

Multi-Use Facility Feasibility Study

Phase Three:

Business Feasibility Analysis

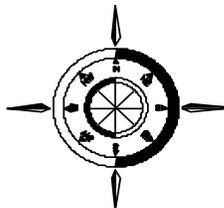
Prepared for:

Yukon Agricultural Association

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Executive Summary

In May 2006, the Yukon Agricultural Association embarked on a study to research the feasibility of operating an agricultural Multi-Use Facility on a suitable property. The first phase (Opportunity Analysis) identified potential markets for three important services:

- Fee-for-service processing of inspected hanging sides of red meat (including beef, elk, bison, and pork) into block-ready packages for wholesale distribution and cut-and-wrapped portions for retail sales. A companion function would further process meat into sausages, smoked meats, bacon, and jerky. The processing floor would receive hanging sides from the mobile abattoir via a docking space.
- Fee-for-service custom slaughtering of turkeys, chickens, and geese in a small-capacity poultry abattoir. Facility and process would be suitable for Territorial inspection to permit the products to be retailed.
- Rental of professional-grade and inspected community kitchen and equipment to food-processing companies.

Each of these services would help meet strategic goals for the Yukon's agriculture sector (identified in Serecon's Multi-Year Development Plan), and they would complement and strengthen existing programs. Lack of these services inhibits the growth of both agricultural producers and agrifood processors in the Yukon. Conversely, providing these services will powerfully stimulate agricultural production of red meat and poultry, fodder and feed grains, and produce, and the production of value-added, shelf-stable foods.

Acting on the opportunity analysis, a committee produced a conceptual design for the facility (Phase II). This report (Phase III) is a feasibility analysis for operating a facility built to the conceptual design.

The Multi-Use Facility is the centerpiece of a strategy for increasing the production of Yukon meat and poultry. Yukon meat and poultry is unavoidably expensive because of high production costs. At present, Yukon red meat is competing at a disadvantage with low-cost southern imports, and local retail markets have shown little interest in carrying it. The recommended strategy is to position Yukon meat in the high-price, high-quality "natural meat" niche and to retail both fresh meat and value-added natural meats such as jerky. An organization focussed on processing and marketing the Yukon product would operate the facility.

Market information from the USDA, Agrifood Canada, and research groups show that the natural meat niche is rapidly expanding, and that the market for jerky and meat snacks enjoys explosive growth. This strongly indicates the validity of the niche approach and the expected contributions of value-added products for strengthening Yukon red meat markets.

The results of the feasibility analysis are that the Multi-Use Facility project can work. If capital is supplied by government with no obligation for repayment, the project can break even on fixed costs of \$110,000 without stretching market assumptions. With some modest market effort, it can generate a profit of \$250,000, and with genuine market success, it can actually generate significant money (\$500,000 and up) while serving several sectors of the agricultural community. *Suitable land is the essential pre-requisite to this project: about 60 ha, flat, and easily accessible.*

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Phase Three: Multi-use Facility Feasibility Analysis

1.0 Introduction

The Phase One Opportunity Analysis Report showed that a potential market exists for three important services that could be met in a Multi-Use Agricultural Facility. The report indicated that the facility might be self-sustaining. The proposed facility would provide equipment and space for three functions:

- Fee-for-service processing of inspected hanging sides of red meat (including beef, elk, bison, and pork) into block-ready packages for wholesale distribution and cut-and-wrapped portions for retail sales. A companion function will be to further process meat into sausages, smoked meats, bacon, and jerky. The processing floor will receive hanging sides from the mobile abattoir via a docking space.
- Fee-for-service custom slaughtering of turkeys, chickens, and geese in a small-capacity poultry abattoir. Facility and process will be suitable for Territorial inspection to permit the products to be retailed.
- Rental of professional-grade and inspected community kitchen and equipment to food-processing companies.

Each of these services would help meet strategic goals for the Yukon's agriculture sector (see Serecon's Multi-Year Development Plan), and they would complement and strengthen existing programs. The Opportunity Analysis shows that demand exists for each of these services, and the Multi-Year Plan states that lack of these services inhibits the growth of both agricultural producers and agrifood processors in the Yukon.

Conversely, providing these services will powerfully stimulate agricultural production of red meat and poultry, fodder and feed grains, and produce, and the production of value-added, shelf-stable foods.

This report (Phase III) analyzes the business feasibility of the Multi-Use Facility schematic design developed in Phase II by a committee working from the Opportunity Analysis Report.

1.1 Importance of Land Base

Central to this project is a suitable land base. The property should be accessible and centrally located on approximately 60 ha of agricultural ground. The Multi-Use Facility is the cornerstone of a larger vision, which is to create an agricultural service park for the Yukon's agricultural community. In addition to the Multi-Use Facility, the agricultural service park could host other infrastructure of benefit to the Yukon's agricultural community, including fertilizer storage, bulk fuel and cardlock outlet, vegetable storage, and possibly a riding facility, an exhibition and fairground, and a rodeo ground. Sixty hectares of flat land would be sufficient to accommodate anticipated future uses. Properties along the North Klondike Highway are ideal for this purpose, being centrally located, flat, accessible to power, and suitably zoned. The purchase of a property in this area is the essential first step in providing important and needed infrastructure for the next era in agricultural development in the Yukon.

1.2 Limitations

This report examines business case scenarios. It establishes whether the project could be financially self-sustaining and under what conditions. The analysis deems the project likely to be financially sustainable under the assumptions and approach discussed in the following sections. It does not warranty success, as there are many factors beyond the control of any individual at this stage.

1.3 Assumptions.

This business feasibility analysis assumes the following:

1. The Multi-Use Facility will be built on a suitably located agricultural property of at least 60 ha. A key criterion is that this facility and its property be able to have the mobile abattoir on-site to process livestock brought to slaughter. Farmers who cannot justify the cost of ordering the abattoir out to their farms for a small number of animals could bring their stock to this central location to be processed in batches with other people's animals. The property must accommodate receiving and holding pens for livestock as well as burial sites for wastes until a composting apparatus is acquired.
2. The property will be purchased and the facility will be built with financial support from government. Agricultural infrastructure of this magnitude cannot be built with private capital in the Yukon at this stage of the industry's development.
3. Business feasibility will be defined as financially self-supporting within 5 years. The project will not have to repay its capital investments, and it need only break even on operating expenses and overhead. Although additional goals may be developed, "self-supporting" is the minimum criterion.
4. Standards will be defined for a Yukon brand of "natural meats". Criteria typically include no hormones, no medicines, and emphasis on chemical-free feeds (especially no feeds of animal origin). Increasingly, standards for humane treatment are included. These standards will be the basis for developing and marketing a brand identity for Yukon-raised meats. For the purposes of this report, this brand will be provisionally referred to as "Yukon Natural".
5. The Yukon Government will provide inspection services for processing red meat and for slaughtering poultry to enable retail sales of these products.

1.4 Organization and Management Issues

The feasibility analysis must address several questions, including:

- Ownership of the land
- Ownership of fixed assets
- Ownership of moveable assets
- Structure of oversight and operating entities

- Operational Management, (including facility scheduling, booking, accounts receivable and payable, hiring and paying casual labor, overseeing maintenance);
- Business development and marketing of a “Yukon Natural” brand of value-added processed meats
- Trained labor for butchering and meat processing, operating poultry abattoir
- Semi-skilled labor for maintenance and cleanup.

The analysis will construct a business case scenario that proposes reasonable alternatives for addressing these questions. The scenario will be the basis for the financial and operational analysis.

2.0 Constructing Business Case Scenarios

2.1 Business Structure

The Multi-Use Facility project must provide for the ownership and management of land, fixed assets, and moveable assets of considerable value. Government will be approached to finance this infrastructure on the rationale that it will help develop the agricultural sector and it will benefit the broader public. We can expect that government will wish to protect its investment and interest in these assets, but it will not want to manage the facility. Similarly, the Yukon Agricultural Association is not prepared to assume hands-on management of the Multi-Use Facility, but it can furnish directors to provide general oversight.

The Yukon has several examples in which government-funded infrastructure has been provided for the use of special interests among the broader public. These include Mt. Sima, the Mt. McIntyre Recreation Centre, the Yukon Arts Centre, and the Yukon Artists' Cooperative. The interests that are served include skiers and snowboarders, curlers, theatergoers and actors, and artists. Three general models for owning and managing public assets can be described:

1. **Great Northern Ski Society / Mt. Sima.**

Mt. Sima was built with public funds received and administered by the Great Northern Ski Society (GNSS) on land transferred to the City of Whitehorse by the Yukon Government. The City of Whitehorse grants a 45-year renewable lease of the land to the GNSS. The GNSS provides a board of directors, which gives major policy and planning oversight to the Mt. Sima Ski Company. The company hires staff, and manages and operates the hill. Any profits earned by the operating company are reinvested into the facility. The operating company owns the movable assets; fixed assets would revert to the City should the GNSS disband or otherwise have to terminate its lease.

2. **Whitehorse Cross Country Ski Club, Whitehorse Curling Club / Mt. McIntyre Recreation Centre.**

The City of Whitehorse owns and maintains the Mt. McIntyre Recreation Centre, which was built for the 1981 World Cup Ski competition. It rents the facility to the Whitehorse Cross-Country Ski Club and to the Whitehorse Curling Club. Each organization pays rent and its portion of utility bills. The Yukon Government leases the land base of the ski trail system to the ski club.

3. **Yukon Arts Centre.**

The Territorial Government built the Yukon Arts Centre for the Yukon arts community and for the theatre-going public. The Yukon Government owns the facility, and a government-appointed board manages it. Reporting to the Minister of Tourism and Culture, the board provides high-level policy oversight for the Center and hires an executive director responsible for managing and operating it. In FY 2004 the Arts Centre received into its annual operating budget contributions from the Yukon Government of nearly \$750,000, in addition other public funding for operations of \$190,000.

4. Yukon Artists Cooperative

The Yukon Artists Cooperative is provided funding to enable them to rent a private facility. Although they are not using a public asset, they are accessing public support for essentially private ends: the enrichment and development of member artists. The public is presumed to benefit by the strengthening of the arts community. It should be noted that in this example, the recipient of funding is competing directly with the private sector: without public support, these artists would be selling their products in privately owned galleries and stores whose business is to sell art.

With the first three models, the public interest in the asset is protected by public ownership. In the case of Mt. Sima, the site is leased to the GNSS, which needs the latitude to modify, expand, or contract its operations in response to its clients' needs and market forces. The volunteer board of the GNSS confines itself to fundraising and to setting policy. It relies on professional management in its wholly owned operating company to optimize use and revenues of this specialized asset.

In the case of the Mt. McIntyre Recreation Centre, the City of Whitehorse has a landlord role: the two tenants concern themselves with delivering their respective services, but have little to do with overhead and maintenance of the facility. Should either tenant dissolve, the asset could be converted to another use or offered to another tenant.

The Yukon Arts Centre is a special case: it is considered to be too valuable, too specialized, and has too broad a mandate to entrust to a volunteer board of a non-government organization. Receiving annual funding and reporting to the Minister, its governing arrangement is similar to that of Whitehorse Hospital.

In building a business case scenario for the Multi-Use Facility, the Mt. Sima arrangement is the most appropriate model to modify. It provides the security of ultimate ownership for the public, it relieves Government of operational involvement, it provides for broad-based, accountable governance, and it provides for professional operations and management. Here is the bare outline of the business case:

- The Government of Yukon would build the facility and lease it to the YAA.
- The YAA would provide general policy and financial oversight for a cooperative charged with managing and operating the facility, and with developing and marketing products.
- The co-operative would have a professional manager and would hire or contract staff as needed.
- Revenue streams would come from rental of professional kitchen facilities; fees for use of the poultry abattoir; fees for rendering inspected carcasses into block-ready units and cut-and-wrapped parcels; and processing and marketing of value-added meat products.
- The co-operative would be charged with developing the market niche best suited to Yukon meats and would produce and market a brand of value-added meats (chiefly jerky) to generate revenues to help cover the overhead of the facility.

2.2. Notes on Co-operative structure.

In principle, either a co-op or a business could manage and operate the facility as outlined. Since the purpose of this facility is to serve a particular sector at least cost, a co-op provides some advantages:

- Co-op membership can be defined as any person or company that pays to use the services of the facility. A management board can be created from this group, which by definition are parties interested in its success.
- Members can receive services and benefits from the co-op as well as dividends. (This need does not arise in the models examined above in Section 2.1.)
- The co-op does not have to earn a profit. For this project, the minimum objective is to break-even, defined as covering overhead, plus provisions for depreciation, replacement, and future repairs. The co-op can provide additional services to the agricultural community on these terms.
- The co-op can take a longer and broader view than a business, which typically must attend to quarterly earnings. It can devote part of its efforts to activities that provide strategic benefits to the sector, such as developing a market image and brand for Yukon meat and produce.
- The co-op provides a ready way to distribute profits to its members, in proportion to their level of participation. For instance, a key component of the business case is that member Yukon livestock growers will forego producing and marketing jerky as individual businesses and will collectively produce a “Yukon Natural” jerky” brand through the co-op. Each will receive local wholesale prices for the carcasses they sell to the co-op, but they will forego their individual opportunities for value-added revenues. If the jerky processing division financially succeeds, additional monies above what is needed for overhead can be distributed as dividends to the members that sold carcasses to the co-op. The size of the dividend can be based on the weight of the carcasses purchased, and can vary from year to year based on the needs and capabilities of the co-op.

3.0 Business case description

The Multi-Use Facility (MUF) will be built with funding from the Yukon Government on land purchased by the Yukon Government. The land and the facility will be leased to the YAA, which shall appoint a broadly-based board of directors to oversee major policy questions concerning its use and management. A producer's co-operative shall manage the property and the MUF for YAA and shall have use of the facility to make its own products. The fundamental purpose of the Co-op will be to help develop the agricultural sector through operating the MUF and promoting Yukon products.

Membership in the producers Co-op shall be composed of businesses and individuals using the MUF. It is assumed that a nominal yearly membership fee will be charged. A board of directors shall be elected from the membership. A specified number of seats shall be reserved for directors appointed by the YAA Board to ensure consistency and accountability with YAA's objectives for the facility.

The Board shall hire a full-time Executive Director who shall be a trained butcher and shall have management and marketing skills. This individual shall be responsible for:

- managing operations, scheduling, and finances of the Multi-Use Facility,
- hiring and overseeing staff as needed,
- creating, managing, and promoting a "Yukon Natural Meats" brand,
- cutting swinging sides into block ready units and/or cutting and wrapping into retail packages,
- creating and marketing "Yukon Natural Meats" products including jerky and other value-added meats,

It is expected that in the first three years, the Executive Director can fulfill all of these functions. As demand and output increase, another butcher will be hired for meat processing, and the Executive Director will concentrate on marketing, management, and administration.

A part-time custodian shall ensure the MUF meets top standards of cleanliness and that the facility remains in good repair. Casual staff will be hired for special projects such as operating the poultry abattoir.

The Co-op shall obtain revenues from the following activities:

- rental of professional kitchen facilities
- operating the poultry abattoir
- processing red meat carcasses on a fee-for-service basis
- purchase and processing of red meat carcasses into value-added products for sale.

4.0 Summary of Market Opportunities.

Market opportunities for each revenue stream are summarized as background for creating reasonable income projections.

4.1 Processing Kitchen Rental.

The processing kitchen is a relatively easy add-on to the basic multi-use facility. It is not conceived as a profit center, but as a service and potential stimulant to the emerging food processing sector. In the ongoing development of Yukon agriculture, the food processing sector is a strategic partner for obtaining full economic value from the “field to fork” food continuum.

At present, there are approximately 15 food processors in the Yukon, ranging from occasional producers of jams and jellies to full-time makers of retail bottled beverages. The Phase I research indicated that a half-dozen Yukon food processing businesses are expanding their production beyond what is needed for occasionally participating in farmer’s markets. At least two have ambitions of exporting. At present, these processors operate out of facilities in restaurants, churches, and homes that are approved by Environmental Health for local markets. They are not ideal: none of these facilities would receive CFIA approval for permitting export, and most have limitations in terms of space, available equipment, and efficient layout.

Four businesses expressed interest and willingness to rent professional-grade kitchen facilities if they were provided by YAA. One business, ramping up for export, anticipates a need for up to 15 days/month. Three others are interested in principle if the new facility has advantages not offered by their current kitchens. The chief obstacles currently faced by these processors are:

- Availability of facility and scheduling;
- Inadequate space, inadequate working surfaces
- Insufficient equipment resulting in inefficient methods
- Awkward layout for separating contaminated from uncontaminated spaces
- Awkward design for cleanup
- Facility sometimes not fully clean when renter arrives.

Since a professional-grade processing kitchen easily complements the red meat processing facility, it would be comparatively easy for this to be rented out to current and to future food processing businesses. Access to this facility would be an important service to the processing sector – now in its infancy – and it would provide additional revenue at little extra cost to the Multi-Use Facility.

Rental rates for a professional-grade kitchen are \$100-120/day, and \$60/half-day. Projected revenues for this service are 20 days/month; \$2000/mo; \$24,000/year.

4.2 Poultry Abattoir.

The poultry abattoir is seen as providing strategic infrastructure that will stimulate the growth of poultry production in the southern Yukon, for personal consumption, for farm-gate sales, and for retail sales.

The Yukon consumes some 500,000 poultry yearly. Until last year, an estimated 10,000 were produced locally, (2% of the market) with a retail value of approximately \$245,000 @ \$3.50/lb. As the Partridge Creek Farm is scaling back from 6000/yr. to 1200/yr., a vacancy has been created in the immediate retail market for local poultry. The poultry production in the southern Yukon is conservatively estimated to be approximately 3000 birds. The demand for local fowl appears to be strong and growing: poultry farmers are selling all they produce and are turning away orders. This is consistent with Canada-wide market data showing strong and growing demand for local, free-range chickens. The USDA estimates that the market for “natural” poultry (free-range, no antibiotics or hormones, grain-fed) will grow by 33% per year beyond 2008. Consumers will credit local poultry as meeting most of the criteria of “natural poultry” even if formal standards are not established.

The gross margin for “hobby” poultry producers in southern Yukon is attractive; the chief barrier to increased production is reported to be the lack of a local abattoir. Local producers state that a poultry abattoir in southern Yukon will be widely used and will stimulate production. An initial slaughter estimate of 2500 birds increasing by 500 birds per year is a reasonable projection.

2500 birds @ 7 lbs each x \$.50/lb: \$8750 for Year 1.

4.3 Red Meat Processing.

4.3.1 Yearly Demand

Yukon’s yearly consumption of red meat includes 5000 beef cattle and 12,000 pigs. This equates to a yearly per capita consumption of 111 lbs of beef and an equivalent amount of pork. No direct local data are available for consumption of value-added products such as bacon, cured meats, sausages and jerky. The USDA reports that the market for jerky has increased 320% over the last decade to a value of \$2.7 billion in 2004. It reasons that there is plenty of room for growth, as just 39% of households buy meat snacks. New consumer groups include women, children, health and diet-conscious individuals, as jerky has been associated with low-carb eating. Extrapolating from available data gives an estimated local consumption of 6000 lbs. of jerky yearly, a large proportion being summer sales to mining exploration companies. It is important to emphasize that jerky and meat sticks are not promoted and they are virtually invisible to the 250,000 visitors to the Yukon, thus current sales do not reflect market potential.

4.3.2 Constraints to Yukon Red Meat Production and Sales

Only a fraction (approximately 2%) of Yukon’s meat demand is supplied by Yukon producers, who sell between 90 and 140 cattle each year, and an estimated 400 pigs, mostly through farmgate sales. In principle, this leaves a massive market opportunity for Yukon producers. In practice, several barriers inhibit increased production and sales. Before estimating market potential, it is worth reviewing why Yukon red meat is virtually

absent from retail shelves. Supermarket and butcher shop managers have expressed little interest in carrying local beef and pork for a variety of reasons:

- Pre-existing contractual relationships with major distributors;
- A nearly complete switch from swinging sides to block-ready meat shipments plus a greater percentage of waste and labor costs in the swinging product;
- Perceived customer preference for Canada A or AA product;
- Unknown grading standards of local product;
- High price of local product: \$3.50⁺/lb. vs. \$2.00^{+/-}/lb.;
- Perceived price sensitivity of most consumers.

In the end, local retailers must justify a revenue-potential for every portion of their shelf space and they have little interest in experimenting with developing markets for Yukon meat. Some small outlets in Whitehorse may be exceptions, but their volumes would not be high.

The key fact is that for the average consumer, Yukon meat is approximately 50% more costly than imported meat and it is not graded, hence it is a relative unknown. The typical consumer is both price-sensitive and cautious, and sees little reason to purchase it. This is the fundamental reason why local retail meat markets find Yukon meat commercially unattractive. In the current situation, farmgate sales are the primary outlet for Yukon growers, but it is questionable that this market can grow much more.

If Yukon beef farmers intend to increase production, they will have to develop a new market, and tailor products to it. A niche market for "natural meat" can counteract the perceived drawbacks of Yukon meat. If it is developed, this niche may be able to consume all that the Yukon can produce.

4.3.3 Natural Meat Niche Market Opportunity

Market data across North America unequivocally show that demand for "natural" meat and poultry is increasing dramatically. The USDA forecasts that sales for natural meat (beef, pork, poultry) will continue the annual 20% growth rate it has enjoyed over the last 5 years. Moreover, consumers are willing to pay a premium for "natural" meat: 50-70% for steaks; 20% for ground meats, up to 70% for poultry. Surveys show that 75-80% of people who have a firm understanding of what "natural meat" means are willing to pay a premium for it.

Natural meat and poultry

While no one definition exists, "Natural" meat and poultry has come to mean free of antibiotics and growth hormones. Some "Natural" beef producers have gone one step further by meeting additional stipulations such as strictly grass, grain, or hay fed cattle. These measures are targeted at consumers who are seeking assurances that their beef comes from cattle that are never fed meat by-products, eliminating potential exposure to BSE.

Issues that are becoming increasingly important in the marketing of "Natural" meat and poultry products are the environment (waste management, resource protection), animal welfare (more humane treatment), enhanced nutrition (higher nutrient content), and small farm support. These traits are becoming as important as being free from antibiotic and growth hormones when marketing "Natural" meat and poultry

to a larger audience. See “Natural Beef Market in the United States” Agrifood Trade Service, CFIA www.agr.gc.ca.

When marketing natural beef, the following attributes are important to the consumer:

- No use of growth hormones
- No use of antibiotics
- Production takes steps to protect open streams
- Production does not endanger wild animals
- Cattle not raised in pens
- Beef properly aged (preferably dry-aged)
- Cattle are grass-fed
- Beef comes from local farms

The higher retail price of natural fresh meats and value-added processed meat can offset and accommodate the higher production costs of Yukon beef, elk, bison, and pork. Two hurdles must be overcome: creating a strong market image that can command the price needed by producers, and presenting products that meet the requirements of consumers. The first requires standards and a dedicated marketing body, the second requires a processing facility. The two are mutually supporting.

To realize this opportunity, Yukon producers must create a market niche and a brand identity for Yukon meat that supports the higher prices needed by local farmers. The product attributes of “natural meat” must be clear, and the brand should be authentic – consumers must trust that standards have been established and are followed. The market positioning would differentiate “Yukon Natural” meat products from “conventional” southern alternatives. A positive market image and identity can be promoted to Yukoners and to visitors as a clean, healthy, nutritious “Northern taste” for fresh and cured meat and for jerky snacks. This niche strategy would not compete directly with existing retail products, since no comparable “all natural” meats or meat snacks are carried on retail shelves here, and the current retail shelves are effectively closed to Yukon meats in any meaningful quantity.

Creating standards and a brand identity for “Yukon Natural” meat would require a concerted and unified effort. The most logical agency for doing this would be the co-op operating the Multi-Use Facility. A co-op led market initiative would be more effective and persuasive than the individual efforts of producers. In order to preserve the value and protect the brand’s image, the co-op would have to license the brand name and ensure that it is applied only to member’s products that it can certify.

The proposed strategy is to increase Yukon’s red meat production by positioning it as a recognized brand within a “natural meat” niche. A producers’ Co-op would develop and market the natural meat brand identity, and it would finance itself and the Multi-Use Facility by making and selling value-added meat products. In so doing, the Co-op would be directly and indirectly stimulating increased livestock production. The red meat processing unit is central to this strategy. It is properly understood to be an item of strategic infrastructure that complements and completes the advancement brought by the mobile abattoir. The abattoir can produce an inspected carcass, but further processing is needed before it can be wholesaled or retailed. The carcass or swinging sides must be cut into “block-ready” packages or be fully cut and wrapped in an inspected facility. Further processing is needed to produce value-added products such as sausages, bacon, and smoked or cured meats.

Processing can be done for a fee by local butcher shops, but this approach would undermine an important part of the niche strategy: to support a producers' co-op that would create, market, and control a "Yukon Natural" meat brand. Only meat processed at this facility could carry the "Yukon Natural" label. Equally important, the co-op would itself be a new market for red meat, as it would purchase carcasses and process them into value-added products including jerky and meat snacks. The members of the Co-op could elect to market their fresh meat individually, but "Yukon Natural" brand jerky and meat snacks, would be produced at the Multi-Use Facility and marketed by the Co-op. A Yukon Producers' Co-op would reinforce the preference of natural meat consumers to support local farms.

Note on Co-op produced value-added products.

This revenue stream would serve several important and mutually supporting purposes. Firstly, it would be a primary revenue source for the MUF's operating budgets. Secondly, it would provide an additional market for carcasses over and above what Yukon producers can secure on their own. Thirdly, these products will establish and reinforce the market identity of the "Yukon Natural Meat" brand. Fourthly, dividends on value-added product sales can be declared and paid to those members who have sold red meat carcasses to the Co-op. Because the Co-op will be purchasing whole carcasses, it will be important that it utilize them completely. There will be at least two kinds of jerky produced: a premium grade from whole lean muscle groups, and an "economy snack" from ground meat. Pemmican and freeze-dried meats may also be developed for the outdoor recreation market. Additionally, other value-added products may be needed for full utilization such as sausages, cured meats, partially-prepared dinner courses, and family packs of cut-and-wrapped fresh meats.

The Co-op "Yukon Natural Meat" product line will be marketed to restaurants, hotels, and to end consumers. The jerky snack line of products will be wholesaled to business outlets serving tourists; the travelling public; sports, fitness, and recreation markets; mining and exploration companies; wilderness tourism and outfitters; as well as to Yukon consumers in general. These products may also be retailed directly.

The Executive Director shall determine how to achieve complete utilization of carcasses by producing commercially attractive value-added products.

4.3.4 Estimated Market Potential: "Yukon Natural" red meat, jerky

Potential market segments for "Yukon Natural" meats would include occasional resident purchasers, dedicated resident purchasers, restaurant-goers, and visitors. Fresh meats and jerky would employ different marketing strategies, but both products would emphasize the Yukon Natural Meat brand.

There are approximately 10,000 households in the Yukon, about 9000 shop in Whitehorse, representing 27,000 people. There are approximately 250,000 visitors yearly.

Scoping Assessment: Demand for red meat (beef):

*Note: this analysis effectively equates beef, elk, and bison as demand for red meat. The purpose of a scoping assessment is to examine the outcomes of applying some reasonable demand assumptions, based on available information.

Occasional purchasers: assume 80% of residents will purchase at least 1 lb of Yukon red meat (beef, bison, elk) out of their yearly purchases of 111 lbs of beef. This equates to 24,000 lbs, or 40 beef cows @ 600 lbs. / cow.

Visitors: assume 80% of visitors can be sold at least one ¼ serving (i.e. a hamburger) of Yukon red meat. This equates to 50,000 lbs of meat or 83 cows.

Dedicated purchasers: assume 3% of resident consumers will elect to go “all Yukon Natural” for their meat consumption. This equates to 99,900 lbs, or 166 beef cows.

Total assumed demand for Yukon Natural red meat: 298 animals; value \$625,800.

Scoping Assessment: Demand for jerky:

Jerky requires 3lbs raw carcass weight for 1lb jerky; or \$10.50 of raw ingredient for a finished product worth \$33/lb.

Initial assumption: If each Yukoner and each visitor consumed ¼ lb yearly of jerky (just 2 snack servings) this would require 70,000 lbs of jerky/year. This equates to 210,000 lbs of raw carcass, or 350 cows.

Gross revenue to producers @\$3.50/lb: \$735,000

Gross revenue to Co-op @\$33.00/lb: \$2,310,000

* The multiplying effect of value-added processing can be seen in this projection.

Total demand for Yukon red meat and jerky in this scoping scenario: 648 animals.

Even if these demand projections were cut by half or greater, it can be seen that in principle, there can be a dramatic economic effect from a Co-op operating the Multi-Use Facility to market a Yukon Natural meat brand of fresh meat and processed meat.

5.0 Cost Structures

There are two kinds of projected costs: fixed costs, which are the same regardless of the level of use or activity, and variable costs, which increase with use.

Fixed costs depend in part on the structure of the business case, and on the design of the Multi-Use Facility. Variable costs will depend largely on the level of use experienced by each service: rental kitchen, poultry abattoir, red meat processing center.

5.1 Fixed Costs

Operation and Maintenance:

A general operation and maintenance budget, including monies being put away for planned upgrades and replacement, for a newly constructed building of “average” to “better-than-average” construction is \$5.00 per square foot annually. For this facility, at 8,000 sq.ft., that would be \$40,000.00. This figure includes utilities, lights, and routine upkeep and maintenance; it does not include setup or cleanup activities for the poultry abattoir, nor does it include freezer expenses.

Executive Director.

Salary and Benefits for an Executive Director with duties as described is estimated to be \$70,000/yr.

Custodian.

The custodian’s wages are included in the estimated O&M budget for the initial years of operation. It is estimated that until the third or fourth year of operation, the custodian may be needed for an average of 10 hours a week @\$15.00/hr for a yearly total of \$7500.

Total estimated fixed costs: \$110,000

5.2 Variable Costs.

5.2.1 Food Processing Kitchen Rental.

Each kitchen rental agreement will include a clause stipulating that the client will thoroughly clean the working environment. A client will be given a supplemental bill covering the costs of cleanup if this requirement is not met. The Executive Director or the custodian would determine if supplemental cleaning is required. Thus the main variable costs for the food-processing kitchen are internalized, and the client pays for extra work by the custodian. Variable costs for this unit are effectively captured in the fixed cost O&M budget.

5.2.2 Poultry Abattoir.

The primary purpose of the poultry abattoir is to stimulate poultry production, not to produce revenue. Therefore it is sufficient in its early years if it recovers its operating costs while providing a convenient, affordable and sanitary slaughter service. The abattoir should operate at optimum capacity to minimize start-up costs. This could be

achieved by slaughtering in large batches on advertised days. Since most poultry growers produce a relatively small number of birds and slaughter them in the fall, the abattoir could handle all of the southern Yukon's birds in two or three days in late September.

The Hutterite colony that built the Partridge Creek poultry abattoir indicates they could duplicate the facility and that the processing rate depends on the number of people involved. With 14 workers, the line can handle up to 400 birds an hour. With 8 people, the facility can process 250/hr. The line can function with as little as 4 workers.

If the abattoir processed all of southern Yukon's 3000 birds at \$.50/lb, it could receive revenues of \$10,500, assuming an average weight of 7 lbs. In principle, this could be accomplished in two days, although three days should be allowed for start-up learning. Wages expense at \$12.00/hr for a 10-person crew for 3 days would amount to \$2880. The number of birds needed to meet wages for this crew for 3 days would be 823. Energy costs for cooled water and freezer would not exceed \$250, and the abattoir would be shut down when not in use.

Very cold well water will chill the carcasses, provided that the bird reaches 5.5C (42F) in three hours. The temperature of the well water from the Mayo Road site would have to be measured, to see if it was cold enough to reach this standard. A heat pump might be needed for added cooling.

Some batches could be processed with volunteer labor for lower fees, if enough poultry growers were interested.

5.3.3 Red Meat Processing.

At present the commercial rate for red meat processing is \$.50/lb to convert a swinging side to cut-and-wrapped retail packages. This fee covers the butcher's labor and the costs of providing a facility and freezer space. The service provided by the Multi-Use Facility could charge either by the pound, or by the hour. Charging by the pound would provide better planning certainty to livestock producers.

Note on labor rates: As butchers earn in the range of \$22/hr, this figure has been used to calculate labor costs in processing. The Executive Director will be earning in the range of \$36/hr. When the labor of the Executive Director is used in processing, the difference between the wage rates would have to be subtracted from the gross profit.

Costs for two kinds of services must be estimated:

- Fee-for-service rendering of swinging sides to block-ready units.
- Fee-for-service cutting and wrapping of swinging sides into retail packages.

Costs must also be estimated for the Co-op purchasing whole carcasses, processing them into value-added products, and marketing them.

Fee-for-Service Processing:

Rendering into block-ready packages

Charge to customer: \$.20/lb; \$120 for a 600 lb animal

Estimated costs of labor: 2 hours/animal: \$44.

* Includes receiving, setup, cutting, cleanup, handling

Rendering to cut-and-wrapped retail packages

Charge to customer: \$.55/lb; \$330 for a 600 lb animal

Estimate cost of labor: 9 hours/animal; \$198

Co-op purchase, processing, and marketing of animals

Completely utilizing an animal will require a breakdown virtually the same as cutting-and-wrapping. Jerky and other value-added products will require further cutting, handling, drying, and packaging. Marketing is a separate set of actions. Each of these will be performed by the Executive Director (also a trained butcher) until increasing volume requires an additional butcher to be hired. The Executive Director's salary covers the labor component of these steps, but they are analyzed to determine if this scenario is reasonable or feasible.

Processing into jerky and other value-added items:

Using entry-level commercial equipment (i.e. slicers, medium capacity smokehouse/oven, packaging machine), two people can produce 2 batches of jerky/day, yielding 130 lbs of jerky from 300 lbs of raw meat. Accounting for bones and trimmings, one animal will yield approximately 195 lbs, or three batches of jerky.

(Midwestern Research and Supply)

Per animal costs and margins:

Cost of animal @ \$3.50/lb	\$2100	
Primary breakdown:	\$ 88	
(4 hours, no wrapping needed)		
Labor for 3 batches, 2 people @ 4 hours/batch		
24 person/hours (\$22/hr and \$15/hr)	\$ 444	
Energy, misc	\$ 25	
Total processing costs for 195 lbs jerky:		\$2657
Retail value @ \$33/lb:	\$6435	
(Less: materials, processing)	\$2657	
Gross Profit on retail for 195 lbs jerky:		\$3778
Wholesale value @ \$23.50/lb:	\$4583	
(Less: materials, processing)	\$2657	
Gross Profit on wholesale 195 lbs jerky:		\$1926

Other costs:

Marketing and distribution costs are difficult to estimate; 5% is used in this estimate. Per 600 lb carcass, value added as jerky yield:

Net on retail:	\$3590
Net on Wholesale:	\$1830

6.0 Pro forma Income Statements

A pro forma income statement is similar to a historical income statement except that it projects the future instead of reporting on past performance. It is a tool for business planning, it is not necessarily a plan in itself. Projections for the Multi-Use Facility are intended to be conservatively reasonable and should show the likelihood that the facility will be self-supporting.

Fixed costs of Operations and Maintenance, and salaries amount to \$110,000. These are the costs the facility would incur regardless of its level of use. Since each proposed service is capable of paying for its incremental variable costs, *covering the fixed costs is the minimum target for net earnings.*

Note on tax considerations: for the foreseeable future, depreciation on the facility will likely cover any tax liability, particularly if profits are either reinvested in the facility or distributed as dividends to eligible co-op members.

Breakeven Analysis:

Financial Target: \$110,000 (100% of annual fixed costs)

Assumptions:

- 100 cows are brought in for cut-and-wrap processing (current farmgate sales)
- No cows are brought in for block-ready wholesale processing
- Kitchen is rented for 15 days/mo (80% of current spoken-for demand)
- 2500 poultry are slaughtered (3/4 of local production)

Gross Profit on services: \$38,630

Shortfall to breakeven: \$71,370

- Value-added processing sales are needed to cover Multi-Use Facility costs.
- Retail sales of value-added and jerky foods from 19 animals yielding 3,705 lbs. of product will cover shortfall.
- This equates to 14,820 4 oz snack servings, or one serving to 6% of visitors or one 4 oz. serving/year to 49% of residents.

Conclusion:

These are conservative assumptions; the enterprise should be capable of meeting these minimum objectives, in light of current market information.

Base Case (Break even) Projection**Year 5:****Revenue on Operations**

Processing Kitchen Rental: 12 months @ 15 days/mo (\$1800/mo)	\$21,600
Poultry Abattoir: 2500 birds @ 7lbs ea @ \$.50/lb (assumes 80% of 2006 production in S. Yukon)	\$ 8,750
Red Meat fee-for-service processing. 100 cut-and-wrapped @ \$.50/lb (assumes that current levels of farmgate sales are processed at MUF)	\$30,000
Red Meat, Co-op value-added Processing 3,705 lbs of jerky retail @ \$33.00/lb	\$122,265
Total revenue:	\$182,615

Cost of Goods Sold

Poultry Abattoir (10 workers @ \$12/hr for 2 days)	\$ 1,920
Red Meat fee-for-service processing Labor, cut-and-wrapped	\$19,800
Red Meat, Co-op value-added Processing 3,705 lbs jerky = 19 animals Cost @ \$3.50/lb Processing costs @ \$2,393/animal * Exec. Director's wages not included as processing cost	\$ 45,467
Marketing @ 5% of gross	\$ 5,771
Total Cost of Goods Sold	\$ 72,958

Gross Revenue	\$109,657
Overhead Costs	

Operations and Maintenance	\$40,000
Executive Director salary	\$70,000,

Net Earnings, Breakeven Projection:	(\$343)
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Year 5, Median Case Projection.**Assumptions:**

Modest sales in each category after 5 years; Executive Director is doing processing with a part-time assistant. Sales assumptions stated below each revenue item.

Revenue on Operations

Processing Kitchen Rental: 12 months @ 25 days (\$3000/mo)	\$36,000
Poultry Abattoir: 4500 birds @ 7lbs ea @ \$.50/lb (assumes 2500 year 1 and 500/ increase)	\$15,750
Red Meat fee-for-service processing. 100 block-ready @ \$.20/lb	\$12,000
100 cut-and-wrapped @ \$.50/lb (assumes a modest level of wholesale business on retail shelves, and that farm gate sales remain level)	\$30,000
Red Meat, Co-op value-added Processing 20,000 lbs of jerky	
10,000 lbs wholesale @ \$23.50/lb	\$235,000
10,000 lbs retail @ \$33.00/lb	\$330,000
Total revenue:	\$658,750

Cost of Goods Sold

Poultry Abattoir (10 workers @ \$12/hr for 4 days)	\$ 3,840
Red Meat fee-for-service processing	
Labor, block –ready	\$ 4,400
Labor, cut-and-wrapped	\$19,800
Red Meat, Co-op value-added Processing 20,000 lbs jerky = 103 animals	
Cost @ \$3.50/lb	
Processing costs @ \$2393/animal	\$246,479
(Assumes 1/3 of Yukoners buy 1 snack, and 1/4 of visitors buy 1 snack)	
Exec. Director's wages not included as processing cost	
Marketing @ 5% of gross	\$ 14,566
Total Cost of Goods Sold	\$289,085
Gross Revenue	\$369,665

Overhead Costs

Operations and Maintenance	\$40,000
Executive Director salary \$70,000, less \$60,456 accounted for as earned labor on meat processing	\$70,000

**Year 5, Median Case Projections
Net Earnings****\$259,665**

Year 5, Optimistic Case Projection.

Assumptions: Executive Director devoted to marketing and administration, processing done by a butcher and an assistant.

Revenue on Operations

Processing Kitchen Rental: 12 months @ 30 days (\$3600/mo)	\$43,200
Poultry Abattoir: 6000 birds @ 7lbs ea @ \$.50/lb (assumes a doubling over 5 years)	\$21,000
Red Meat fee-for-service processing. 150 block-ready @ \$.20/lb	\$18,000
150 cut-and-wrapped @ \$.50/lb (assumes a modest level of wholesale business on retail shelves, and that farm gate sales remain level)	\$45,000
Red Meat, Co-op value-added Processing 40,000 lbs of jerky	
20,000 lbs wholesale @ \$23.50/lb	\$470,000
20,000 lbs retail @ \$33.00/lb	\$660,000
(Assumes ½ of Yukoners buy 1 snack/yr and 60% of visitors buy 1 snack/visit)	
Total revenue:	\$1,257,200

Cost of Goods Sold

Poultry Abattoir (10 workers @ \$12/hr for 8 days)	\$ 7,680
Red Meat fee-for-service processing	
Labor, block-ready	\$ 6,600
Labor, cut-and-wrapped	\$29,700
Red Meat, Co-op value-added Processing 40,000 lbs jerky = 206 animals	
Cost: \$3.50/lb	
Processing costs @ \$2657/animal	\$547,342
Marketing @ 5% of gross	\$ 29,133
Total Cost of Goods Sold	\$620,455

Gross Revenue	\$636,745
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Overhead Costs

Operations and Maintenance	\$40,000
Executive Director salary	\$70,000

Year 5, Optimistic Case Projections
Net Earnings

\$526,745

Discussion and Conclusions.

The Multi-Use Facility's five revenue centers would be operated as services to the agricultural community. Each of these services would be profitable, although the margins are relatively small on the food processing kitchen rentals and the poultry abattoir. The market assumptions made for each of the three pro forma scenarios examine breakeven, median, and optimistic projections. The assumptions for the breakeven and median scenarios are conservative, in light of the market information obtained on jerky and meat snacks, and on natural meat niche markets. Growth in these markets has been explosive and it shows no signs of abating. The assumptions for the "optimistic" projection are only a fraction of the potential market. It is reasonable to predict that the MUF can reliably cover its operating expenses within five years if the following conditions are met:

- That the MUF is built as designed with non-repayable grants on suitable land;
- That the operating co-operative is provided with start-up funds and working capital;
- That Yukon farmers can and will increase production of red meat; and
- That YAA and the Co-op are able to hire a capable Executive Director.

Breaking even on overhead and expenses is only a minimum performance standard. The potential of the MUF can be reached if only a small portion of Yukon consumers are convinced that Yukon Natural Meats are good value, and if an attractive natural meat snack package can be developed for the tourism market. A market vacancy exists for these products in the Yukon, since natural meats are not retailed local stores, and jerky snacks are neither "natural" nor are they seriously promoted. Success in these under-utilized markets will support the MUF and make it truly self-sustaining.

A sustainable, successful MUF would be a keystone project whose effects will be felt across the agricultural community. A strong demand for natural meats will stimulate production of beef, elk, bison, pork and poultry. These will in turn stimulate demand for fodder, grain, irrigation services, fencing, buildings, and farm equipment. Increased visibility of Yukon meats can only improve the market standing of Yukon vegetables.

In the last decade, Yukon agriculture has developed incrementally, with progress occurring in several areas, including land development, irrigation, farmer's markets, and

farmgate sales. Potatoes have had the most impressive penetration into the retail market, but further growth for this and for other agricultural commodities face barriers.

The most serious barriers are limited markets stocked by low-cost outside suppliers, price-sensitive consumers, and the high costs of competitive Yukon products. These barriers especially stall local meat producers: Yukon meat is expensive, and imported meat is not; neither retailers nor consumers have a strong incentive to change their purchasing patterns. The abattoir, meant to stimulate increased meat production and sales, is an important and necessary initiative, but it is not sufficient. Farmgate customers don't need and don't care about inspections, and retail meat markets are not interested in high-priced, swinging sides. Three more elements are needed for Yukon meat to successfully expand:

- a market identity and strategy to successfully position Yukon meat as a high-price, high-quality leader (Yukon Natural Meat niche)
- a Co-op (or comparable entity) to implement the marketing strategy
- a facility to enable the Co-op to control the Natural Meat brand and increase the demand for Yukon meat by processing fresh meats and value-added meats for new market segments.

The feasibility analysis indicates the following conclusions:

1. The project cannot be expected to repay capital unless it starts earning in the upper strata of the possible market.
2. The project needs to sell products just to break even. The fee-for-services will not earn enough.
3. The stronger the Co-op, the stronger the project. If the Co-op successfully retailed fresh and processed Yukon Natural Meats, it could support the MUF and provide dividends to livestock producers that would more than make up for their individual sales efforts.
4. The pro formas show that value-added products really add to the bottom line. It is worthwhile emphasizing these.
5. The key to selling Yukon meat is a niche strategy that creates a Yukon Natural Meat brand. There are a number of issues to resolve, including standards, meat quality, and grading of products.
6. The chief concern is whether Yukon farmers can produce enough livestock to meet demand if the strategy succeeds. Land base and fodder may be constraints.
7. Waste disposal will have to be addressed for the livestock and poultry industries if demand grows as projected. On-site burial is only a stopgap measure.

The MUF can be self-sustaining and it has good prospects for thriving. In doing so, it can provide services to other sectors of strategic importance – most immediately to food processors and poultry growers. It will also complete and complement the abattoir, guaranteeing that the public gets full value from this piece of infrastructure. The docking bay in the proposed MUF (see plans in Phase II Report) will provide warm winter storage for the abattoir so that its cold-weather limitations can be overcome. The expected increase in livestock production will keep it busy year-round.

In the long run, the MUF can be the centerpiece of what could develop into an agricultural infrastructure park. Other services could be expected to locate on the property, such as a fuel card lock, fertilizer and equipment storage, vegetable cold storage, and perhaps a secure and convenient location for equestrian facilities and

fairgrounds. The ramifications for agriculture, for tourism, for the Yukon economy, and for the culture and community of rural Yukon would be great.

The essential first step would be to secure a property that meets the immediate needs of the MUF project and the long-term needs of the agricultural infrastructure park. The YAA has identified an excellent candidate property on the Mayo Road. Such properties are not often on the market and it would be wise to secure a suitable one if the MUF project becomes a priority for YAA.