





MODOC COUNTY
MEAT PROCESSING
FEASIBILITY STUDY

PREPARED BY:
MORRISON

Modoc County Meat Processing Feasibility Study

February 29, 2024

A project of:

Superior California Economic Development
350 Hartnell Avenue, Suite A
Redding, CA 96002

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February 29, 2024

Mr. Ryan Richardson
Superior California Economic Development
350 Hartnell Avenue, Suite A
Redding, CA 96002

Dear Mr. Richardson:

We have assessed the feasibility of the proposed Modoc County USDA-Inspected Meat Processing venture from the following standpoints:

1. Venture Description and Approach
2. Industry Overview
3. Market Analysis
4. Operational Analysis
5. Management Analysis
6. Basis of Design
7. Capital
8. Risk Assessment
9. Financial Projections

Our procedures consisted primarily of:

1. An assessment of statistics and other internal information provided by Superior California Economic Development.
2. Direct interviews with potential users of a meat processing facility in the region.
3. Direct interviews with independent meat processors, industry experts, and community leaders.
4. Assessment of research, statistics, and historical information from other regional meat processors and from firms that build meat processing facilities.
5. An assessment of external statistics and other independent information.
6. An assessment of the market, operational, and management potential and needs, including the results of similar ventures.
7. Discussions and written representations from Friesla, an independent mobile and modular meat processing system designer and manufacturer.
8. Discussions and written representations from the Modoc County Meat Processing Stakeholder Committee.

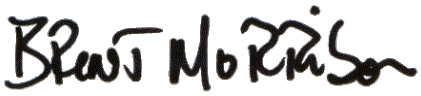
The purpose of a feasibility assessment is to determine the general viability of a proposed approach to a project. In the actual execution of a plan, external circumstances, internal decisions, and other factors may dictate departures from the original plan. Further, it is not possible to consider every possible cost or circumstance, internal or external. Accordingly, we

make no representation as to the outcome of any action any party may take based on this Assessment.

With these limitations, we have concluded that there is sufficient regional demand for the services a meat processing facility in Modoc County could provide and that the general approaches to the venture, business organization, operation, management, capital needs, and risks discussed in this assessment are technically feasible. At this time no individual party or organization has stepped forward to lead and implement such a venture, therefore the assessments and conclusions discussed in this report are generic in nature. Should this venture align with the goals of their business, and if they had access to the needed capital (including state and federal grants or incentives) to allow for construction and operational expenses, a private operator may be able to operate a meat processing facility in Modoc County and potentially achieve financial viability.

This Assessment replaces and supersedes all previous drafts, correspondence, and other related communications, written or oral. Please contact me at your convenience with any questions or comments. Once again, I thank you for allowing us the privilege of providing services to Superior California Economic Development.

Sincerely,



R. Brent Morrison
Founder & Principal

MODOC MEAT PROCESSING FEASIBILITY STUDY
A Project of Superior California Economic Development

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A Project of Superior California Economic Development

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Venture Description and Approach (Section II)

Morrison was engaged by the Superior California Economic Development to conduct a feasibility study regarding the potential establishment of a meat processing facility in Modoc County. A 2022 United States Department of Agriculture (USDA) Rural Business Development Grant supported this work. Morrison's engagement and the USDA grant application followed several years of legwork by a dedicated committee of local stakeholders who have met regularly together and with livestock producers, independent meat processors, and meat processing equipment vendors to form the foundation of this report.

Industry Overview (Section III)

Livestock production in California is a major economic driver, totaling $12.8 billion in cash receipts in 2021. In 1967, more than 10,000 slaughter plants operated in the US; today there are fewer than 3,000. Compared with the highly independent cow-calf and stocker segments, the meat processing segment is extremely concentrated in the United States. The share of steers and heifers processed by the four largest companies grew from 36 percent in 1980 to 85 percent in 2019. The 2021 UC Davis Food Systems Lab report found just 46 USDA-inspected slaughter plants in California, with just 32 of those handling livestock (as opposed to poultry), and at least 11 only processing for their own brands. While state-inspected and custom-exempt slaughter options exist, USDA inspection gives livestock producers the greatest flexibility and reach in their sales and marketing opportunities.

Market Analysis (Section IV)

A survey of 27 local and regional livestock producers was conducted to assess the market demand for a meat processing facility in Modoc County. In ranking their likelihood of using a meat processing facility in Modoc County, 21 survey participants indicated some likelihood of use, selecting 3, 4, or 5 on a scale of 1 to 5. Of the beef producers who rated their likelihood of using a USDA-inspected meat processing facility in Modoc County from 3-5, the combined potential volume of cattle was 1,049 head annually. All other livestock producers surveyed were highly likely to utilize a local meat processing facility, yielding the potential for 600 chickens, 220 lambs, 60 hogs, and 36 goats to be processed annually as well. As was anticipated, producers reported traveling great distances at considerable time and expense to access meat processing services currently. The distance varied for all producers, but a common thread was travelling over 100 miles away and three to six hours one-way.

Operational Analysis (Section V)

The operational assessment for a potential meat processing facility included an assessment of potential locations for a meat processing facility in Modoc County; and assessment of land/building acquisition; and an assessment of equipment needs and costs.

Management Analysis (Section VI)

Morrison's analysis included an assessment of the potential management and organization structure of the facility; the identification of likely expertise/qualifications needed to operate the facility; and the assessment of personnel needed to operate facility and related costs.

Basis of Design (Section VII)
Having determined that a modular processing facility with site-built infrastructure would likely be the most convenient, flexible, and effective in serving local and regional meat producers, Morrison consulted with Washington-based independent meat processing system manufacturer Friesla to assess the needed infrastructure. Given the tradeoffs of various system options, and absent an identified operator who would assess those tradeoffs in relation to their processing needs, Morrison assessed only the modular meat processing system in this study. The facilities and equipment needed for operation are detailed in Section VII.

Capital (Section VIII)
Capital and operating costs are detailed in the financial projections prepared for this study and documented in the Assumptions for the financial projections (see Page 31). These include:

- Total investment: $6.3 million
- Cost of USDA-compliant Modular Meat Processing System and equipment: $4.2 million
- Cost of site development and infrastructure: $1.7 million
- Cost of exterior operating equipment: $400,000

Operating capital will be needed to manage cash flow; the project does not anticipate generating positive cash flow until Year 2 of the venture.

Risk Assessment (Section IX)
Meat processing is by nature a business rife with risk. Potential risks for a private operator to consider when determining whether to pursue such a venture include availability of labor and materials to construct a facility; demand fluctuations; waste management; and availability of operating labor. The identified risks (which are not represented as all-inclusive) can likely be mitigated to varying degrees, and should be appropriately considered by any potential operator or investor.

Financial Projections (Section X)
Net contribution for Years 1-7 is projected at $(431,180); $(276,335); $(100,246); $13,854 $162,823 ; $328,432; and $512,251 respectively under the assumptions documented beginning on Page 31, for a total net contribution in years 1-7 of $209,599. Cash flows from operating activities is projected as positive in years 2 through 7, but offset by cash flows from financing activities. Given this, traditional bank financing would likely be a challenge to achieve without other funding sources such as incentives, subsidies, or grant funding. Meat processing projects generating negative earnings and/or cash flow for several years is not an anomaly. This would likely be a strong consideration of any financial investment for this venture.

Conclusions (Section XI)
The meat processing industry is incredibly complex. Low profit margins and state and federal regulations make market entry a significant barrier without specialized expertise. A private operator well-versed in meat processing operations and management, with public investment in the economic development potential of the project, is likely the most feasible and sustainable approach to building and operating a meat processing facility in Modoc County. ■

SECTION II. – VENTURE DESCRIPTION AND APPROACH

Morrison was engaged by the Superior California Economic Development to conduct a feasibility study regarding the potential establishment of a meat processing facility in Modoc County. A 2022 United States Department of Agriculture (USDA) Rural Business Development Grant awarded to Superior California Economic Development supported this work. Morrison's engagement and the USDA grant application followed several years of legwork by a dedicated committee of local stakeholders who have met regularly together and with livestock producers, independent meat processors, and meat processing equipment vendors to form the foundation of this report.

As outlined in the initial grant application submitted to USDA and the subsequent scope of work for Morrison, the goal of the venture was to: assess the landscape of the current and projected meat processing market in the region; conduct a market interest survey to assess the demand for local meat processing services; identify operational requirements for a specialty meat processing facility; assess the core elements of infrastructure and equipment for the facility; and prepare financial projections for a potential operation.

The feasibility study was designed to be documented in a formal report that could be used by the County of Modoc, City of Alturas, and the Stakeholder Committee to quantify and focus further development efforts, or to attract a private operator of a meat processing facility. The scope of the feasibility study was not intended to be a comprehensive analysis of the livestock and meat processing industry, available technologies, or the government policies impacting the industry, but rather to provide a highly localized view on the regional market potential for a meat processing facility under stated assumptions – primarily meeting the needs of the local livestock community by providing a local processing option for their animals.

To accomplish this, Morrison met with City of Alturas staff; conducted personal interviews with independent meat processing businesses in the region; deployed a qualitative market interest survey conducted via telephone of potential processing facility customers; and performed independent research related to meat processing facilities.

The sum of this work is documented in this report. Key findings include:

- The regional livestock industry centered around Modoc County is substantial. Within a 100 mile radius of Alturas lie six California counties, three Nevada counties, and three Oregon counties. Altogether, the total livestock counts reported in the 2017 Census of Agriculture for these 12 counties include 622,533 cattle and calves; 41,469 sheep; 14,572 goats; 2,483 hogs; 1,929 broiler chickens; and 774 turkeys.
- Recognizing the high volume of beef cattle raised regionally compared with other species, much of the research for this feasibility study focused on local beef producers as the primary beneficiaries.
- For livestock producers who wish to retain ownership of their animals and market the meat themselves to capture additional supply chain value, the local and regional meat processing options in Modoc County (and throughout the nation for that matter) are

extremely limited. **Regional producers surveyed who are seeking USDA-inspected slaughter and processing report traveling 100 to 400 miles for these services, often with wait times of up to 18 months.** This constraint in regional meat processing severely restricts producers' ability to pursue the value-added market of local and direct-to-consumer sales.

- The most essential finding from the qualitative research was that, in ranking their likelihood of using a meat processing facility in Modoc County, 21 survey participants indicated some likelihood of use, selecting 3, 4, or 5 on a scale of 1 to 5. **Of the beef producers who rated their likelihood of using a USDA-inspected meat processing facility in Modoc County from 3-5, the combined potential volume of cattle was 1,049 head annually.** All other livestock producers surveyed were highly likely to utilize a local meat processing facility, yielding the potential to process an additional 600 chickens, 220 lambs, 60 hogs, and 36 goats annually.
- When asked about what factors would impact their willingness to utilize a new facility, the largest number of responses (5) were related to quality and service provided by management and staff. Freight costs and distance were a close second (4), followed by cost competitiveness compared with other options; timeliness in ability to schedule processing; availability of organic certification; and diversity of services offered (2 each).
- The most common model for new small and medium meat processing facilities is those owned and managed by private operators; this was also the most popular option among market interest survey participants. Private operators usually fall into one of two categories: 1) livestock producers who want to market their own meats but struggle to find or work with existing processors; and 2) existing processors who need to expand. The benefits of a private producer-owned facility include enhanced control over product quality, timing, and processing costs by those most closely impacted by the project.
- Given the potential economic development benefits of a local meat processing facility in Modoc County, as well as the possible availability of city-owned property on which to house such a facility, Morrison's assessment is that a privately operated facility on publicly owned property with a negotiated long term use agreement holds the greatest potential for viability and feasibility (see Section VI – Management Analysis).
- There are significant input costs that would require significant upfront capital investment to support the establishment of a meat processing facility. Under the Assumptions used in preparing the Financial Projections (see Appendix A and the Financial Projections section of this document beginning on Page 31), in the absence of any incentives, subsidies, operator cash investment, or grant funding to offset capital needs, this venture would require a $5,040,000 loan, assumed for 80% of the total project costs (6,300,000 * 80% = $5,040,000). This loan assumes an interest rate of 8.5% and a 10-year maturity.
- The meat processing industry is incredibly complex. Low profit margins and state and federal regulations make market entry a significant barrier without specialized expertise. A private operator well-versed in meat processing operations and management, with public investment in the economic development potential of the project, is likely the most feasible and sustainable approach to building and operating a meat processing facility in Modoc County.
- As noted in the attached pro forma financial projections prepared for this venture (see Appendix A and the Financial Projections section of this document beginning on Page

31), a meat processing facility in Modoc County could generate net sales totaling $12,032,390 over the first seven years of the venture.

- Net contribution for Years 1-7 is projected at $(431,180); $(276,335); $(100,246); $13,854; $162,823; $328,432; and $512,251 under the assumptions documented beginning on Page 31. Cash flows from operating activities is projected as positive in years 2 through 7, but offset by cash flows from financing activities.
- Given the negative cash flow projected for this venture in the first few years, traditional bank financing would likely be a challenge to achieve without other funding sources such as incentives, subsidies, or grant funding. Meat processing projects generating negative earnings and/or cash flow for several years is not an anomaly. This would likely be a strong consideration of any financial investment for this venture. ■

SECTION III. – INDUSTRY OVERVIEW

Livestock Production in California

Livestock production in California is a major economic driver, totaling $12.8 billion in cash receipts in 2021[1]. Milk and dairy products led all of California agriculture with $7.8 billion in cash receipts, accounting for 59.1 percent of the total livestock and livestock products receipts, while cattle and calves accounted for 24.3 percent of the state's total livestock receipts for the year with $3.1 billion.

Statewide in 2021, farmers and ranchers produced 5.1 million head of cattle; 6 million turkeys; 48,000 hogs; 82,000 meat goats; and 250,000 feeder sheep[2]. How those livestock are raised and marketed is nearly as diverse as the agricultural operations themselves. California's complex meat supply chain features countless scales, links, and alternative pathways to market, all governed and affected by different regulations depending upon the size, type, and location of the operation[3].

Focusing on just the beef supply chain, the meat generally consumed by US consumers encounters no fewer than five or six market sectors on its way to the dinner table:

1) The first is the cow-calf sector. These are the cattle ranchers that are the cornerstone of the industry. Their role is to breed mature beef cows, which will then raise approximately one calf per year. Most beef cattle operations breed their cows synchronously to calve altogether within the same 45- to 60- day timeframe each year. These ranchers steward approximately 38 million acres of rangeland and forest throughout California[4], where the cow-calf pairs graze until the calves are ready to wean at approximately four to seven months of age. The cow-calf producer may retain ownership further into the beef supply chain, or they may sell the weaner calves to a secondary producer through a livestock market or auction yard.

[1] 2021-2022 California Agricultural Statistics Review
[2] 2021-2022 California Agricultural Statistics Review
[3] UC Davis Food Systems Lab, 2021
[4] California Cattlemen's Association

2) Most of these calves (about 60 percent[5]) will then enter a backgrounding or stocker operation where they consume a diet of mostly grass and supplements while they grow in size to about 700-800 pounds.

3) The next step in the beef supply chain is the feedlot. Cattle spend on average 90-180 days in the feedlot, usually confined in pens where they consume high-energy diets comprised of grain, byproducts, and hay until they reach approximately 1,200 pounds. A 2002 report in the University of California publication California Agriculture surveyed nearly 300 ranches in 40 counties and found that only 29 percent of the state's cattle destined for feedlots remained in California. That number has not likely grown since then as regulatory issues and feed availability within the state have certainly not improved in the ensuing decades.

4) Once cattle reach full market weight, they are typically sold and shipped to a meat processor/packer, where they are slaughtered, the carcasses quickly cooled, and broken down into a wide variety of primal and subprimal cuts, ground beef, and used in countless byproducts.

5) From the primary processor, the meat may go to a secondary processor for further processing, to a distributor who sells into retail and foodservice markets, or directly to a retail market.

6) The consumer is the final segment in the beef supply chain. [6]

Concentration and Vulnerability in the Meat Processing Sector

Much has been studied and written in recent years about the impacts of concentration in the meat processing sector on value and resiliency throughout the supply chain, with COVID-19 plant closures exposing deep vulnerabilities. Compared with the highly independent cow-calf and stocker segments, the meat processing segment is extremely concentrated in the United States.[7] The share of steers and heifers processed by the four largest companies grew from 36 percent in 1980 to 85 percent in 2019[8].

In 1967, more than 10,000 slaughter plants operated in the US; today there are fewer than 3,000.[9] The largest beef packers can process up to 5,000 animals per day, and somewhere in the range of 650,000 beef animals are processed each week in the US. A 2021 White Paper by the Food Systems Lab at UC Davis titled *A New Era For Meat Processing In California? Challenges And Opportunities To Enhance Resilience* stated, "Such intense concentration has destroyed critical

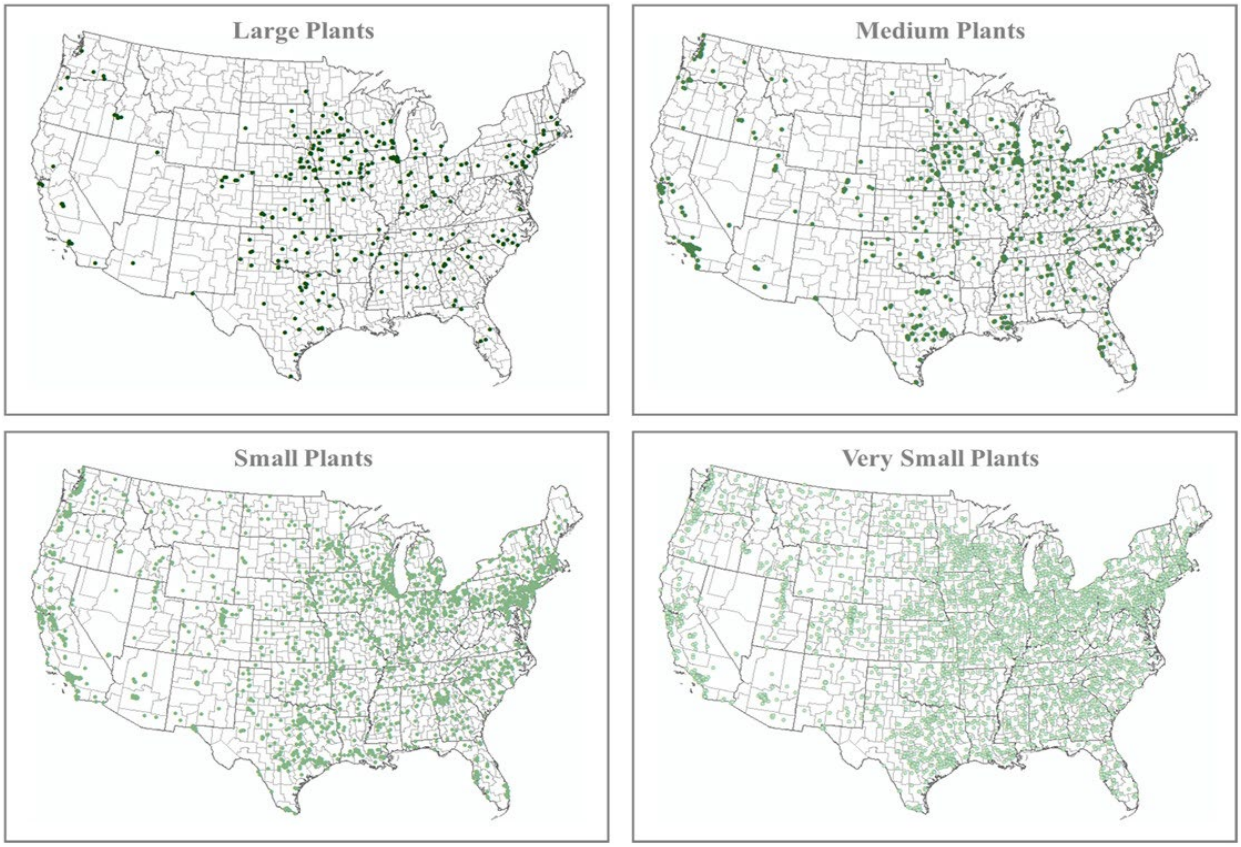
[5] A breakdown of the American Beef sector, UC Davis CLEAR Center
[6] This highly simplistic value chain description omits the important factors of cull cows and bulls entering the beef supply chain, of particular significance in California, home to 1.7 million dairy cows.

[7] Estimated Weekly Meat Production Under Federal Inspection, USDA Market News
[8] Concentration and Competition in U.S. Agribusiness, USDA, Economic Research Service, 2023
[9] UC Davis Food Systems Lab, 2021

forms of resilience, leaving the meat sector vulnerable to disruptions across the entire value chain."

The geographic distribution of these processing plants are concentrated in the eastern half of the United States, and 86 percent of plants are located in metro or metro-adjacent counties. [10]

Study Plant Locations (1997 through 2020)



Source: Meat Processing Plant Survival: The Role of Plant and Regional Characteristics, J of Agr & App Econ Assoc, Volume: 2, Issue: 2, Pages: 215-247, First published: 26 April 2023, DOI: (10.1002/jaa2.55)

In a complex and decentralized beef supply chain, California cattle producers face more challenges than most regions of the country in getting their livestock to market. A November 2022 report prepared for the California Department of Food and Agriculture reflected on the record three-year drought that ravaged the state from 2020 – 2022 (*Economic Impacts of the 2020–22 Drought on California Agriculture*, Medellín-Azuara et al.). The report read, "In 2022, California's drought reduced forage availability substantially and raised costs for purchased forages for the cattle grazing industry, which brings billions of dollars of farm revenue to the California economy. Lack of rainfall on pastures in the coastal range and foothills of the Sierra Nevada range directly reduced beef cattle pasturage. Beef cattle from California sell into national

[10] "Meat processing plant survival: The role of plant and regional characteristics," Isley, C. and Low, S.A. Journal of the Agricultural and Applied Economics Association, 2023

and international markets where California supply conditions have little effect on product prices."

Just over a month after that report was released, a series of atmospheric rivers wreaked further havoc on the state's farmers and ranchers. Floodwaters forced the evacuation of some 75,000 dairy cows in Central California; the cool, wet winter forestalled critical forage growth on winter and spring rangeland throughout the state; and ranchers who ship their cattle to the high country for the summer were delayed or prevented from doing so entirely in 2023 by near-record snowpack covering roadways and mountain forests. These recent climate crises throughout the state compound the losses felt locally as devastating wildfires consumed more than 10 million acres across California from 2018 to 2021, destroying livestock, feed, fence lines, and property.

Consumer Demand for Local Meats

A 2020 Local Food Marketing Practices Survey conducted by USDA NASS found that farmers produced and sold $9 billion of local edible food commodities directly to consumers, retailers, institutions, and intermediaries in 2020, and direct farm sales of food increased by 3 percent from 2015[11]. California led the nation in direct farm sales with $1.4 billion, accounting for 16 percent of the US total. This trend towards locally grown food was particularly strong in the meat industry, where empty grocery store meat counters early in the pandemic drove consumers to seek out local livestock producers from whom they could buy directly. In turn, demand for local meat processing services skyrocketed, with producers and processors alike reporting delays of up to 18 months to access slaughter and cut-and-wrap processing services.

The 2021 UC Davis Food Systems Lab report found just 46 USDA-inspected slaughter plants in California, with just 32 of those handling livestock (as opposed to poultry), and at least 11 only processing for their own brands. While state-inspected and custom-exempt slaughter options exist, USDA inspection gives livestock producers the greatest flexibility and reach in their sales and marketing opportunities. ■

SECTION IV. – MARKET ANALYSIS

Regional Market Overview

Located in far Northeastern California, bordering Oregon and Nevada, Modoc County is California's third least-populous county at 8,700 residents,[12] lending credibility to the county motto, "Where the West Still Lives." With 59,000 cattle and calves, cattle outnumber people nearly 7:1. Alturas is the county seat, the only incorporated municipality in the county, and the largest community with 2,715 residents[13].

[11] https://www.nass.usda.gov/Publications/Highlights/2022/local-foods.pdf
[12] US Census Bureau, 2020 Census
[13] US Census Bureau, 2020 Census

Leading Commodities by Gross Value of Agricultural Production in Modoc County, 2021	
$1,000	
Cattle, All	82,598
Alfalfa, All	57,364
Potatoes	32,116
Hay, Grain, Misc	22,708
Pasture, All	11,810
Onions, Dry	7,350
Rice, All	4,007
Hay, Wild	3,884
Wheat, All	3,812
Forest Products, Timber	3,284

Source: Calif. Agricultural Statistics Review 2021-2022

The largest industries of employment in Modoc County are Agriculture, Forestry, Fishing & Hunting (620 people), Health Care & Social Assistance (353 people), and Public Administration (332 people).[14] The federal government makes up the largest landholder in Modoc County at 63.1 percent, with 35.6 percent of lands privately owned. The remaining 1.3 percent is under state, tribal, and conservation easement ownership[15].

Modoc County ranked 32 in gross value of agricultural production out of 53 counties listed in the 2021-2022 California Agricultural Statistics Review (California Department of Food and Agriculture, CDFA)[16]. Cattle are the leading agricultural commodity in the county, valued at $82.6 million[17]. Other top commodities include alfalfa ($57.4 million); potatoes ($32.1 million); hay/grain miscellaneous ($22.7 million); and pasture ($11.8 million). Interestingly, Modoc County is the number one county in California for organic harvested acreage, with 101 producers harvesting 198,000 acres of organic commodities in 2021. The bulk of that acreage was raised by eight beef cattle producers[18].

Most of the 59,000 beef cattle and 10,000 sheep in Modoc County migrate in and out of the county at least once or repeatedly throughout their lives. Many producers move their livestock seasonally to access fresh forage, shipping livestock out of the county during the fall/winter to more temperate climates with accessible feed, and back to Modoc County in the late spring and summer when the grass is growing and feed is available. Furthermore, the lack of feedlots in the region means that most weaners and stocker cattle are sold and/or shipped out of the region, and often out of the state, for the duration of their lives.

For livestock producers who wish to retain ownership of their animals and market the meat themselves to capture additional supply chain value, the local and regional meat processing options in Modoc County (and throughout the nation for that matter) are extremely limited. **Regional producers surveyed who are seeking USDA-inspected slaughter and processing report traveling 100 to 400 miles for these services, often with wait times of up to 18 months.** This constraint in regional meat processing severely restricts producers' ability to pursue the value-added market of local and direct-to-consumer sales. ▪

Qualitative Market Research – Market Survey Interviews

Morrison created a market interest survey for the purpose of conducting on-one-one interviews of regional livestock producers to gauge the market need and demand for a meat processing facility in the region.

[14] Data USA: Modoc County, CA
[15] U.S. Geological Survey, Gap Analysis Program, 2018, Protected Areas Database of the United States
[16] 2021-2022 California Agricultural Statistics Review
[17] 2021 Modoc County Crop and Livestock Report
[18] 2021-2022 California Agricultural Statistics Review

The survey questions were developed based on Morrison's prior similar experience developing qualitative market research questions for other types of facilities in order to determine market demand. Once the survey was completed, outreach to potential survey participants commenced. Potential survey participants were identified through referrals from stakeholder committee members; University of California Cooperative Extension (UCCE) Livestock and Natural Resources Advisor Laura Snell; and survey participants themselves; as well as through sign-ups at two producer meetings held in Alturas (Modoc County Cattlemen's Association and Modoc County Farm Bureau). Outreach to schedule appointments was conducted by phone calls and emails. Interviews, directed from the list of survey questions, were then conducted by phone. In-depth interviews by phone allowed Morrison to ask follow-up questions if needed as well as to answer clarifying questions from the participants.

The survey structure consisted of four main sections. The first section was designed to gather the following general participant information: name, company, title, the city where the company is located, and the types of livestock and crops that respondent grows, handles, or processes. The second section was designed to be answered by respondents that currently utilize and need meat processing services. The third section was designed to be answered by producers that do not currently utilize or need meat processing services, but expressed some degree of likelihood of using or needing meat processing services in the next three to five years. The fourth and last section was designed to be answered by both producers that currently use meat processing services or that will likely need meat processing services in the next three to five years. The survey questions are located in Appendix B.

When conducting interviews, Morrison stressed the confidentiality of the survey to participants and informed them that their responses would be aggregated and that individual producer responses would not be shared. The nature of the confidentiality of the survey was a key component in establishing trust with the participants and assuring them that no personally identifiable information would be shared.

During the course of the interviews 55 producers were contacted in Modoc and the surrounding counties. Of those, 27 were interviewed.

The level of participation of these producers demonstrate strong interest alone; representations made by a marketing firm familiar with similar surveys reported to Morrison that a response rate of 20 percent would indicate strong interest. The response rate to this survey was nearly 50 percent.

KEY FINDINGS

The most essential finding from the qualitative research was that, in ranking their likelihood of using a meat processing facility in Modoc County, 21 survey participants indicated some likelihood of use, selecting 3, 4, or 5 on a scale of 1 to 5. **Of the beef producers who rated their likelihood of using a USDA-inspected meat processing facility in Modoc County from 3-5, the combined potential volume of cattle was 1,049 head annually.** Producers of all other

species surveyed were highly likely to utilize a local meat processing facility, yielding the potential for 600 chickens, 220 lambs, 60 hogs, and 36 goats.

As was anticipated, producers reported traveling great distances at considerable time and expense to access meat processing services currently. The distance varied for all producers, but a common thread was over 100 miles away and 3-6 hours one-way.

SUMMARY OF RESPONSES

Survey Section I

For Section I of the survey, participating producers were asked to provide their names, the title of the participant being interviewed, as well as the primary headquarters of their companies. Ten of the 27 respondents are located in Alturas. Other locations included Cedarville, Adin, Likely, Lakeview, Tulelake, Loyalton, Lake City, Etna, Canby, Eagleville, and Hughson.

Additionally, the participants were asked what types of livestock and crops they grow, handle, or process. The primary livestock species listed was Cattle (96% of respondents), and the primary crops listed were Alfalfa, Grass Hay, and Other Forage (78%). Other responses included Sheep, Goats, Pigs, Chickens, Eggs, Horses, and Vegetables/Herbs.

Survey Section II

Currently Utilizing/Needing Meat Processing Services

Of the 27 respondents, 20 (74%) stated that they currently utilize and need meat processing services, while 7 (26%) do not.

Currently Utilizing Slaughter Services

Those who currently utilize meat processing services were then asked about the type of services they utilize and need. All 20 (74% of total respondents) need or currently utilize slaughter services. The majority of producers (13) who are slaughtering are currently going to a USDA-inspected facility. Custom-exempt and Self-Slaughter both received three responses, and no one reported using State Inspection.

Respondents who are currently utilizing slaughter services report a total of 2,470 beef cattle, 600 chickens, 220 lambs, 60 hogs, and 36 goats slaughtered annually. The majority (55%) of producers slaughter in the fall, but many expressed interest in adjusting their slaughter seasons if a local facility was available. Four producers report slaughtering all year.

Producers were asked where they are currently accessing slaughter services. The distance varied for all producers, but a common thread was producers travelling more than 100 miles and three to six hours one-way.

Regarding the prices and terms of their current slaughter arrangements, arrangements varied from a kill fee as low as $90 and as high as $400. The average per head kill fee reported was approximately $200 with an additional hanging fee. Sometimes the hanging fee is all-inclusive with disposal, cut/wrap and value-added processing. If a local slaughter option was available,

producers indicated a general willingness to pay whatever the current market value is, and perhaps a little more considering their savings on travel. If such an option was available, producers' responses were split between expectations that their slaughter volume would either increase or stay the same. Aging time of 14-21 days was the most common need of producers surveyed.

Currently Utilizing Cut/Wrap Services
Sixty-three percent of survey respondents reported currently utilizing or needing cut/wrap services. Most of these respondents are currently traveling to a USDA-inspected facility to access cut/wrap services. Based on estimates from producers currently utilizing and needing cut/wrap services, the estimated meat by volume for cut and wrap is over 130,000 lbs/year. Most of these producers currently utilizing cut/wrap services have them cut and wrapped at the same facility where they are slaughtered. One producer travels elsewhere for cut/wrap to ensure the highest quality.

Currently Utilizing Value-Added Processing Services
Just four producers report currently utilizing value-added or ready-to-eat processing services, but an additional seven expressed interest in exploring the option if one were available.

Currently Utilizing Cold Storage/Locker Services
Most producers do not currently utilize cold storage or locker services, and if they do, they are storing themselves in their own freezer space. However, nine respondents expressed interest in exploring the option if one were available.

Potential for Expansion
Producers who currently utilize meat processing services were asked a series of questions related to the potential for their needs expanding should a local option become available. The majority of producers currently processing (13) believe their needs will expand in the next three to five years, especially if there was a local processing facility. When asked how they are currently marketing these meat products, the answers were mixed. Some producers sell through the local Modoc Harvest food hub and others slaughter just for themselves or friends and family. A few utilize other direct-to-consumer (DTC) or word-of-mouth marketing. Several producers anticipated that they could expand into DTC sales though internet and social media. Some feel they could start selling to grocery stores or restaurants and believe a local USDA-inspected processing facility would open many opportunities for their business to expand. When asked what impact a local processing facility would have on the size of their livestock herd, the respondents were split fairly equally between a high possibility of herd expansion and being constrained by the availability of feed.

Survey Section III
As mentioned above, this section was designed to be answered by producers that do not currently utilize or need meat processing services, but expressed some degree of likelihood of using or needing meat processing services in the next three to five years. Of the seven survey respondents who do not currently utilize or need meat processing services, three expressed that they are

somewhat likely to use meat processing services in the next three to five years with a total annual volume of up to 75 head.

Survey Section IV
This survey section was presented to all producers who currently utilize or need meat processing services and those who expect to in the next three to five years.

Facility Type
When asked what model of meat processing operation they would be likely to use, most respondents would be willing to access any available option. Of those with a preference, brick and mortar was the most popular option followed by mobile processing and then modular.

Ownership and Management Model
When asked what ownership and management model they would be likely to utilize, and given the opportunity to select multiple options, a majority of producers (18) preferred a private ownership model in which they are not an investor. A cooperative ownership model (see Section VI. – Management Analysis) was also acceptable to most respondents with 12 interested in a co-op in which they are a members and 10 interested in a co-op in which they are not a member. Producers interested in cooperative investment were split between considering an up-front investment of less than $20,000 (5) and $20,000-$50,000 (5). Six producers reported willingness to consider investing as a private owner.

Special Considerations to Business
When asked if there are any special considerations to their business and/or products that they would need a meat processing facility to accommodate, seven respondents reported a need for organic certified meats. The majority of producers who said yes to organic felt it would be beneficial in supporting producers who are currently organic or want to go organic. However one producer felt offering both organic and non-organic processing services would not be feasible. Some producers felt kosher or halal certifications would be great, but none of the producers surveyed currently require these certifications.

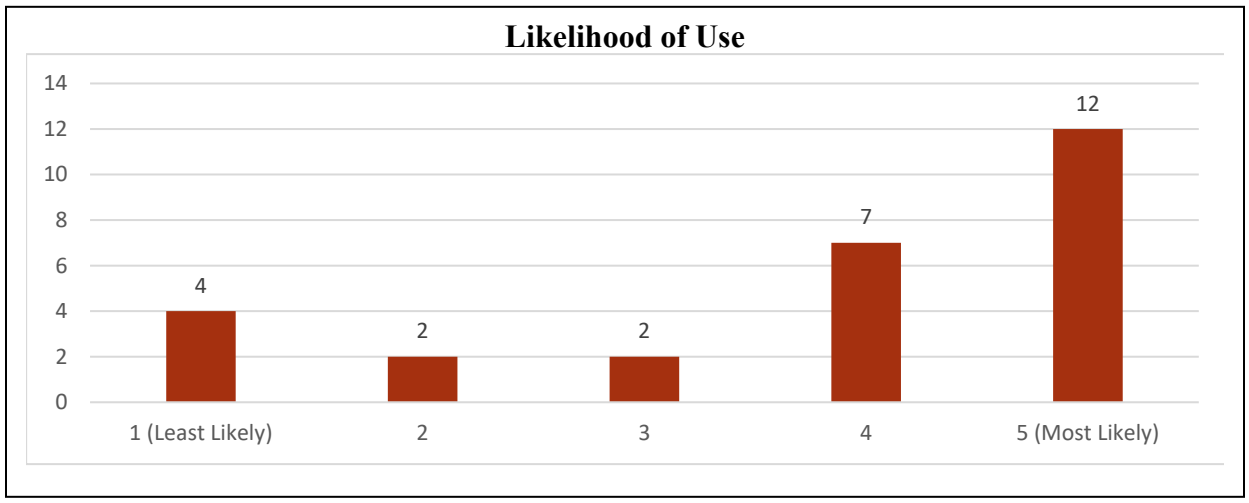
Factors Impacting Willingness to Move Business
When asked, *"If you currently are using meat processing off-site, and a new company could match the price of your current provider, what other factors would impact your willingness to move your business?"* participants provided many and often multiple responses. The largest number of responses (5) were related to quality and service provided by management and staff. Freight costs and distance were a close second (4), followed by cost competitiveness compared with other options; timeliness in ability to schedule processing; availability of organic certification; and diversity of services offered (2 each). Factors mentioned at least once are listed below.

- Quality and service (x5)
- Freight costs and distance (x4)
- Cost/competitiveness of services (x2)
- Timeliness in ability to schedule processing (x2)

- Organic certification (x2)
- Built-in diversity of services for producer access (Slaughter, Cut/Wrap, Grind, Value-Added Processing, Cold Storage/Locker, Flash Freezing, Shipping) (x2)
- Community oriented, backed, and based (x1)
- Good communication skills (x1)
- Cleanliness of facility (x1)
- Facility layout/accessibility/yardage (x1)
- Hours of operation (x1)

Meat Processing Constraints and Ability to Grow
Producers were asked *"Does meat processing availability negatively affect your ability to grow your business?"* While the majority (59%) reported "No," many acknowledged that the lack of meat processing options is a factor that contributes to their current business model; if local processing was available they may consider holding back and feeding more calves for processing.

Likelihood of Using a USDA-Inspected Meat Processing Facility in Modoc County
Asked to rank their likelihood of utilizing a USDA-Inspected Meat Processing Facility in Modoc County from 1-5, 12 producers (44%) indicated a high likelihood of use.



Morrison conducted further analysis into the potential volume of slaughter related to likelihood of use. Of the beef producers who rated their likelihood of using a USDA-inspected meat processing facility in Modoc County from 3-5, the combined potential volume of cattle was 1,049 head annually. Producers of all other livestock species surveyed were highly likely to utilize a local meat processing facility, yielding the potential for 600 chickens, 220 lambs, 60 hogs, and 36 goats.

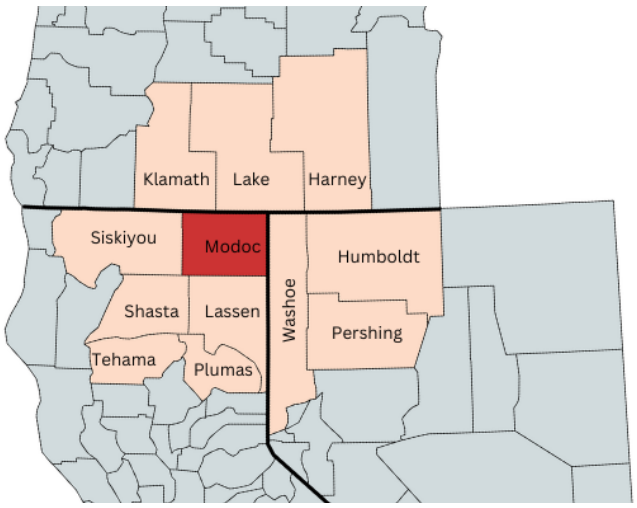
Anecdotal Experiences with Lack of Meat Processing Availability
The survey participants were asked if they had any anecdotal experiences with a lack of meat processing availability that they would be willing to share. There are many stories the producers shared, and the common thread through all of them was travel. The amount of time, gas, and

logistical organization that goes into transporting the live animals, picking up the meat and keeping the inventory cold is incredibly taxing on the producers. Some often share trucking costs, or one drops off and the other picks up. Many of the producers also discussed the bottleneck issue of getting into a processing facility. They are having to book months to a year or two in advance to get on the schedule. Some have also had issues with quality control and ensuring the meat is wrapped properly, cut to size accordingly, or stored at the correct temperature. ▪

Secondary Market Research & Volume Estimates

To further provide insights on the potential use of a meat processing facility in Modoc County, secondary market research was conducted. As noted above, of the beef producers who rated their likelihood of using a USDA-inspected meat processing facility in Modoc County from 3-5, the combined potential volume of cattle was 1,049 head annually. All other livestock producers surveyed were highly likely to utilize a local meat processing facility, yielding the potential for 600 chickens, 220 lambs, 60 hogs, and 36 goats.

Counties Within ~100 Mile Radius of Alturas



Modoc County has 203 farms and ranches raising cattle and calves, according to the 2017 Census of Agriculture. While 27 responses from four counties were received to the qualitative market survey, the regional livestock industry is significantly larger. Within a 100mile radius of Alturas lie six California counties, three Nevada counties, and three Oregon counties. Altogether, the total livestock counts reported in the 2017 Census of Agriculture[19] for these 12 counties include 622,533 cattle and calves; 41,469 sheep; 14,572 goats; 2,483 hogs; 1,929 broiler chickens; and 774 turkeys.

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[19] As of the writing of this report, the 2017 Census of Agriculture was the most current census data available.

Livestock Count by County

	County	Cattle & Calves	Sheep	Goats	Hogs	Broilers	Turkeys
Calif.	Modoc	59,392	7,723	1,252	406	-	52
	Lassen	38,630	5,876	330	154	-	-
	Shasta	37,068	1,652	2,796	523	168	308
	Siskiyou	49,271	3,957	601	-	-	21
	Plumas	14,269	351	54	21	210	10
	Tehama	65,335	5,084	5,593	745	-	70
Nev.	Washoe	13,549	5,658	276	-	183	107
	Humboldt	70,894	5,379	1,321	370	1,269	77
	Pershing	20,549	306	529	77	-	38
Ore.	Lake	85,584	605	698	-	88	32
	Harney	96,972	-	168	-	-	-
	Klamath	71,020	4,878	954	187	11	59
	Totals	622,533	41,469	14,572	2,483	1,929	774

Source: 2017 Census of Agriculture

These counts indicate that the potential demand for a meat processing facility in Modoc County could be substantially larger than the sample of producers surveyed. However substantial shifts in individual producers' business models, and investment in local feeding capacity, would be necessary to capture any significant measure of this volume in a new local meat processing plant servicing regional producers.

Additional outreach was made to existing meat processors in Northern California and Northern Nevada to gather their assessments of the regional market demand. One small independent USDA-inspected processor reported that the size and age of their facilities currently limits their ability to serve all livestock producers seeking their services. A second small independent USDA-inspected processor believes the demand has crested and no longer presents the market constraints it once did in the height of COVID-19. This processor stated that they have capacity to serve more producers than what they are currently serving, but they are not seeing consistency in demand. As evidence of the decline in demand, they referenced Masami Foods in Klamath Falls, Oregon, which recently reduced its processing shifts from two to one; and Nexus Beef Packing in Yreka, which closed its doors less than a year after purchasing the former Belcampo plant. The personal and financial reasons for these reductions may be numerous, but the processor interviewed believes that softening in producer demand for these services is a factor, particularly given the high prices producers are currently receiving for feeder cattle.

A summary of the sometimes-competing producer and processor concerns about processing in a 2013 USDA Economic Research Service publication, "Local Meat and Poultry Processing: The Importance of Business Commitments for Long-Term Viability," seems just as applicable in 2024:

Farmer and processor concerns about processing

What farmers say	What processors say
There are not enough processing facilities.[1]	There aren't enough farmers bringing me enough livestock.
Processors don't have the right services or inspection status.	Farmers ask me to do new things, but they don't have enough volume to cover my costs.
I have to schedule a processing date too far in advance.	Farmers don't come when they say they will, or they bring fewer or different animals than they said they would bring.
I can't get a processing date during the fall.	I have no business in the spring.
Processing costs too much.	Farmers don't want to pay what processing really costs.
Processors make cutting, packaging, and labeling mistakes.	I don't have enough year-round, steady business to hire skilled labor and pay them a good wage.
My order wasn't ready on time, and my customers are unhappy.	Farmers don't pick up their orders on time, using up valuable cooler space.

[1]Particularly for poultry: there are far fewer inspected poultry plants than red meat plants, in part because profit margins are thinner, in part because many States allow the sale of poultry processed under one of the Federal exemptions, and in part because poultry production at smaller scales is typically very seasonal. Farmers must cross State lines for federally inspected processing or be shut out of the market in States that do not allow such sales and in which there is no inspected small plant.

Source: "USDA Economic Research Service, "Local Meat and Poultry Processing: The Importance of Business Commitments for Long-Term Viability." ▪ ■

SECTION V. – OPERATIONAL ANALYSIS

As part of the scope of work for this feasibility study, the operational assessment for a potential facility included an assessment of potential locations for a meat processing facility in Modoc County; an assessment of land/building acquisition; and an assessment of equipment needs and costs.

It is important to note that the planning for the operations and management of a meat processing facility can be significant – even after feasibility is determined. In the absence of an existing ownership and management team who would normally guide and direct many operational decisions, Morrison has relied upon its collective qualitative and secondary research, third-party evaluation, and understanding of the industry and community in conducting this analysis. Any operator would need to invest in further analysis and planning specific to a proposed venture.

Species

The goal of the stakeholder group and the community would be to have the capacity to process beef, lamb, goats, and swine as needed. With smaller volumes of the three latter species available for processing, the financial projections for this venture were developed specific to beef due to the significant volumes of beef raised in the region. However, lamb, goat, swine, and organic beef producers in the region are keenly interested in utilizing the facility, and it is recommended that any future business plan assess these species with specific processing plans, perhaps as infill to moderate seasonality.

Site Feasibility

In the course of visiting and discussing potential meat processing sites with the stakeholder committee and community leaders, two potential sites were elevated as possible locations for a meat processing facility: a former USDA-inspected slaughterhouse on Main Street (County Road 1) approximately 1.5 miles south of Cedarville that was last operational in the early 1990s; and an undeveloped property off of N West St. (County Road 54) approximately 2 miles southwest of Alturas on property where a future City of Alturas municipal wastewater treatment facility is planned. As the City of Alturas and County of Modoc have both offered strong support for this project, and as a primary goal of the Modoc County general plan is to encourage the expansion or establishment of industry in Modoc County, zoning is not anticipated to be an obstacle in either location. Both properties offer benefits and drawbacks, some of which are highlighted below:

Cedarville location (41°30'17.3"N 120°10'19.3"W):

Pros: Existing facility with utility infrastructure in place; property owner is interested in having the site operational.
Cons: Significant renovations needed for safety, modernization, and operation (with high likelihood that a complete demolition and full rebuild may be necessary); plant is on Pacific Power, resulting in higher energy rates; labor pool is somewhat smaller than in Alturas (though this is a common challenge in both rural areas).

Cedarville Location (Source: Google Maps Street View)

Alturas location (41°27'48.9"N 120°34'20.3"W):

Pros: Centrality of access from Highways 395 and 299; low energy rates through Surprise Valley Electric; proximity and access to wastewater treatment on same property; proximity to city landfill across the road (though not currently permitted to accept offal); potential for public/private partnership in use of city-owned property, eliminating land acquisition costs.
Cons: Full ground-up build required.

Alturas Location (Source: Google Maps Street View)

It is Morrison's assessment given the information available that the Alturas location offers strong benefits relative to long-term feasibility of the project given its central location with ease of access, potential for reduction or elimination of land acquisition costs, low energy rates, and proximity to future water and waste disposal options. Ultimately, any site would have to fit the needs of an operator.

Building and Equipment Needs and Costs

In assessing the feasibility of a future meat processing facility in Modoc County and to inform financial analysis of this study, research was performed as it relates to the likely design, engineering, and construction needs and costs for a potential meat processing facility. As any potential operator of a meat processing facility would likely seek to design and construct a facility to best suit their needs and personal specifications, extensive feasibility work was not conducted on all possible design specifications for a potential facility. Mobile, modular, and brick-and-mortar options were considered in consultation and discussions with the stakeholder committee, community leaders, existing meat processors, and market interest survey respondents. The related benefits and drawbacks of each system are summarized in the table below.

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Brick-and-Mortar (Permanent stick-built facility)		**Modular** (Fixed structures arranged to meet the needs of the operation)		**Mobile** (e.g. trailers)	
Pros	*Cons*	*Pros*	*Cons*	*Pros*	*Cons*
Single preferred option of producers surveyed Perceived durability and quality of construction related to modular and mobile options	Static design makes future expansion more challenging Availability of contractors with experience in meat processing builds	Flexibility of design for future expansion Ability to sell modular units back to manufacturer if business is not successful Inclusive consultation and support of manufacturer in navigating project development, regulatory approval, and operational costs Customized design for high productivity, efficiency, and worker safety	Perception of lower quality and durability of construction related to brick-and-mortar options Costs of unit perceived as high; inclusivity of accompanying equipment and support services may mitigate this concern	Lowest up-front investment costs for slaughter services Versatile and convenient for potential on-farm processing Reduction of stress on animals with on-farm processing	Difficulty processing in inclement weather Slaughter-only; additional brick-and-mortar would be needed for cut/wrap and further processing/ aging/storage Limitations of where on-farm processing can occur under USDA inspection somewhat negates the "pro" of convenience and often means that mobile slaughter units are actually stationary Space constraints on slaughter floor limit productivity and efficiency relative to modular and brick/mortar options

The wide diversity in responses and opinions related to potential facility design reflects the complex dynamics and subjectivity of system design. The majority of producers interviewed agreed that they would be open to utilizing any of the above options.

For the purposes of this report, Morrison consulted with independent meat processing system manufacturer Friesla to assess the costs and viability modular meat processing system with additional infrastructure construction. Friesla's mission is to help independent meat producers and processors to take back control of local meat processing by designing and building USDA-compliant mobile and modular meat processing systems. The foundation for each Friesla System is a Project Development Phase, or PDP, in which Friesla's technical and design team works closely with the future system operator to define goals, develop system layout and design, work through regulatory and site-specific considerations, and assist with business financial forecasting.

Friesla conducted a "mini-PDP" for this study based on known or assumed information to date. Each element of Friesla's system is customizable, and a full PDP, or equivalent study, in consultation with the facility's planned operator will be necessary to determine actual project needs and costs based upon the venture's business objectives. The building and equipment needs and costs as determined by this initial estimate for a modular meat processing system are detailed below in Section VII – Basis of Design. ▪ ■

SECTION VI. – MANAGEMENT ANALYSIS

As part of its study objectives, Morrison's analysis included an assessment of the potential management and organization structure of the facility; the identification of likely expertise/qualifications needed to operate the facility; and the assessment of personnel needed to operate facility and their costs.

As no single entity or entities have signaled their desire to own and operate a meat processing facility in Modoc County, Morrison's approach was to assess the general strengths and weaknesses of a variety of ownership models to provide policy makers and potential investors with food for thought in advancing the venture. It was determined to explore the challenges and benefits of an ownership/management structure by a private owner; a cooperative association of livestock producers; a city- or county-owned management/ownership structure; and a public/private partnership. Each approach was considered and provided below:

Private operator
The most common model for new small and medium meat processing facilities is those owned and managed by private operators; this was also the most popular option among market interest survey participants, although personal investment in such an option was not as appealing (see Section IV – Market Analysis).

Private operators usually fall into one of two categories: 1) livestock producers who want to market their own meats but struggle to find or work with existing processors; and 2) existing processors who need to expand. [20] The benefits of a private producer-owned facility include enhanced control over product quality, timing, and processing costs by those most closely impacted by the project. The Friesla website (www.friesla.com) profiles success stories of

[20] To Build or Not to Build: Lessons Learned from New Processing Ventures; A Niche Meat Processor Assistance Network Webinar, Sept. 28, 2011

producer-owned projects in their Client Stories section, including that of Siskiyou County producers Brian and Mary Heffernan, who built nationwide e-commerce demand for their Five Marys-branded beef, pork, and lamb products, but faced repeated challenges in reliable slaughter and processing services. The Five Marys client story states, "'*Nobody cares as much about your brand as you do,' Mary says. Maintaining control over each element of their brand has been vital to their success—from raising animals to building an e-commerce sales machine and vertically integrating meat processing into their operations."*

With the capital investment, regulatory complexity, and operational demands of a meat processing facility, the success of operators like Five Marys cannot be taken for granted. A 2011 presentation by Food and Livestock Planning consultant Keith DeHaan, PhD shared that of 35 producer-owned meat processing projects he studied in 18 states over the prior 13 years, just five of them were still operational. While each project was unique, some common obstacles the unsuccessful projects faced were insufficient capital to weather down markets (more than half were never able to raise enough money to launch the project in the first place); management mistakes that led to financial crises; weaknesses in marketing and sales; and lack of experience to oversee a processing/marketing business. Dr. DeHaan's conclusion was that the strongest path to processing business success for livestock producers would be to purchase a successful processor if possible, or to develop a business partnership with an existing processor interested in expansion if not.

Cooperative Model

Cooperatives, or co-ops, are business entities that are owned and controlled by – and operate for the benefit of – their members. Co-ops can be established and organized in any number of ways, and they generally share profits with their members on the basis of use.

The potential benefits of a cooperative model for a meat processing facility include wider distribution of the start-up and operation costs of such a facility so that no single producer or entity must shoulder the entire burden. USDA is a strong advocate of farmer-owned cooperatives and offers technical support and financial assistance, including loans and grants, to specifically benefit co-ops. [21]

Producers interviewed through the market interest survey were particularly intrigued by the cooperative ownership model, with 12 respondents indicating a willingness to invest as a member. Of those, half indicated a potential willingness to invest up to $20,000, and half would consider investing up to $50,000.

Quotes from two separate independent meat processors interviewed for this study sum up the challenges to the co-op model: "I'm always skeptical of the co-op model," one said. "All of the members come into it with disparate circumstances and competing needs." "A co-op model would be a disaster," the other stated. "The only way it could work is if the co-op acts as a bank to build the facility and invests in a strong manager who would eventually buy out the investors."

[21] https://www.rd.usda.gov/programs-services/cooperatives

Indeed, case studies of producer-owned meat processing co-ops demonstrate the difficulty in building cohesion around a shared vision, and maintaining the commitment and stamina needed for long-term success. A 2017 Niche Meat Processor Assistance Network (NMPAN) profile of the Livestock Producers Cooperative Association (LPCA),[22] as summarized by the Oregon State University Small Farms Program[23], stated, *"The plant opened in 2013, closed temporarily in 2015, and is back in operation as of this writing but still faces big challenges to profitability and long-term viability. The plant is operated as a member-owned cooperative (LPCA), but it is no longer selling new memberships. Although they will stick with their business model, they have not found the cooperative model to be entirely functional. LPCA doesn't have great buy-in from the majority of members, just a select few. There has not been a strong understanding of cooperative principles by the members, many of which are used to operating as independent ranchers."*

Somewhat closer to home, the 40-member Bay Area Ranchers Co-Operative (BAR-C), which opened a mobile slaughterhouse in Petaluma to much fanfare early in 2022, lasted less than a year before staffing and management issues, contributing to a string of USDA citations, led to its closure and dissolution (The Press Democrat, Nov. 9, 2023). The lack of consistent producer demand to justify and fund qualified staff full-time and year-round was cited by a co-op member quoted in *The Press Democrat* as a contribution to the unfortunate outcome. These challenges experienced by BAR-C aren't unique to the co-op model, but they can be particularly tricky to untangle when ownership is spread among multiple independent producers with divergent priorities.

Public Entity Operator
No models for public ownership and operation of a meat processing facility were identified, and particularly in a rural region such as Modoc County where city and county resources are limited, this model is not recommended for consideration.

Public/Private Partnership
Given the potential economic development benefits of a local meat processing facility in Modoc County, as well as the possible availability of city-owned property on which to house such a facility, Morrison's assessment is that a privately operated facility on publicly owned property with a negotiated long term use agreement holds the greatest potential for viability and feasibility.

Expertise and Qualifications Needed
What has become extraordinarily clear through the interviews and research conducted in preparing this assessment is the critical importance of a strong and experienced manager with a meat processing background and business/financial acumen who is qualified to navigate the complex regulatory requirements of a meat processing facility; build positive relationships with producers, USDA, and other stakeholders; effectively train and supervise staff; and uphold a commitment to quality, safety, sanitation, and customer service.

[22] https://www.nichemeatprocessing.org/lpca-plant-odessa-wa/
[23] https://smallfarms.oregonstate.edu/lessons-learned-local-meat-processing-livestock-producers-cooperative-association

To further advance the project's likelihood of success, it would be prudent for this manager to be on board during the formal PDP to thoughtfully consider the layout and equipment selection from an operational perspective. This was a lesson learned by the Livestock Producers Cooperative Association board members and recommended in the case study by the Niche Meat Processors Assistance Network.

Additional expertise and sustained attention is needed for marketing, scheduling, and producer procurement. "Build it and they will come" is not an effective way to run a small meat processing facility. Existing meat processors report the need for a strong balance between large weekly customers, mid-size regular (i.e. monthly or quarterly) producers; and small producers who use the facility once or twice a year. Questions to be answered include what will the facility do when its largest customer pulls their business; how will it keep workers busy when producers don't make their scheduled appointments; what coordination and pricing needs to happen to distribute the demand more uniformly throughout the year, rather than all in the fall; and who in the facility, whether it's the ownership, management, or dedicated marketing staff, needs to make marketing a priority.

Personnel Needs and Cost
All meat processors – and all industries in small rural areas for that matter – struggle to find capable and willing labor. Based on Friesla's experience, and validated in interviews with other meat processors, expected labor requirements of a small facility processing 20-30 head per week is five to seven workers. This would include the facility manager and at least two skilled laborers and two unskilled laborers. Additional clerical staffing may also be needed. Training and retaining workers is vitally important to long-term feasibility of a small meat processing facility. Most USDA citations that result in suspensions or revocations of USDA inspection arise from mistakes made by poorly trained or unskilled workers.

The financial projections for this feasibility study include hourly wage estimates of $50 per hour for the Facility Manager, $30 per hour for skilled labor, and $18 per hour for unskilled labor based on local market wages. Annual increases of 3 percent per year is assumed to account for inflation.

Labor Availability
Modoc County's labor force according to the state Employment Development Department is 3,070 individuals, 2,820 of whom were currently employed as of December 2023, for an unemployment rate of 7.9 percent. This was higher than the statewide unemployment rate of 5.1 percent.

County-to-county commute patterns[24] demonstrate that Siskiyou, Lassen, and Shasta Counties are the most common California counties from and to which Modoc County commuters travel. Of those, incoming workers are most likely to come from Lassen County.

[24] Modoc County Profile, EDD Labor Market Information

County-to-County Commute Patterns (US Census Bureau)				
Year	Time Period	Area of Residence	Area of Work Place	# of Workers
2020	Census	Modoc County, CA	Modoc County , CA	2,635
2020	Census	Modoc County, CA	Siskiyou County , CA	110
2020	Census	Modoc County, CA	Shasta County , CA	89
2020	Census	Lassen County, CA	Modoc County , CA	69
2020	Census	Modoc County, CA	Lassen County , CA	53

Source: Modoc County Profile, Employment Development Department

The availability of labor is a recognized risk for any new venture, including meat processing, and especially for one in a remote rural area such as Modoc County. In the absence of an existing meat processing industry, the facility manager and skilled workers will likely need to be recruited from outside the area. Some recommendations are listed below.

- NMPAN offers a series of recommendations for small meat processors to develop a viable labor pool, including developing relationships with culinary schools and college programs, perhaps establishing internship programs.
    - Regional community colleges Klamath Community College (Klamath Falls, 93 miles); Lassen Community College (Susanville; 104 miles); Shasta College (Redding; 139 miles); and Feather River College (Quincy, 170 miles) each offer programs in agriculture and animal science.
- Strong potential also exists to establish relationships with two regional state colleges who specifically train students in meat processing.
    - California State University, Chico (Chico; 208 miles) operates a USDA-inspected meat laboratory (the Meat Lab) as an educational facility, where students can gain knowledge of multiple facets of the meat industry through hands on experience by producing a quality and safe product. The Meat Lab is closely affiliated with the California Association of Meat Processors (CAMP) and sends students annually to the CAMP meetings. Chico State also offers a competitive meat judging team, which provides students with further training and opportunity for industry engagement and inspiration.
    - University of Nevada Reno (Reno; 174 miles) owns Wolf Pack Meats, a USDA-approved meat processing plant that has been offering students first-hand experience in meat production, retail distribution, and packaging for more than 57 years. UNR's Herds and Harvest program also assists local ranchers, farmers, and all others who want to develop their skills in agriculture.
- Restaurant workers are often viable candidates for meat processing jobs as they come with experience in food safety and sanitation.
- The Alliance for Workforce Development (AFWD) provides one-stop employment services for employers and job seekers in Modoc, Lassen, Nevada, Plumas, Sierra, and Butte Counties. With US Department of Labor funding through the Workforce Innovation and Opportunity Act, AFWD supports workers experiencing layoff or plant closures with job training and supportive services. The program also subsidizes on-the-

job training for eligible workers, potentially reducing the employer's labor costs during the training period.

- As a long term recruitment and community investment strategy, engagement with and support of local youth educational programs such as 4-H and FFA can help build goodwill towards the venture and contribute to the education and motivation of the community's future workforce. This could take the form of providing guest speakers, inviting tours, purchasing animals in the local youth livestock auctions, providing meat processing services for those auctions, offering student internships or employee shadowing programs, and sponsoring meat judging teams or contests.

Workforce recruitment, retention, and management will surely be a challenge for any meat processor, with no simple solutions. Meat processors interviewed who are able to meet their labor needs do so by paying above-industry wages and ensuring consistent full time work year round. ■

SECTION VII. – BASIS OF DESIGN

Assuming a modular processing facility with site-built infrastructure would likely be the most convenient, flexible, and effective design in serving local and regional meat producers, Morrison consulted with Washington-based independent meat processing system manufacturer Friesla. The foundation for each Friesla System is a Project Development Phase, or PDP, in which Friesla's technical and design team works closely with the future system operator to define goals, develop system layout and design, work through regulatory and site-specific considerations, and assist with business financial forecasting. Friesla conducted a "mini-PDP" for this study based on known or estimated information to date. Each element of Friesla's system is customizable, and a full PDP in consultation with the facility's planned operator will be necessary to determine actual project needs and costs based upon the venture's business objectives.

Based upon the mini-PDP, Friesla provided the following system specifications with the capacity to harvest, chill, cut, package, freeze, and store finished goods at a volume of up to 75 head of beef per week and equipped for multi-species (beef, hogs, goats, sheep, and wild game). The Friesla system is comprised of four modules: a 50' harvest module; a 58' carcass aging cooler; a 58' cut-and-package module; and a 50' finished goods cooler and freezer. A single carcass aging cooler should suffice for a volume of up to 25 head per week with 14-day aging. If that volume or aging time is anticipated to expand, and additional carcass aging cooler would likely be needed and is not included in the ballpark budget estimate provided.

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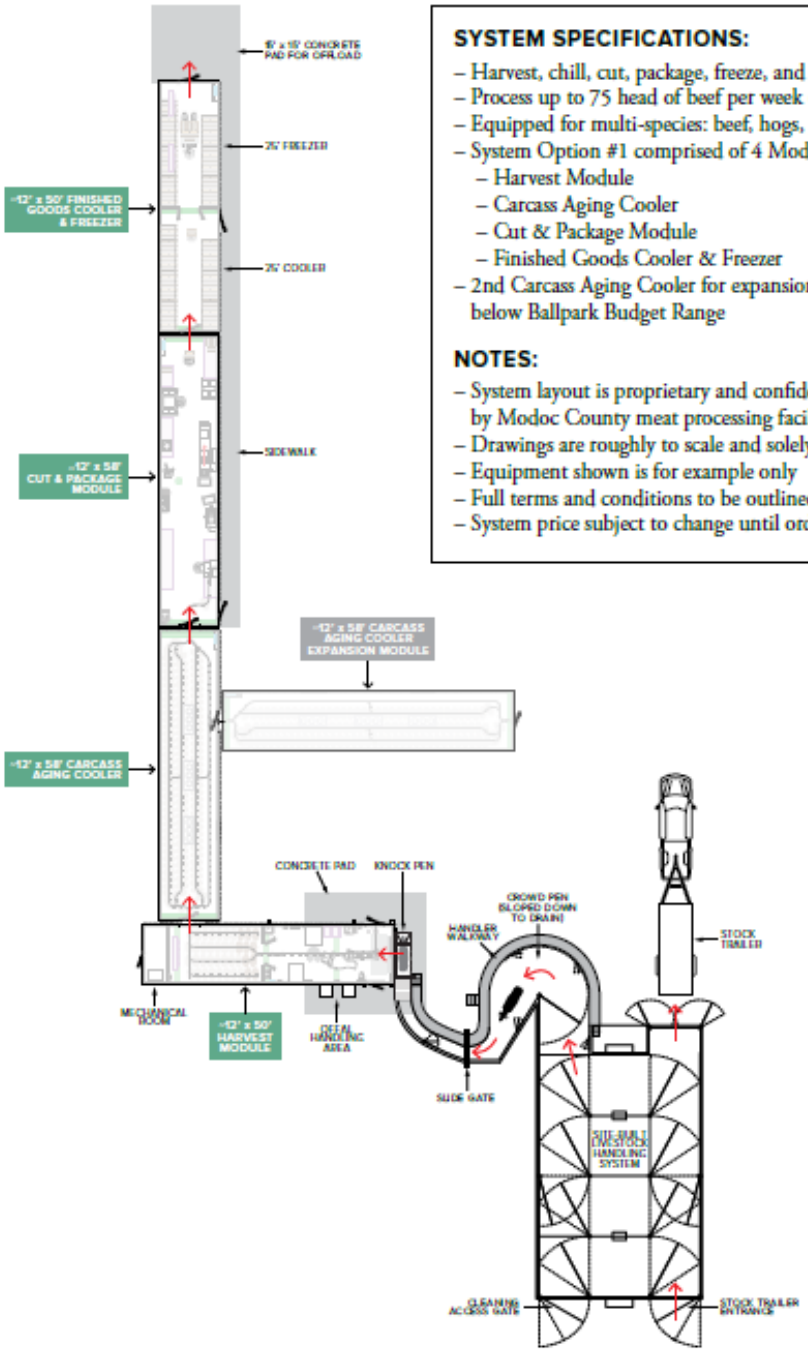
FRIESLA | MEAT PROCESSING SYSTEMS

Friesla

SYSTEM LAYOUT OPTION #1: MODULAR HARVEST



SYSTEM SPECIFICATIONS:

- Harvest, chill, cut, package, freeze, and store finished goods
- Process up to 75 head of beef per week (or equivalent species)
- Equipped for multi-species: beef, hogs, goats, sheep, wild game
- System Option #1 comprised of 4 Modules:
  - Harvest Module
  - Carcass Aging Cooler
  - Cut & Package Module
  - Finished Goods Cooler & Freezer
- 2nd Carcass Aging Cooler for expansion not included in the below Ballpark Budget Range

NOTES:

- System layout is proprietary and confidential; solely for reference by Modoc County meat processing facility project stakeholders
- Drawings are roughly to scale and solely for illustration purposes
- Equipment shown is for example only
- Full terms and conditions to be outlined in Purchase Agreement
- System price subject to change until order placement is confirmed

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The ballpark estimate for the four processing modules complete with all processing equipment, traceability hardware and software, consumables, HACCP Plan writing, training, and support is $3.9 million to $4.2 million installed, depending upon operator specifications, which would be outlined in the full PDP.

Not included in Friesla's ballpark budget range, but necessary for full operation of the facility, are site infrastructure and preparation. These include office space (required for USDA inspector); a restroom; dry storage; offal handling; the livestock handling system; electrical; potable water; waste management infrastructure; architectural, engineering, zoning, and permitting; and state-licensed contractor support, including final utility hook-ups. Based upon similarly sized meat processing facilities in comparable economic regions, Morrison's financial projections assume construction and installation costs of $1,700,000. An additional $400,000 is factored for operating equipment such as forklifts, pickup trucks, tanks, pressure washer, dump trailer, miscellaneous exterior tools, etc.

Friesla also provided the system layout option for a mobile slaughter unit (MSU) option (see Appendix C). Given the tradeoffs of various system options, and absent an identified operator who would assess those tradeoffs in relation to their processing needs, Morrison is assessing only the modular meat processing system in this study. ■

SECTION VIII. – CAPITAL

The option considered for this study is a USDA-inspected meat processing facility owned and operated by a private entity with public support in the form of a no-cost lease agreement of public property. This study's approach to determining the capital needs focused on the likely needs of a private for-profit operator.

Capital and operating costs are detailed in the financial projections prepared for this study and documented in the Assumptions for the financial projections (see Page 31). These include:

- Total investment: $6.3 million
- Cost of USDA-compliant Modular Meat Processing System and equipment: $4.2 million
- Cost of site development and infrastructure: $1.7 million
- Cost of exterior operating equipment: $400,000

For the financial projections, it was assumed that capital costs would be financed with 20 percent cash and 80 percent bank financing. Additional non-traditional capital like state and federal grants or incentives could offset some of these capital costs. The federal government has invested more than $1 billion into grant opportunities specifically for the construction and expansion of local US meat processing facilities and operations in response to the overconcentration, and related vulnerabilities, of the US meat processing sector, as detailed in Section III. – Industry Overview starting on Page 5. A concise summary of selected granted opportunities that may benefit a meat processing facility in Modoc County are as follows.

United States Department of Agriculture (USDA) Meat and Poultry Processing Expansion Program: This grant opportunity is available to meat and poultry processors for new facilities

and for the renovation and expansion of existing facilities for the purpose of promoting competition and giving more and better options to producers by increasing meat and poultry processing capacity. Eligible program activities are construction of a new facility or purchase of an inoperable facility; construction of USDA-inspected mobile slaughter and processing units; purchasing meat processing and packaging equipment; and staffing or operational costs specifically tied to the project, among other activities. Previous Meat and Poultry Processing Expansion Program (MPPEP) grants had a maximum grant amount of $10 million or 30 percent of the total project costs, whatever was less, and have been released on an annual basis since 2022. MPPEP requirements closely align with this project and award additional points to project's that possess robust community and stakeholder support, positioning Modoc's meat processing facility well for this significant source of capital.

USDA Local Meat Capacity Grants: Local Meat Capacity Grants (Local MCap) Processing Expansion Projects fund grants up to $5 million for meat processing equipment purchases and facilities upgrades that create new and/or expanded markets for local livestock producers. (USDA defines "local" as within the same state as the business or within 400 miles of the facility location). Priority points would be granted for projects located in Modoc County as it qualifies as a distressed community per the grant guidelines, meaningfully boosting the likelihood of this project's success in obtaining grant funding should it apply.

USDA Local Food Promotion Program (LFPP): LFPP's purpose is to support the development and expansion of local and regional food businesses that engage as intermediaries to increase access and availability of locally and regionally produced agricultural products. This would fit well with the vision for a meat processing facility in Modoc County as it will largely process meat produced by local farmers and ranchers, per USDA's definition. LFPP's maximum grant amount is $750,000 and can fund processing and packaging equipment costs and staff costs related to the project, among others.

Given the numerous federal grant opportunities available specifically tailored to support projects like the one proposed here, it is feasible that this project would be successfully awarded for one or more of the abovementioned opportunities should it apply and could serve as a significant funding source of capital. This funding, partnered with ownership contributions and a conventional bank loan, supports the feasibility of this venture. ■

SECTION IX. – RISK ASSESSMENT

Meat processing is by nature a business rife with risk. Potential (though not all-inclusive) risks for a private operator to consider when determining whether to pursue such a venture include:

Availability of labor and materials to construct a facility. This report recommends a modular processing facility, which would be designed and partially constructed offsite to allow for more streamlined design and construction. However significant site work and infrastructure would be needed to make the facility operational, including site grading and trenching, road access, well-drilling, livestock handling facilities, waste management, and USDA-required office and restroom facilities. Availability and scheduling of contractors and subcontractors to complete this

work could present a bottleneck to construction, though less so than for a brick and mortar facility.

Demand fluctuations. The cyclical nature of the cattle industry is likely to drive significant variations in producer demand for meat processing services. Regional drought conditions or other market factors that result in a reduction in beef supply would pose a risk to the facility's ability to reach and maintain full processing capacity. Successful meat processing businesses are well capitalized to weather the storms when market downturns occur (as they inevitably do), both through equity of its investor and strong relationships with lenders. Demand fluctuations can be further mitigated through strong marketing and excellent communication with producers.

Waste management. Management of waste, including wastewater as well as carcass trimmings, offal, and blood, is a daunting task for any meat processing facility and presents financial, permitting, and regulatory risks if not adequately addressed.

A beef processing plant will require approximately 300-450 gallons of potable water per animal carcass per day and will generate that approximate amount in waste water[25]. Therefore, wastewater generation for 20 head per week would be 6,000 to 9,000 gallons. Siting the facility on city-owned property adjacent to its municipal wastewater treatment facility will help to mitigate the challenges and risks of wastewater management, and further discussions are needed with city staff and engineers in the planning phase of both facilities to understand and plan for management of wastewater, measured in pH, TSS (Total Suspended Solids), BOD (Biological Oxygen Demand), and FOG (Fats, Oils and Greases)[26].

Disposal of offal and butcher waste is becoming increasingly difficult for meat processors as renderers close down. Currently the nearest rendering option to Alturas is Reno Rendering, a 170-mile drive charging $1,200 per weekly load for pick up and disposal. Some landfills can accept blood and offal, but Alturas' landfill currently does not. The nearest viable landfills to Alturas may be Klamath Falls Landfill in Klamath Falls, Oregon (200 miles round trip) or Rogue Dry Creek Landfill in White City, Oregon (330 miles round trip).

Composting of livestock carcasses and mammalian tissue is a typical method for solid waste disposal in 42 states, but the practice is currently illegal in California. University of California Cooperative Extension and California State University, Chico are conducting research on composting in California and coordinating with regulatory authorities on development of an additional option for livestock carcass management. These efforts are currently limited to on-site composting of no more than 100 cubic yards of livestock carcasses; however legislation in progress, once enacted, could serve as an opening for the meat processing industry to pursue legislative action as well.

[25] Business Plan for a New Small USDA Inspected Meat Processing Plant to Serve Local Livestock Producers: https://www.nichemeatprocessing.org/wp-content/uploads/2019/07/Generic-meat-plant-business-plan.pdf
[26] https://www.nichemeatprocessing.org/wastewater-treatment-for-meat-processors

An entrepreneurial operator could reduce these wastes and add additional revenue streams through innovative processing and marketing of byproducts such as cured hides; offal for pet treats; blood and paunch for fertilizer; etc.

Food Safety Risks: Food safety and related product recalls are risks to any meat processor. Working closely with Friesla's experienced USDA Hazard Analysis Critical Control Point (HACCP) consultant in the development of a HACCP plan specific to the facility will help to mitigate these risks. Routine assessment and updating of the plan as needed, together with rigorous ongoing training and monitoring on the HACCP plan with all processing staff, will support food safety.

Availability of Operating Labor. As discussed in the Personnel Needs and Costs (Section VI – Management Analysis), all meat processors – and all industries in small rural areas for that matter – struggle to find capable and willing labor. The lack of qualified labor is a major risk to a meat processing plant. Most USDA citations that result in suspensions or revocations of USDA inspection arise from mistakes made by poorly trained or unskilled workers. Furthermore, producers expect and demand a high caliber of service and quality; when these expectations are unmet, the facility's reputation and demand among local livestock producers can suffer irreparable harm. These risks might be addressed by offering competitive wages and benefits, and appropriate ongoing training.

Summary. These identified risks can likely be mitigated to varying degrees, and should be appropriately considered by any potential operator or investor. ■

SECTION X. – FINANCIAL PROJECTIONS

Through an evaluation of key market trends; a market demand survey consisting of in-depth one-on-one potential user interviews; representations made by a leading manufacturer of mobile and modular meat processing facilities for independent operators; interviews with current meat processors in Northern California and Northern Nevada; and additional outside research, financial statements have been prepared on a month-by-month basis for the first seven years of the venture based on specific assumptions, summarized below. The full financial projections and assumptions are included in Appendix A of this document. Below is a brief and summarized version of both documents.

General:
Morrison was engaged by Superior California Economic Development to conduct a feasibility study regarding the potential establishment of a meat processing facility in Modoc County. A 2022 United States Department of Agriculture (USDA) Rural Business Development Grant supported this work. Morrison's engagement and the USDA grant application followed several years of legwork by a dedicated committee of local stakeholders who have met regularly together and with livestock producers, independent meat processors, and meat processing equipment vendors to form the foundation of this report.

As outlined in the initial grant proposal application submitted to USDA and the subsequent scope of work, the goal of the venture was to: assess the landscape of the current and projected meat processing market in the region; conduct a market interest survey to assess the demand for local meat processing services; identify operational requirements for a specialty meat processing facility; assess the core elements of infrastructure and equipment for the facility; and prepare financial projections for a potential operation.

Morrison met with the local stakeholder committee to assess needs and priorities; conducted personal interviews with independent meat processing businesses in the region; deployed a qualitative market interest survey conducted via telephone of potential processing facility customers; and conducted independent research and assessed third party information related to meat processing facilities. These projections reflect the results of the above research.

The organizational structure for this venture has not yet been determined. Accordingly, income taxes are not reflected in these projections for the venture.

All transactions are in US dollars (USD). All projections are in nominal dollars (not inflation adjusted) and not tax adjusted unless otherwise noted. These projections are presented on an annual basis with the start date beginning once the meat processing facility becomes operational.

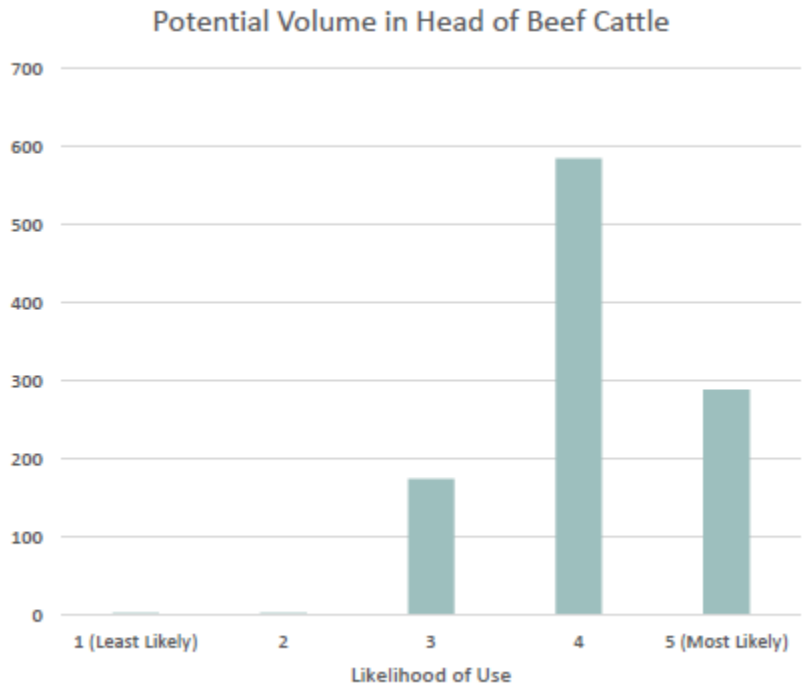
The assumptions and support for each line item is documented below.

Summary Projected Income Statement assumptions:
The Summary Projected Income Statements summarize the "Detailed Projected Financial Statements" in a standard presentation format that simply summarizes the information from the Detailed Projected Income Statements. There are no inputs on this worksheet.

Detailed Projected Income Statement assumptions:
Friesla discussed and provided inputs to assist with these projections. Specifically, this included cost estimates and information related to regional slaughter fees, estimated hanging and finished goods weights, labor requirements, packaging, electricity usage, repairs and maintenance, and Modular/Mobile facility depreciation. Friesla reviewed the Assumptions section of this feasibility study into which these cost estimates and information were integrated and believe these assumptions appear to be reasonable and in line with local/regional industry averages.

The Detailed Projected Income Statements show revenue and expense projections detailed by account. The support for the assumptions for each line are as follows:

- Volume:
  - *Head (Cattle):* Represents the number of cattle expected to be processed annually once construction is completed and equipment is placed in service. These volumes are based on anticipated demand from the market interest survey results (See Feasibility Study Section IV – Market Analysis). Out of the 27 respondents (Modoc County has 203 farms raising cattle and calves), 12 respondents rated their likelihood of using a USDA-inspected meat processing facility in Modoc County from 3-5, the combined potential volume of cattle was 1,049 head annually:



Annual volume is conservatively anticipated to ramp up to 1,049 head per year by year 3. Annual volume over the projection period is presented below:

Volume (units)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Head (Cattle)	800	900	1,049	1,101	1,156	1,214	1,275

Note: The above volume estimates include annual growth of 5% starting in Year 4, after the 1,049 estimate based on the surveys is reached in Year 3. Additionally, there were other animal species included in the market interest survey with a total potential volume of 220 lambs, 60 hogs, and 36 goats that would potentially utilize the meat processing facility. These were not included in these projections as they would not have a material impact on the feasibility of this project. Furthermore, there is a potential market for seasonal wild game processing that could potentially fill a local/regional need and also support full asset utilization of the facility when the operators are not processing at full capacity. The proposed Friesla System supports the harvest and processing capacity up to 75 head of beef (or equivalent species) per week. The above annual volumes are based solely on the market interest survey of 1,049 head per year, averaging out to 20 head per week leading to a volume/capacity utilization of less than one-third (~26%). The projected income statement will differ significantly as the Modoc County operators achieve closer to full utilization (whether through more beef, multi-species processing, wild game processing, etc.). See Section V – Operational Analysis of the Feasibility Study.

- *Lbs. (hanging weight):* Represents the estimated the weighted-average hanging weight (meat and bones) at 750 lbs. per head that will be processed. According to the National Daily Cattle and Beef Summary, dated February 13, 2024, USDA Livestock, Poultry & Grain Mkt New

(https://usda.library.cornell.edu/concern/publications/p2676v556?locale=en), the average live weights for beef production was 1,388 lbs. The average hanging weight for beef is 60% of the live weight, resulting in an average hanging weight of 832 pounds. As such, 750 lbs. appears a reasonable estimate.

Morrison consulted with independent meat processing system manufacturer Friesla to determine reasonable sales and expense assumptions documented below. Friesla's mission is to help independent meat producers and processors to take back control of local meat processing by designing and building USDA-compliant Mobile and Modular Meat Processing Systems. See Reasonableness Letter received from Friesla (Appendix C).

- Sales:
  - *Slaughter Fee:* According to Friesla, regional (CA/OR) processors are currently charging slaughter fees ranging from $200 - $265 per head of beef based on their experience. The Slaughter Fee of $220 per head represents a conservative estimate for purposes of these projections. Sales price is anticipated to increase by 5% per year throughout the projection period.
  - *Cutting & Wrapping:* The price of $1.54 per pound of hanging weight (i.e., meat and bones) for cutting the meat and wrapping it is based upon results from the market interest survey. Out of the 27 respondents, 7 respondents noted that they currently pay on average of $1.49 per pound and were willing to pay up to $2 per pound for cutting & wrapping services. Furthermore, these prices do not include a premium for USDA Inspection. Based on the above, the cutting and wrapping fee appears reasonable. An annual sales price increase of 5% per year throughout the projection period is assumed.
  - *Spoilage:* Representing 1% of gross sales is estimated for the losses incurred during the processing of the meat.

- Cost of goods sold:
  - *Wages and Salaries:* Represents labor directly involved in the production of the meat processing and cold storage facilities and are estimated as follows:

Year	Head per Year	Facility Manager	Skilled Labor	Unskilled Labor	Total Employees
1	800 – 1,000	1	2	2	5
2	800 – 1,000	1	2	2	5
3-7	1,000 +	1	2	3	6

Note: Wages are calculated based on the number of employees above and adjusted for inflation of 3% per year as described below. Total number of employees needed will depend on the Friesla System's final size/scope, employee skill level/experience, overall team operational efficiency, and the scope of cutting and packaging services. Total FTE will be discussed during Friesla's full Project Development Phase (PDP), the first phase in Friesla's ecosystem of services to meat processing clients in which they work with the facility's ownership and management to detail the facility's specific needs prior to technical design

and manufacturing. Ultimate staffing needs will be decided by ownership. See Friesla's Reasonableness Letter in Appendix C.

The hourly wages estimated are $50/hr for the Facility Manager, $30/hr for skilled Labor and $18/hr for unskilled labor based on local market wages (www.glassdoor.com). Annual increases of 3% per year is assumed to account for inflation.

- *Fringe Benefits:* Estimated at 22% of hourly rate based on statistics from the U.S. Bureau of Labor Statistics (https://www.bls.gov/news.release/ecec.nr0.htm) As such this percentage represents a conservative estimate.
- *Packaging:* Represents the cost of packaging materials such as boxes, trays, shrink wrap, etc., estimated at $0.05 per lbs. of hanging weight and is based on Friesla's experience and in-line with local/regional industry averages. Costs are anticipated to increase by 3% per year to account for inflation.
- *Disposal:* The cost of disposing non-edible meat by-products is estimated at $50 per head and is based on local/regional costs for disposing offal/byproducts. Reno Rendering, the closest rendering option, provided a rough estimate of $1,200 per load with one load per week totaling $62,400 based on volumes at full capacity. As such, disposal cost appears reasonable. Costs are anticipated to increase by 3% per year to account for inflation.

- Operating Expenses:

The following operating expense assumptions are based on estimated expenses provided by Friesla, an independent provider of USDA compliant Meat Processing Systems to farmers and ranchers across America and updated based on local/regional industry averages. These amounts are estimates only and will be further refined through based on the Systems design/size, volume throughput, and Modoc County specific utility rates resulting from the Project Development Phase in consultation with the facility's owner/operator.

Note: the below expenses (calculated at $/lbs. hanging weight and fixed costs noted below) are based on Morrison's experience with similar meat-processing clients and adjusted for local considerations noted below. Ultimate expenses should be considered against the eventual Friesla System design/size, volume throughput, and Modoc County-specific utility rates, which will be discussed during the PDP. Annual increases of 3% per year is assumed to account for inflation.

- *Electricity*: $57,255 per year. According to Friesla, the 4-Module PS System used in these projections requires 3-phase, 1200 Amp service and estimate electricity usage of 12,000-14,000 kWh per month at maximum demand. Morrison obtained Surprise Valley Electrification Corp. Rates Change – Effective February 1, 2024. Schedule A – Industrial rates are monthly minimum of $250 per transformers 500 KVA or above, with an energy charge (per KWh) of $0.0945 and a demand charge of $6.25 per KW. Additionally, CA has a surcharge of $0.003 per KWh. Based on the above, monthly electrical expense is estimated at $4,771.25 per month, or $57,255 per year ($250 minimum + ($0.0945 * 14,000 KWh = $1,323) + ($6.25 * 505KW = $3,156.25) + ($0.003 * 14,000 KWh = $42) once full capacity is reached. Annual increases of 3% per year is assumed to account for inflation.

- *Water/Sewer/Garbage:* $0.014 / Lbs. – hanging weight. Morrison reviewed the Municipal Water and Wastewater Municipal Utility Billing for the City of Alturas. The monthly minimum basic rate for Commercial water/sewage $82.84 per month. Water rates include $46.59 monthly fee for 1,000 cubic feet (CF) plus $0.44 per 100 CF beyond 1,000 CF. Sewage rates are $36.25 plus $0.79 per 100 CF of water consumed. Assuming the monthly minimum rates and an estimated $1,000/month for garbage services, total monthly expenses are assumed at $12,000 per year once full capacity is reached, converted to $0.014 per lbs. – hanging weight. Costs are anticipated to increase by 3% per year to account for inflation. Actual costs should be considered against
- *Supplies:* $0.03 / Lbs. – hanging weight based on Morrison's experience with similar meat processing facilities. Costs are anticipated to increase by 3% per year to account for inflation.
- *Repairs and Maintenance:* $0.025 / Lbs. – hanging weight in Year's 1-3 and $0.05 / Lbs. – hanging weight in Year's 4-7 based on Morrison's experience with similar meat processing facilities. As new equipment will be installed, repairs and maintenance will be less in the first years in operations. Costs are anticipated to increase by 3% per year to account for inflation.
- *Insurance:* $60,000 per year (fixed) based on Morrison's experience with similar meat processing facilities. Costs are anticipated to increase by 3% per year to account for inflation.
- *Taxes and Fees:* $12,000 per year (fixed) based on Morrison's experience with similar meat processing facilities. Costs are anticipated to increase by 3% per year to account for inflation.
- *Interest Expense:* Interest Expense is based interest for a loan for 80% of the total construction costs totaling $5,040,000 with an annual interest rate of 8.5%. Interest rate is based off the WSJ Prime rate as of February 2024 (https://www.bankrate.com/rates/interest-rates/wall-street-prime-rate/) with a 10-year maturity.
- *Depreciation:* Friesla conducted a "mini-PDP" for this study based on known or estimated information to date. Each element of Friesla's system is customizable, and a full PDP in consultation with the facility's planned operator will be necessary to determine actual project needs and costs based upon the venture's business objectives. Based on the mini PDP, Friesla determined a ball park budget of $3.9M - $4.2M for a 4-unit Modular Harvest-to-Package Meat Processing System. Other construction costs to consider include site preparation (grading, electrical, potable water, waste management, architectural, engineering, zoning & permitting, contractual support, and final hookups of utilities) as well as determining necessary site infrastructure (office space, restrooms, dry storage, offal handling, livestock handling system, etc.). The building and equipment needs and costs as determined by this initial estimate are detailed at Section VII – Basis of Design of the Feasibility Study. As final costs have not yet been determined at this stage in the project, Morrison determined to use $4.2M for the cost of the Friesla modular system and $1,700,000 in construction costs and $400,000 for operating equipment (forklifts, pickup trucks, tanks, pressure washer, dump trailer, and misc. tools) as a placeholder based on Morrison's experience with similar meat processing facilities. These costs are placeholders only and will depend on finalization of the full PDP. Total

Estimated Construction and Equipment Costs are $6,300,000. Depreciation expense represents depreciation of a new meat processing facility costing $5,900,000 with a total estimated useful life of 25 years as well as new operational equipment costing $400,000 with a useful life estimated at 7 years.

- Sales General and Admin: As a new operation, the venture will require an administrative structure and sales force. Morrison determined to use 20% of annual sales to represent sales, general, and administrative costs. Independent statistics from Risk Management Association (RMA) Statistics for NAICS code "311611 – Animal (except Poultry) Slaughtering" was used in determining the industry average SG&A expenses. This comprises establishments primarily engaged in slaughtering animals (except poultry and small game). The statistics include 18 companies within the $2M - $10M range of annual sales. Based on the above, 20% of sales appears to be a reasonable estimate for SG&A expenses for the purpose of these projections.

Projected Balance Sheets and Cash Flows:
The projected balance sheets and cash flows reflect the estimated impact of activities related to this new operation. Key assumptions include:

- Cash is net cash earned by the venture. The cash balance at any point reflects the cumulative incremental cash benefit of the venture over time (distributions not budgeted).
- Accounts receivable are based on an average of 30 days' sales outstanding, represented as ~8.33% of annual sales), based on a conservative estimate.
- Inventory projections assume 100% of each month's inventory needs (represented as ~8.33% of annual packaging costs) will be acquired the previous month. Inventory consists of packaging, wrapping, and other needed inputs for processing.
- Property, Plant & equipment (net): Friesla conducted a "mini-PDP" for this study based on known or estimated information to date. Each element of Friesla's system is customizable, and a full PDP in consultation with the facility's planned operator will be necessary to determine actual project needs and costs based upon the venture's business objectives. Based on the mini PDP, Friesla determined a ball park budget of $3.9M - $4.2M for a 4-unit Modular Harvest-to-Package Meat Processing System. Other construction costs to consider include site preparation (grading, electrical, potable water, waste management, architectural, engineering, zoning & permitting, contractual support, and final hookups of utilities) as well as determining necessary site infrastructure (office space, restrooms, dry storage, offal handling, livestock handling system, etc.). The building and equipment needs and costs as determined by this initial estimate are detailed at Section VII – Basis of Design of the Feasibility Study. As final costs have not yet been determined at this stage in the project, Morrison determined to use $4.2M for the cost of the Friesla modular system and $1,700,000 in construction costs and $400,000 for operating equipment (forklifts, pickup trucks, tanks, pressure washer, dump trailer, and misc. tools) as a placeholder based on Morrison's experience with similar meat processing facilities. These costs are placeholders only and will depend on finalization of the full PDP. Total Estimated Construction and Equipment Costs are $6,300,000. Depreciation expense represents depreciation of a new meat processing facility costing $5,900,000 with a total estimated useful life of 25 years as well as new operational equipment costing $400,000 with a useful life estimated at 7 years. Land is assumed to be contributed at no cost by the City of Alturas as the most viable option for Site

Feasibility based on preliminary discussions (see Section V – Operational Analysis of the Feasibility Study. No formal offer or agreement by the City of Alturas has been proffered as of the writing of this feasibility study.)

- Accounts payable: Assumes invoices will be paid in 30 days, represented as ~8.33% of annual expenses.
- Line of Credit: Represent the internal short-term funding of operational cash flow needs during the ramp-up phase of this venture, to be provided by ownership.
- Current maturities of LT debt: Incremental debt will be incurred through a financing arrangement for the project costs relating to this venture. This represents the portion of debt that will be due in the next twelve months. See further details under *Interest expense* and above, *Property, Plant and Equipment* above, and *Long term debt* below.
- Long term debt: A $5,040,000 loan is assumed for 80% of the total project costs (6,300,000 * 80% = $5,040,000). This loan assumes an interest rate of 8.5% and a 10-year maturity. See further details under *Interest expense* and *Property, Plant, and Equipment* above
- Equity impact of venture represents the accumulated net contribution (income) from the venture. As noted above, cash distributions and income taxes are not estimated in these projections. Note that the cash balance at any point reflects the cumulative incremental cash benefit of the venture over time.
- Equity contributions: Represents projected estimated contributions of equity by ownership for the project costs associated with this venture. It assumed that 20% of total project costs (or $1,260,000) will be contributed by ownership. ■

SECTION XI. – CONCLUSIONS

The purpose of a feasibility assessment is to determine the general viability of a proposed approach to a project. In the actual execution of a plan, external circumstances, internal decisions, and other factors may dictate departures from the original plan. Further, it is not possible to consider every possible cost or circumstance, internal or external. Accordingly, we make no representation as to the outcome of any action any party may take based on this Assessment.

With these limitations, we have concluded that there is sufficient regional demand for the services a meat processing facility in Modoc County could provide and that the general approaches to the venture, business organization, operation, management, capital needs, and risks discussed in this assessment are technically feasible. At this time no individual party or organization has stepped forward to lead and implement such a venture, therefore the assessments and conclusions discussed in this report are generic in nature. Should this venture align with the goals of their business, and if they had access to the needed capital (including state and federal grants or incentives) to allow for construction and operational expenses, a private operator may be able to operate a meat processing facility in Modoc County and potentially achieve financial viability. ■

Modoc County Meat Processing Feasibility Study

Appendix A: Financial Projections

Superior California Economic Development
Modoc County Meat Processing Feasibility Study

Financial Projection Assumptions

General:

Morrison was engaged by Superior California Economic Development to conduct a feasibility study regarding the potential establishment of a meat processing facility in Modoc County. A 2022 United States Department of Agriculture (USDA) Rural Business Development Grant supported this work. Morrison's engagement and the USDA grant application followed several years of legwork by a dedicated committee of local stakeholders who have met regularly together and with livestock producers, independent meat processors, and meat processing equipment vendors to form the foundation of this report.

As outlined in the initial grant proposal application submitted to USDA and the subsequent scope of work, the goal of the venture was to: assess the landscape of the current and projected meat processing market in the region; conduct a market interest survey to assess the demand for local meat processing services; identify operational requirements for a specialty meat processing facility; assess the core elements of infrastructure and equipment for the facility; and prepare financial projections for a potential operation.

Morrison met with the local stakeholder committee to assess needs and priorities; conducted personal interviews with independent meat processing businesses in the region; deployed a qualitative market interest survey conducted via telephone of potential processing facility customers; and conducted independent research and assessed third party information related to meat processing facilities. These projections reflect the results of the above research.

The organizational structure for this venture has not yet been determined. Accordingly, income taxes are not reflected in these projections for the venture.

All transactions are in US dollars (USD). All projections are in nominal dollars (not inflation adjusted) and not tax adjusted unless otherwise noted. These projections are presented on an annual basis with the start date beginning once the meat processing facility becomes operational.

The assumptions and support for each line item is documented below.

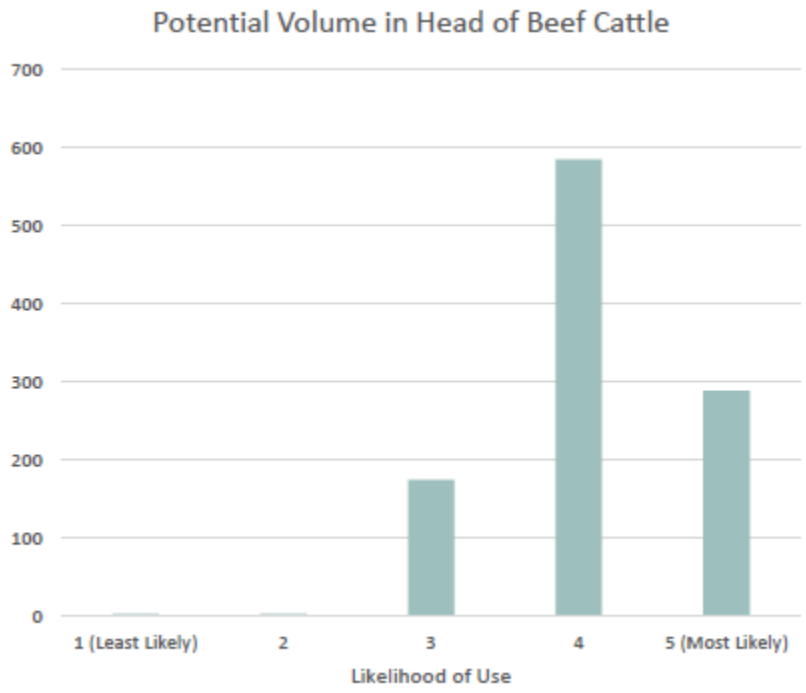
Summary Projected Income Statement assumptions:

The Summary Projected Income Statements summarize the "Detailed Projected Financial Statements" in a standard presentation format that simply summarizes the information from the Detailed Projected Income Statements. There are no inputs on this worksheet.

Detailed Projected Income Statement assumptions:
Friesla discussed and provided inputs to assist with these projections. Specifically, this included cost estimates and information related to regional slaughter fees, estimated hanging and finished goods weights, labor requirements, packaging, electricity usage, repairs and maintenance, and Modular/Mobile facility depreciation. Friesla reviewed the Assumptions section of this feasibility study into which these cost estimates and information were integrated and believe these assumptions appear to be reasonable and in line with local/regional industry averages.

The Detailed Projected Income Statements show revenue and expense projections detailed by account. The support for the assumptions for each line are as follows:

- Volume:
  - *Head (Cattle):* Represents the number of cattle expected to be processed annually once construction is completed and equipment is placed in service. These volumes are based on anticipated demand from the market interest survey results (See Feasibility Study Section IV – Market Analysis). Out of the 27 respondents (Modoc County has 203 farms raising cattle and calves), 12 respondents rated their likelihood of using a USDA-inspected meat processing facility in Modoc County from 3-5, the combined potential volume of cattle was 1,049 head annually:



Annual volume is conservatively anticipated to ramp up to 1,049 head per year by year 3. Annual volume over the projection period is presented below:

Volume (units)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Head (Cattle)	800	900	1,049	1,101	1,156	1,214	1,275

Note: The above volume estimates include annual growth of 5% starting in Year 4, after the 1,049 estimate based on the surveys is reached in Year 3. Additionally, there were other animal species included in the market interest survey with a total potential volume of 220 lambs, 60 hogs, and 36 goats that would potentially utilize the meat processing facility. These were not included in these projections as they would not have a material impact on the feasibility of this project. Furthermore, there is a potential market for seasonal wild game processing that could potentially fill a local/regional need and also support full asset utilization of the facility when the operators are not processing at full capacity. The proposed Friesla System supports the harvest and processing capacity up to 75 head of beef (or equivalent species) per week. The above annual volumes are based solely on the market interest survey of 1,049 head per year, averaging out to 20 head per week leading to a volume/capacity utilization of less than one-third (~26%). The projected income statement will differ significantly as the Modoc County operators achieve closer to full utilization (whether through more beef, multi-species processing, wild game processing, etc.). See Section V – Operational Analysis of the Feasibility Study.

- *Lbs. (hanging weight):* Represents the estimated the weighted-average hanging weight (meat and bones) at 750 lbs. per head that will be processed. According to the National Daily Cattle and Beef Summary, dated February 13, 2024, USDA Livestock, Poultry & Grain Mkt New (https://usda.library.cornell.edu/concern/publications/p2676v556?locale=en), the average live weights for beef production was 1,388 lbs. The average hanging weight for beef is 60% of the live weight, resulting in an average hanging weight of 832 pounds. As such, 750 lbs. appears a reasonable estimate.

Morrison consulted with independent meat processing system manufacturer Friesla to determine reasonable sales and expense assumptions documented below. Friesla's mission is to help independent meat producers and processors to take back control of local meat processing by designing and building USDA-compliant Mobile and Modular Meat Processing Systems. See Reasonableness Letter received from Friesla.

- Sales:
  - *Slaughter Fee:* According to Friesla, regional (CA/OR) processors are currently charging slaughter fees ranging from $200 - $265 per head of beef based on their experience. The Slaughter Fee of $220 per head represents a conservative estimate for purposes of these projections. Sales price is anticipated to increase by 5% per year throughout the projection period.
  - *Cutting & Wrapping:* The price of $1.54 per pound of hanging weight (i.e., meat and bones) for cutting the meat and wrapping it is based upon results from the market interest survey. Out of the 27 respondents, 7 respondents noted that they currently pay on average of $1.49 per pound and were willing to pay up to $2 per pound for cutting & wrapping services. Furthermore, these prices do not include a premium for USDA Inspection. Based on the above, the cutting and wrapping fee appears reasonable. An annual sales price increase of 5% per year throughout the projection period is assumed.
  - *Spoilage:* Representing 1% of gross sales is estimated for the losses incurred during the processing of the meat.

- Cost of goods sold:

– *Wages and Salaries:* Represents labor directly involved in the production of the meat processing and cold storage facilities and are estimated as follows:

Year	Head per Year	Facility Manager	Skilled Labor	Unskilled Labor	Total Employees
1	800 – 1,000	1	2	2	5
2	800 – 1,000	1	2	2	5
3-7	1,000 +	1	2	3	6

Note: Wages are calculated based on the number of employees above and adjusted for inflation of 3% per year as described below. Total number of employees needed will depend on the Friesla System's final size/scope, employee skill level/experience, overall team operational efficiency, and the scope of cutting and packaging services. Total FTE will be discussed during Friesla's full Project Development Phase (PDP), the first phase in Friesla's ecosystem of services to meat processing clients in which they work with the facility's ownership and management to detail the facility's specific needs prior to technical design and manufacturing. Ultimate staffing needs will be decided by ownership. See Friesla's Reasonableness Letter.

The hourly wages estimated are $50/hr for the Facility Manager, $30/hr for skilled Labor and $18/hr for unskilled labor based on local market wages (www.glassdoor.com). Annual increases of 3% per year is assumed to account for inflation.

– *Fringe Benefits:* Estimated at 22% of hourly rate based on statistics from the U.S. Bureau of Labor Statistics (https://www.bls.gov/news.release/ecec.nr0.htm) As such this percentage represents a conservative estimate.
– *Packaging:* Represents the cost of packaging materials such as boxes, trays, shrink wrap, etc., estimated at $0.05 per lbs. of hanging weight and is based on Friesla's experience and in-line with local/regional industry averages. Costs are anticipated to increase by 3% per year to account for inflation.
– *Disposal:* The cost of disposing non-edible meat by-products is estimated at $50 per head and is based on local/regional costs for disposing offal/byproducts. Reno Rendering, the closest rendering option, provided a rough estimate of $1,200 per load with one load per week totaling $62,400 based on volumes at full capacity. As such, disposal cost appears reasonable. Costs are anticipated to increase by 3% per year to account for inflation.

- Operating Expenses:

The following operating expense assumptions are based on estimated expenses provided by Friesla, an independent provider of USDA compliant Meat Processing Systems to farmers and ranchers across America and updated based on local/regional industry averages. These amounts are estimates only and will be further refined through based on the Systems design/size, volume throughput, and Modoc County specific utility rates resulting from the Project Development Phase in consultation with the facility's owner/operator.

Note: the below expenses (calculated at $/lbs. hanging weight and fixed costs noted below) are based on Morrison's experience with similar meat-processing clients and adjusted for local considerations noted below. Ultimate expenses should be considered against the eventual Freisla System design/size, volume throughput, and Modoc County-specific utility

rates, which will be discussed during the PDP. Annual increases of 3% per year is assumed to account for inflation.

- *Electricity*: $57,255 per year. According to Friesla, the 4-Module PS System used in these projections requires 3-phase, 1200 Amp service and estimate electricity usage of 12,000-14,000 kWh per month at maximum demand. Morrison obtained Surprise Valley Electrification Corp. Rates Change – Effective February 1, 2024. Schedule A – Industrial rates are monthly minimum of $250 per transformers 500 KVA or above, with an energy charge (per KWh) of $0.0945 and a demand charge of $6.25 per KW. Additionally, CA has a surcharge of $0.003 per KWh. Based on the above, monthly electrical expense is estimated at $4,771.25 per month, or $57,255 per year ($250 minimum + ($0.0945 * 14,000 KWh = $1,323) + ($6.25 * 505KW = $3,156.25) + ($0.003 * 14,000 KWh = $42) once full capacity is reached. Annual increases of 3% per year is assumed to account for inflation.
- *Water/Sewer/Garbage:* $0.014 / Lbs. – hanging weight. Morrison reviewed the Municipal Water and Wastewater Municipal Utility Billing for the City of Alturas. The monthly minimum basic rate for Commercial water/sewage $82.84 per month. Water rates include $46.59 monthly fee for 1,000 cubic feet (CF) plus $0.44 per 100 CF beyond 1,000 CF. Sewage rates are $36.25 plus $0.79 per 100 CF of water consumed. Assuming the monthly minimum rates and an estimated $1,000/month for garbage services, total monthly expenses are assumed at $12,000 per year once full capacity is reached, converted to $0.014 per lbs. – hanging weight. Costs are anticipated to increase by 3% per year to account for inflation. Actual costs should be considered against
- *Supplies:* $0.03 / Lbs. – hanging weight based on Morrison's experience with similar meat processing facilities. Costs are anticipated to increase by 3% per year to account for inflation.
- *Repairs and Maintenance:* $0.025 / Lbs. – hanging weight in Year's 1-3 and $0.05 / Lbs. – hanging weight in Year's 4-7 based on Morrison's experience with similar meat processing facilities. As new equipment will be installed, repairs and maintenance will be less in the first years in operations. Costs are anticipated to increase by 3% per year to account for inflation.
- *Insurance:* $60,000 per year (fixed) based on Morrison's experience with similar meat processing facilities. Costs are anticipated to increase by 3% per year to account for inflation.
- *Taxes and Fees:* $12,000 per year (fixed) based on Morrison's experience with similar meat processing facilities. Costs are anticipated to increase by 3% per year to account for inflation.
- *Interest Expense:* Interest Expense is based interest for a loan for 80% of the total construction costs totaling $5,040,000 with an annual interest rate of 8.5%. Interest rate is based off the WSJ Prime rate as of February 2024 (https://www.bankrate.com/rates/interest-rates/wall-street-prime-rate/) with a 10-year maturity.
- *Depreciation:* Friesla conducted a "mini-PDP" for this study based on known or estimated information to date. Each element of Friesla's system is customizable, and a full PDP in consultation with the facility's planned operator will be necessary to determine actual project needs and costs based upon the venture's business objectives.

Based on the mini PDP, Friesla determined a ball park budget of $3.9M - $4.2M for a 4-unit Modular Harvest-to-Package Meat Processing System. Other construction costs to consider include site preparation (grading, electrical, potable water, waste management, architectural, engineering, zoning & permitting, contractual support, and final hookups of utilities) as well as determining necessary site infrastructure (office space, restrooms, dry storage, offal handling, livestock handling system, etc.). The building and equipment needs and costs as determined by this initial estimate are detailed at Section VII – Basis of Design of the Feasibility Study. As final costs have not yet been determined at this stage in the project, Morrison determined to use $4.2M for the cost of the Friesla modular system and $1,700,000 in construction costs and $400,000 for operating equipment (forklifts, pickup trucks, tanks, pressure washer, dump trailer, and misc. tools) as a placeholder based on Morrison's experience with similar meat processing facilities. These costs are placeholders only and will depend on finalization of the full PDP. Total Estimated Construction and Equipment Costs are $6,300,000. Depreciation expense represents depreciation of a new meat processing facility costing $5,900,000 with a total estimated useful life of 25 years as well as new operational equipment costing $400,000 with a useful life estimated at 7 years.

- Sales General and Admin: As a new operation, the venture will require an administrative structure and sales force. Morrison determined to use 20% of annual sales to represent sales, general, and administrative costs. Independent statistics from Risk Management Association (RMA) Statistics for NAICS code "311611 – Animal (except Poultry) Slaughtering" was used in determining the industry average SG&A expenses. This comprises establishments primarily engaged in slaughtering animals (except poultry and small game). The statistics include 18 companies within the $2M - $10M range of annual sales. Based on the above, 20% of sales appears to be a reasonable estimate for SG&A expenses for the purpose of these projections.

Projected Balance Sheets and Cash Flows:
The projected balance sheets and cash flows reflect the estimated impact of activities related to this new operation. Key assumptions include:

- Cash is net cash earned by the venture. The cash balance at any point reflects the cumulative incremental cash benefit of the venture over time (distributions not budgeted).
- Accounts receivable are based on an average of 30 days' sales outstanding, represented as ~8.33% of annual sales), based on a conservative estimate.
- Inventory projections assume 100% of each month's inventory needs (represented as ~8.33% of annual packaging costs) will be acquired the previous month. Inventory consists of packaging, wrapping, and other needed inputs for processing.
- Property, Plant & equipment (net): Friesla conducted a "mini-PDP" for this study based on known or estimated information to date. Each element of Friesla's system is customizable, and a full PDP in consultation with the facility's planned operator will be necessary to determine actual project needs and costs based upon the venture's business objectives. Based on the mini PDP, Friesla determined a ball park budget of $3.9M - $4.2M for a 4-unit Modular Harvest-to-Package Meat Processing System. Other construction costs to consider include site preparation (grading, electrical, potable water, waste management, architectural, engineering, zoning & permitting, contractual support, and final hookups of utilities) as well as determining necessary site infrastructure (office space, restrooms, dry storage, offal

handling, livestock handling system, etc.). The building and equipment needs and costs as determined by this initial estimate are detailed at Section VII – Basis of Design of the Feasibility Study. As final costs have not yet been determined at this stage in the project, Morrison determined to use $4.2M for the cost of the Friesla modular system and $1,700,000 in construction costs and $400,000 for operating equipment (forklifts, pickup trucks, tanks, pressure washer, dump trailer, and misc. tools) as a placeholder based on Morrison's experience with similar meat processing facilities. These costs are placeholders only and will depend on finalization of the full PDP. Total Estimated Construction and Equipment Costs are $6,300,000. Depreciation expense represents depreciation of a new meat processing facility costing $5,900,000 with a total estimated useful life of 25 years as well as new operational equipment costing $400,000 with a useful life estimated at 7 years. Land is assumed to be contributed at no cost by the City of Alturas as the most viable option for Site Feasibility based on preliminary discussions (see Section V – Operational Analysis of the Feasibility Study. No formal offer or agreement by the City of Alturas has been proffered as of the writing of this feasibility study.)

- Accounts payable: Assumes invoices will be paid in 30 days, represented as ~8.33% of annual expenses.
- Line of Credit: Represent the internal short-term funding of operational cash flow needs during the ramp-up phase of this venture, to be provided by ownership.
- Current maturities of LT debt: Incremental debt will be incurred through a financing arrangement for the project costs relating to this venture. This represents the portion of debt that will be due in the next twelve months. See further details under *Interest expense* and above, *Property, Plant and Equipment* above, and *Long term debt* below.
- Long term debt: A $5,040,000 loan is assumed for 80% of the total project costs (6,300,000 * 80% = $5,040,000). This loan assumes an interest rate of 8.5% and a 10-year maturity. See further details under *Interest expense* and *Property, Plant, and Equipment* above
- Equity impact of venture represents the accumulated net contribution (income) from the venture. As noted above, cash distributions and income taxes are not estimated in these projections. Note that the cash balance at any point reflects the cumulative incremental cash benefit of the venture over time.
- Equity contributions: Represents projected estimated contributions of equity by ownership for the project costs associated with this venture. It assumed that 20% of total project costs (or $1,260,000) will be financed by ownership.

Superior California Economic Development
Summary Projected Income Statements
(See "Financial Statement Assumptions" for explanations)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Head (Cattle)	800	900	1,049	1,101	1,156	1,214	1,275
Lbs. (hanging weight)	600,000	675,000	786,750	825,750	867,000	910,500	956,250
Sales	$ 1,100,000	$ 1,299,375	$ 1,590,218	$ 1,752,500	$ 1,932,048	$ 2,130,433	$ 2,349,355
Deductions	11,000	12,994	15,902	17,525	19,320	21,304	23,494
Net Sales	1,089,000	1,286,381	1,574,316	1,734,975	1,912,728	2,109,129	2,325,861
Cost of Goods Sold	423,990	447,269	521,618	543,092	565,729	589,593	614,747
Gross Margin	665,010	839,112	1,052,698	1,191,883	1,346,999	1,519,536	1,711,114
Operating Expenses	167,471	176,401	187,889	215,521	223,854	232,569	241,673
SALES GENERAL AND ADMIN.	220,000	259,875	318,044	350,500	386,410	426,087	469,871
Operating Income	277,539	402,836	546,765	625,862	736,735	860,880	999,570
Interest Expense	415,576	386,028	353,868	318,865	280,769	239,305	194,176
Depreciation	293,143	293,143	293,143	293,143	293,143	293,143	293,143
Net contribution	$ (431,180)	$ (276,335)	$ (100,246)	$ 13,854	$ 162,823	$ 328,432	$ 512,251

Superior California Economic Development
Detailed Projected Income Statements
(See "Financial Statement Assumptions" for explanations)

			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Volume (units)									
Head (Cattle)			800	900	1,049	1,101	1,156	1,214	1,275
Lbs. (Cattle hanging weight)			600,000	675,000	786,750	825,750	867,000	910,500	956,250
SALES									
Slaughter Fee	$ 220.00	per head	$ 176,000	$ 207,900	$ 254,435	$ 280,400	$ 309,128	$ 340,869	$ 375,897
Cutting & Wrapping	$ 1.54	per lbs.	924,000	1,091,475	1,335,783	1,472,100	1,622,920	1,789,564	1,973,458
Gross sales			1,100,000	1,299,375	1,590,218	1,752,500	1,932,048	2,130,433	2,349,355
Deductions:									
Spoilage	1%	% of sales	11,000	12,994	15,902	17,525	19,320	21,304	23,494
			11,000	12,994	15,902	17,525	19,320	21,304	23,494
Net sales			1,089,000	1,286,381	1,574,316	1,734,975	1,912,728	2,109,129	2,325,861
COST OF GOODS SOLD									
Wages and Salaries			280,320	288,730	334,056	344,078	354,400	365,032	375,983
Fringe Benefits			61,670	63,521	73,492	75,697	77,968	80,307	82,716
Packaging	$ 0.07	per hanging weight	42,000	48,668	58,426	63,162	68,307	73,886	79,927
Disposal	$ 50.00	per hanging weight	40,000	46,350	55,644	60,155	65,054	70,368	76,121
Total COGS			423,990	447,269	521,618	543,092	565,729	589,593	614,747
Gross margin			665,010	839,112	1,052,698	1,191,883	1,346,999	1,519,536	1,711,114
Operating Expenses									
Electricity	$	57,255.00	57,255	58,973	60,742	62,564	64,441	66,374	68,365
Water/Sewer/Garbage	$	0.014	8,157	9,452	11,347	12,267	13,266	14,350	15,523
Supplies	$	0.03	15,059	16,941	19,746	20,725	21,760	22,852	24,000
Repairs and Maintenance	$	0.03	15,000	16,875	19,669	41,288	43,350	45,525	47,813
Insurance		60,000	60,000	61,800	63,654	65,564	67,531	69,557	71,644
Taxes and Fees		12,000	12,000	12,360	12,731	13,113	13,506	13,911	14,328
Total Operating Expense			167,471	176,401	187,889	215,521	223,854	232,569	241,673
SALES GENERAL AND ADMIN.									
SG&A expenses	20%	% of Sales	220,000	259,875	318,044	350,500	386,410	426,087	469,871
Total General & Admin			220,000	259,875	318,044	350,500	386,410	426,087	469,871
Operating Income			277,539	402,836	546,765	625,862	736,735	860,880	999,570
Interest Expense			415,576	386,028	353,868	318,865	280,769	239,305	194,176
Depreciation			293,143	293,143	293,143	293,143	293,143	293,143	293,143
Net contribution			$ (431,180)	$ (276,335)	$ (100,246)	$ 13,854	$ 162,823	$ 328,432	$ 512,251

Superior California Economic Development
Projected Balance Sheets
(See "Financial Statement Assumptions" for explanations)

			Opening	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Assets										
Current Assets:										
Cash			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accounts Receivable	% of mo	8.33%		90,750	107,198	131,193	144,581	159,394	175,761	193,822
Inventory	% of next mo	8.33%	-	4,056	4,869	5,264	5,692	6,157	6,661	6,661
			-	94,806	112,067	136,457	150,273	165,551	182,422	200,483
Long term:										
Property, plant & equipment (net)			6,300,000	6,006,857	5,713,714	5,420,571	5,127,428	4,834,285	4,541,142	4,247,999
			6,300,000	6,006,857	5,713,714	5,420,571	5,127,428	4,834,285	4,541,142	4,247,999
Total Assets			$ 6,300,000	$ 6,101,663	$ 5,825,781	$ 5,557,028	$ 5,277,701	$ 4,999,836	$ 4,723,564	$ 4,448,482
Liabilities & Equity										
Current Liabilities:										
Accounts Payable	% COGS, SGA	8.33%		$ 67,622	$ 73,629	$ 85,629	$ 92,426	$ 97,999	$ 104,021	$ 110,524
Current Portion of LTD			334,290	363,838	395,998	431,000	469,097	510,561	555,690	604,808
Line of Credit				499,511	857,795	1,073,286	1,204,308	1,227,144	1,126,979	888,833
			334,290	930,971	1,327,422	1,589,915	1,765,831	1,835,704	1,786,690	1,604,165
Long Term Debt			4,705,710	4,341,872	3,945,874	3,514,874	3,045,777	2,535,216	1,979,526	1,374,718
Equity										
Equity impact of venture				(431,180)	(707,515)	(807,761)	(793,907)	(631,084)	(302,652)	209,599
Contributions			1,260,000	1,260,000	1,260,000	1,260,000	1,260,000	1,260,000	1,260,000	1,260,000
Distributions				-	-	-	-	-	-	-
			1,260,000	828,820	552,485	452,239	466,093	628,916	957,348	1,469,599
	1,260,000.0									
Total Liabilities & Equity			$ 6,300,000	$ 6,101,663	$ 5,825,781	$ 5,557,028	$ 5,277,701	$ 4,999,836	$ 4,723,564	$ 4,448,482

Superior California Economic Development
Projected Statements of Cash Flows
(See "Financial Statement Assumptions" for explanations)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Cash Flows from Operating Activities							
Net contribution	(431,180)	(276,335)	(100,246)	13,854	162,823	328,432	512,251
Depreciation	293,143	293,143	293,143	293,143	293,143	293,143	293,143
Decrease (increase) in accounts receivable	(90,750)	(16,448)	(23,995)	(13,388)	(14,813)	(16,367)	(18,061)
Decrease (increase) in inventory	(4,056)	(813)	(395)	(428)	(465)	(504)	-
Increase (decrease) in accounts payable	67,622	6,007	12,000	6,797	5,573	6,022	6,503
Net cash provided by (used in) operating activities	(165,221)	5,554	180,507	299,978	446,261	610,726	793,836
Cash Flows from Investing Activities							
Purchases of equipment	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
Cash Flows from Financing Activities							
Line of credit advance/(repayment)	499,511	358,284	215,491	131,022	22,836	(100,165)	(238,146)
Payments of LT debt	(334,290)	(363,838)	(395,998)	(431,000)	(469,097)	(510,561)	(555,690)
Proceeds of LT debt	-	-	-	-	-	-	-
Equity contributions	-	-	-	-	-	-	-
Equity distributions	-	-	-	-	-	-	-
	165,221	(5,554)	(180,507)	(299,978)	(446,261)	(610,726)	(793,836)

Modoc County Meat Processing Feasibility Study

Appendix B: Market Interest Survey Questions

Superior California Economic Development
Market Interest/Demand for Meat Processing in Modoc County
Survey to Prospective Users

Name	
Company	
Title	
Where Company Is Located (nearest city/town)	
What types of livestock and crops do you grow, handle, or process?	
Do you currently utilize/need meat processing services?	
1. Do you currently utilize/need <u>slaughter</u> services?	
Is your current slaughter service USDA-Inspected, CA/State-Inspected, or Custom Exempt?	
How much by head, weight, and species are you currently slaughtering?	
What is the seasonality of your slaughter needs?	
Where are you currently accessing slaughter services?	
What is the price/terms of your current slaughter arrangement?	
What price would you be willing to pay if local?	
If you had a local slaughter option, would you expect your volume to increase, decrease, or stay the same?	
How long are you - or would you want to - age the carcasses?	
How much do you currently pay to hang/age carcasses?	
2. Do you currently utilize/need <u>Cut/Wrap</u> services?	
Is your current cut/wrap service USDA-Inspected, CA/State-Inspected, or Custom Exempt?	
How much meat by volume are you currently cut/wrapping?	
What is the seasonality of your cut/wrap needs?	
Where are you currently accessing cut/wrap services?	
What is the price/terms of your current cut/wrap arrangement?	
What price would you be willing to pay if local?	
If you had a local cut/wrap option, would you expect your volume to increase, decrease, or stay the same?	
3. Do you currently utilize/need <u>value/added (or ready to eat) processing</u> services? Please describe.	
How much meat by volume are you currently selling as value-added (or ready to eat)?	
Is there any seasonality to your value-added (or ready to eat) needs?	
Where are you currently accessing value-added (or ready to eat) processing?	
What is the price/terms of your current value-added (or ready to eat) processing arrangement?	
What price would you be willing to pay if local?	
If you had a local value-added (or ready to eat) processing option, would you expect your volume to increase, decrease, or stay the same?	
4. Do you currently utilize/need <u>cold storage/locker</u> services?	
How much meat by volume are you currently storing?	
Is there any seasonality to your cold storage needs?	
Where are you currently accessing cold storage?	
What is the price/terms of your current cold storage arrangement?	
What price would you be willing to pay if local?	

If you had a local cold storage option, would you expect your volume to increase, decrease, or stay the same?	
How often does your inventory in cold storage turnover? How often in six months? A year?	
5. If you answered Yes to any of these questions, do you expect that those needs would expand in the next 3 to 5 years? By how much?	
6. How are you currently marketing these meat products? (Who is buying)	
7. How would your current marketing change or expand if you had a local processing option?	
8. If you had local processing capacity, would you expand your herd? If so, by how much annually?	

7. If no: How likely would it be in the next three to five years that you would need USDA-inspected meat processing services?	
8. If likely at all: What volumes might you expect for the following services?	
8.a. Slaughter	
8.b. Cut/Wrap	
8.c. Value-added processing	
8.d. Cold Storage	
9. What seasonality would you expect for the services you might need?	
10. Do you foresee any major changes to business operations that would impact your ongoing need for meat processing (such as selling, closing, downsizing, or relocating out of the area?)	
What model of meat processing operation would you be likely to utilize?	
Brick and Mortar?	
Modular? e.g. fixed structures that can be arranged to meet the needs of the operation	
Mobile? e.g. trailers	
All of the above?	
None of the above?	
What ownership and management model would you be likely to utilize?	
Cooperative in which you are a member?	
If yes, how much would you be willing to consider investing upfront? (Less than $20K; $20-$50K; $50-100K; More than $100K)	
Cooperative in which you are <u>not</u> a member?	
Private ownership in which you are an investor?	
Private ownership in which you are <u>not</u> an investor?	
While this feasibility study will not address the feasibility of various marketing models, do you foresee a need for a cooperative marketing model?	
Are there any special considerations to your business and/or your products that you would need a meat processing facility to accommodate?	
Do you plan to need processing for any organic certified meats?	
Do you plan to need processing for any kosher or halal-certified meats?	
If you currently are using meat processing off-site, and a new company could match the price of your current provider, what other factors would impact your willingness to move your business?	
Does meat processing availability negatively affect your ability to grow your business?	
On a scale of 1-5, with 5 being the most likely, how likely would you be to use a USDA-Inspected Meat Processing Facility in Modoc County?	
Do you have any anectdotal experiences with a lack of meat processing availability that you would be willing to share?	
Can you recommend any additonal producers we should be sure to survey for this feasibility study?	

Modoc County Meat Processing Feasibility Study

Appendix C: Friesla Documentation

Friesla®

111 E Main St.
Everson, WA 98247

Toni Scott
Morrison
1385 Ridgewood Dr.
Chico, CA 95973

February 28, 2024

Dear Ms. Scott,

At Friesla, our mission is to provide meat producers, processors, and entrepreneurs with tools to take back control of local meat processing—on their terms, time, and site. We serve our Clients through the design, build, and implementation of Modular and Mobile Meat Processing Systems and the services enabling our Clients to successfully operate them under USDA or state inspection.

The foundation on which our Meat Processing Systems are built is our Project Development Phase, or PDP. This engagement lays the groundwork for moving a Friesla System from concept to commissioning. The PDP covers a wealth of information: from defining goals, to system layout and design, working through regulatory and site-specific considerations, and discussing and providing inputs to assist with financial projections.

We conducted a "mini-PDP" to support Morrison's Modoc Meat Processing Feasibility Study, drawing on the information provided by Morrison, your Client, and our industry experience. A separate, full PDP in consultation with the facility's future ownership group will be necessary to precisely determine project needs and costs based on the ownership group's business objectives.

During the mini-PDP, we provided ballpark budget range estimates for two Meat Processing System designs. Both layout options support the harvest and processing of up to 75 head of beef (or equivalent species) per week. These ballpark budget range estimates included 1.) the Modular and/or Mobile facilities, 2.) Equipment Packages (Harvest & Processing Equipment, Startup & Consumables, and Traceability Hardware & Software) and 3.) Services (USDA Regulatory Compliance Support, USDA-Compliant Food Safety System, Design of Livestock Handling System, System Shipping to Modoc County Site, and Onsite Installation Supervision by Friesla Technicians). Considerations related to the future Client site were also discussed, including Site Infrastructure and Site Preparation elements, of which the responsibility and associated costs were highlighted as the Client's responsibility and outside of our ballpark budget range estimates.

To further assist with Morrison's preparation of a financial feasibility model for this project, we discussed and provided inputs to assist with these projections. This included cost estimates and information related to regional

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slaughter fees, estimated hanging and finished goods weights, labor requirements, packaging, electricity usage, repairs and maintenance, and Modular/Mobile facility depreciation. We reviewed the Financial Projection Assumptions section of your feasibility study into which these cost estimates and information were integrated and believe your assumptions appear to be reasonable and in line with local/regional industry averages.

Since these inputs were estimates only, this information will need to be refined in consultation with the facility's ownership group during a separate, full PDP, and aligned with the chosen System's design and size, Client- and site-specific considerations, and volume throughput. Refining the latter—processing volume—is especially key as the Friesla System options presented in this feasibility study enable the harvest-to-package processing of up to 75 head of beef (or equivalent species) per week. This enables the Client substantial processing capacity over above the approximately 20 head of beef per week projected in the study based on a market interest survey of Modoc County producers (i.e., ~26% Meat Processing System capacity utilization). As referenced in the feasibility study's *Volume* section, the projected income statement will be positively impacted as Modoc County operators achieve a higher System utilization—whether by processing more beef, additional species, and/or wild game.

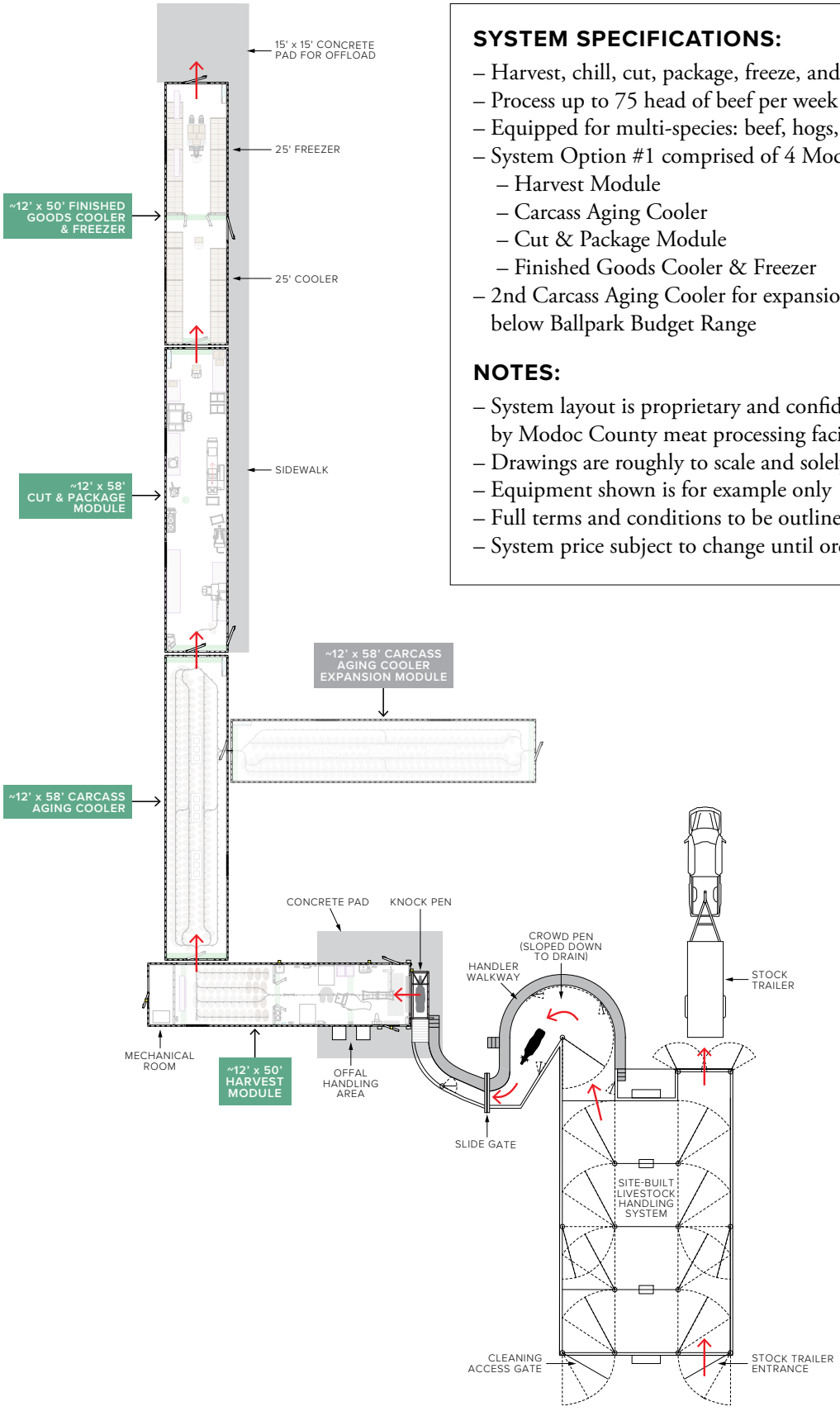
We recognize that the purpose of a feasibility study is to determine the general viability of a proposed approach to a project. Further, we understand that in the actual execution of a strategy, external circumstances, internal decisions, and other factors may dictate departures from the original plan; that it isn't possible to consider every possible cost or circumstance, internal or external; and that Friesla and Morrison make no representation as to the outcome of any action Superior California Economic Development or any other party may take based on the above estimates or the aforementioned feasibility study.

Sincerely,

Bob Lodder
Founder & President
Friesla

Friesla

SYSTEM LAYOUT OPTION #1: MODULAR HARVEST



SYSTEM SPECIFICATIONS:

- Harvest, chill, cut, package, freeze, and store finished goods
- Process up to 75 head of beef per week (or equivalent species)
- Equipped for multi-species: beef, hogs, goats, sheep, wild game
- System Option #1 comprised of 4 Modules:
  - Harvest Module
  - Carcass Aging Cooler
  - Cut & Package Module
  - Finished Goods Cooler & Freezer
- 2nd Carcass Aging Cooler for expansion not included in the below Ballpark Budget Range

NOTES:

- System layout is proprietary and confidential; solely for reference by Modoc County meat processing facility project stakeholders
- Drawings are roughly to scale and solely for illustration purposes
- Equipment shown is for example only
- Full terms and conditions to be outlined in Purchase Agreement
- System price subject to change until order placement is confirmed

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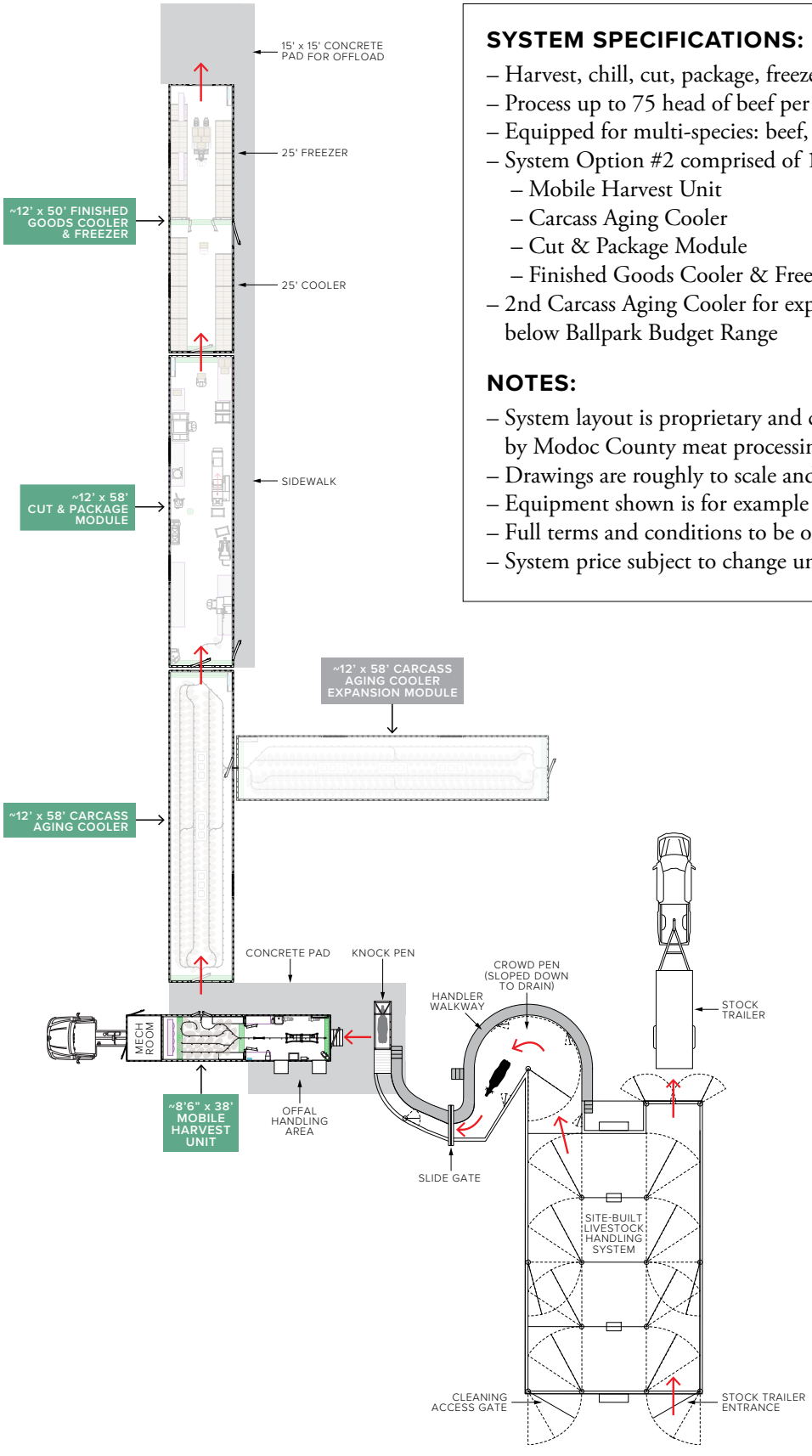
SYSTEM LAYOUT OPTION #2: MOBILE HARVEST



SYSTEM SPECIFICATIONS:

- Harvest, chill, cut, package, freeze, and store finished goods
- Process up to 75 head of beef per week (or equivalent species)
- Equipped for multi-species: beef, hogs, goats, sheep, wild game
- System Option #2 comprised of 1 Mobile Unit & 3 Modules:
  - Mobile Harvest Unit
  - Carcass Aging Cooler
  - Cut & Package Module
  - Finished Goods Cooler & Freezer
- 2nd Carcass Aging Cooler for expansion not included in the below Ballpark Budget Range

NOTES:

- System layout is proprietary and confidential; solely for reference by Modoc County meat processing facility project stakeholders
- Drawings are roughly to scale and solely for illustration purposes
- Equipment shown is for example only
- Full terms and conditions to be outlined in Purchase Agreement
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Modoc County Meat Processing Feasibility Study

Appendix D: Acknowledgements

MODOC MEAT PROCESSING FEASIBILITY STUDY
A Project of Superior California Economic Development

APPENDIX D

ACKNOWLEDGEMENTS

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Bekki Ingraham
Cindy Johnson
Adam Knapp
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Dick Mackey
Reed Martinez
Tom Martinez
Shane McGarva
Glenn Nader
Brandi Neider
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Modoc County Farm Bureau
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Owen Segerstrom
Laura Snell
Pete Talbot
UCCE Cooperative Extension
Laurie Wayne
Steve Ybarra