	VP/Loan Officer	khons@mybanks.com	<Nu...									

Northcentral TX bioeconomy service providers and Economic Development Organizations.



Geospatial webmap of “advancing the northcentral TX bioeconomy” showing compilation of data layers as described in Content pane to the left of the map.



Dairy Industry Stakeholder Partnership Survey

Yes, we are interested in finding partners to buy our manure or to explore value-added revenue opportunities!

Farm Name: _____

Point of Contact at Operation: _____

Address: _____

City: _____ State: TX Zip code: _____

Email: _____

Phone: _____

Information on the Farming Operation:

Animal population:

Wet cows _____

Heifers _____

Dry cows _____

Check which applies:



Free Stall



Feedlot

Please respond by **November 25th**, if possible!

EMAIL to: ashleigh@stephenvilleeda.com

CALL: Ashleigh, 254-459-4921

From: rbrenner@atipfoundation.com
To: "Lonnie Jenschke"
Cc: jsandford@stephenvilleeda.com; "Wes Jurey"; ashleigh@stephenvilleeda.com
Subject: Confirming outreach [RE: Documentation for SEDA]
Date: Wednesday, December 2, 2020 4:47:00 PM

Lonnie,

Thanks for the information you have provided on the November email distribution that you orchestrated with Jeff and Ashleigh (Stephenville Economic Development Authority; SEDA) and Darren Turley (Executive Director, Texas Association of Dairymen).

I understand your concern on providing an AgriLife-proprietary list of email recipients to the ATIP Foundation as documentation of the outreach to the dairies and other operations in north central Texas. Actually, as our 1-year USDA Rural Energy for America Program grant is ending, it is appropriate that SEDA, in partnership with your office assume the more confidential elements of the next steps ---- shaping partnerships between those corporations who plan to build digester facilities in the region and the dairy operators who will provide biomass to those conversion facilities.

Through your distribution list, the documents from ATIP and SEDA have reached the dairies in Erath (57) and Comanche counties (4) and other industry-related organizations (97) and Cooperative Extension representatives in adjacent counties. That information is all that we need in order to document outreach in fulfillment of our USDA Rural Development grant requirements while maintaining confidentiality of businesses and proprietary/sensitive information.

The "survey" that was provided serves as the mechanism for dairies to express interest to SEDA in working with technology providers on biomass conversion. Thus, follow up on outreach is appropriately at the local and confidential level.

As these partnerships are considered, we are happy to provide technical assistance and further communications with dairies and technology providers, as you and SEDA deem warranted.

Again, thanks for facilitating the outreach to the dairies in the region.

Regards,

Rick Brenner, Ph.D.

Director, ATIP Foundation

RBrenner@atipfoundation.com

410.980.1943

From: Lonnie Jenschke <Lonnie.Jenschke@ag.tamu.edu>

Sent: Tuesday, December 1, 2020 6:03 PM

To: ashleigh@stephenvilleeda.com

Cc: sandford@stephenvilleeda.com; rbrenner@atipfoundation.com; 'Wes Jurey' <wesjurey@gmail.com>

Subject: Documentation for SEDA

I appreciate the opportunity to share information to our local dairies concerning the USDA REAP REDA Grant.

I have attached a mail chimp report showing that I sent the SEDA documents to 158 locations.

From the report there were 57 dairies in Erath County and 4 dairies in Comanche County.

Please don't hesitate to let me know if I can be of any assistance in the future.

Thanks

Lonnie Jenschke
112 West College Street
Courthouse Annex Room 109
Stephenville, Texas 76401
PH#: 254-965-1460
Fax: 254-965-1472