

U.S. Department of Agriculture
2012 Census of Agriculture
County Profile: Lincoln County, Washington

Table 6: Overall Comparison, 2007 - 2012

	2012	2007	% change
Number of Farms	897	798	+ 12
Land in Farms	1,114,940 acres	1,090,178 acres	+ 2
Average Size of Farm	1,243 acres	1,366 acres	- 9
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Market Value of Products Sold	\$183,244,000	\$126,216,000	+ 45
Crop Sales \$173,610,000 (95 percent)			
Livestock Sales \$9,634,000 (5 percent)			
Average Per Farm	\$204,286	\$158,165	+ 29
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Government Payments	\$20,307,000	\$15,371,000	+ 32
Average Per Farm Receiving Payments	\$29,176	\$25,834	+ 13

Table 6 shows there were 897 farms in Lincoln County in 2012, up from 796 in 2007 although the average size of farms decreased from 1,366 acres to 1,243 acres. The value of all products sold was \$183,244,000 consisting of \$173,610,000 in crop sales and \$9,634,000 in livestock sales. Farms by size and relative distribution of land in use are shown in the graphs below.

Aerial Inspection Services



The use of aerial drones to replace helicopters and fixed wing aircraft inspections of agricultural fields, power lines, topographic features affecting development, and a wide range of other activities is rapidly becoming a new standard of operating procedures. It is also a new standard for rapid and targeted response to emergencies and natural disasters.

It was noted in the introduction to this report that a drone was used by the engineering firm MFA to survey the fairgrounds at Davenport and identify utility infrastructure along with other features important for redevelopment and reuse of the land and buildings. The Coeur d'Alene Tribe recently used a drone to overfly the Circling Raven Golf Course to measure topographical features and distances to improve the course layout and plan for its maintenance.

The location of the Davenport Airport is ideal for offering aerial drone services to farmers and other customers in northeastern Washington. It is outside the operational areas of Spokane International Airport and Fairchild Air Force Base yet is close enough to attract skilled technicians and mechanics to adapt the drones for their specific requirements.

Offering an aerial drone service would lead to support businesses such as maintenance and repair and possibly even manufacturing. There is growing demand for replacement and custom parts for vintage aircraft that is being met through 3D additive manufacturing. This concept is explored in more detail in the next section of this report.

5. Commuter Labor Force

The part of the labor force that lives in the Davenport area but works in Spokane County is an important resource for business development. Typically, people who commute 20 miles or more would prefer to have jobs closer to home. Many of those workers could be candidates for starting or working at entrepreneurial or innovative businesses that could be developed at the fairgrounds. They could also work for companies locating facilities at the fairgrounds

There is currently strong interest among U.S.-based businesses for bringing the industrial supply chain back to the United States for logistical controls, cost containment, and quality assurance. The Lincoln County Fairgrounds could become a strategic location for this “on-shoring” trend in northeastern Washington. A strategy for achieving this is described in detail in the next section of this report.

These are only a few of the business concepts that could be supported by the resources available at the fairgrounds. Business plans, financial analyses and other details are not provided in this section in order to focus on the business models that are considered to have the highest potentials for commercial success in Davenport. These are described in the following section of this report.

LINCOLN COUNTY FAIRGROUNDS
HIGHEST & BEST USE ANALYSIS

DEVELOPMENT AND IMPLEMENTATION STRATEGIES

SUMMARY OF OBJECTIVES / REQUIREMENTS

The business development strategies recommended in this report need to achieve the objectives that the Lincoln County Commission set forth in its grant application to the Washington Community Economic Revitalization Board (CERB) and its contract with Elesco LLC to perform this study. Those clearly state that the primary objective of the Commission is to increase its net revenues from the Fairgrounds to cover its ownership costs and reverse the negative cash flows resulting from low value, part-time uses of the facilities such as off-season dry storage. If that objective cannot be achieved, then the alternative may be to sell the property as a development site for uses other than as a fairgrounds.

The analysis of the Lincoln County economy showed that there is not a stream of economic activity that the fairgrounds can simply tap into. There is no pattern of demand for land and buildings in Davenport that would support opportunities for market absorption through land and building leases. Based on the State's GMA population growth forecasts there is not likely to be any significant increase in demand for the foreseeable future. Instead, the approach to enhanced utilization of the fairgrounds property will require a managed *economic development* strategy, i.e. a strategy that requires creating demand in Davenport by enlarging its scope of business and industrial activities. This report focuses on two primary potential opportunities that are considered to be realistic and achievable over the three-to-five year time frame cited earlier:

- (1) Developing forward and backward linkages to the dominant economic sector in Lincoln County which is Agriculture, primarily wheat production, along with other grains, livestock, and other diverse agricultural commodities;
- (2) Linking into the larger and more diversified market that exists in adjacent Spokane County by participating in the supply chain that supports regional manufacturers.

It needs to be considered that the fairgrounds may not be the only, or best, property in Davenport for achieving these objectives. Instead, the fairgrounds might be used as the initial incubator site for stimulating creation of new businesses that can relocate to larger and more suitable sites in Davenport for long-term growth. These would produce the needed revenues indirectly to the County by raising overall levels of economic activity with commensurate increases in employment, taxes, and retail sales.

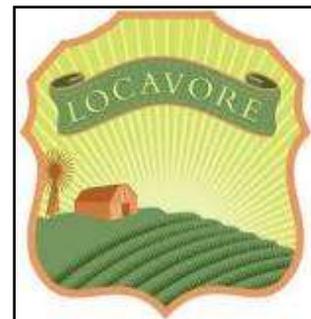
Using the fairgrounds land and buildings as a “feeder” would require developing a business and industrial park with lots and/or buildings for lease that could accommodate companies growing out of the fairgrounds facilities. The ideal location for such a facility is across Hwy 2 at the Davenport Municipal Airport. There are existing plans to expand the airport and including a business park should be part of that planning process. It could stand on its own to attract businesses to Davenport, especially in the Aviation and Aerospace sector, in addition to providing expansion opportunities for businesses relocating from the fairgrounds.

Further discussion of the goal of developing a business park at the airport is provided in Strategy 2 of this section.

Strategy #1: Develop Linkages to the Agricultural Base of Lincoln County

The first strategy is to use the fairgrounds as an asset to leverage Lincoln County’s agricultural production, primarily wheat, to develop new products and new methods of production to add local value. There are several resources available to support such efforts including Washington State University, the Washington Department of Agriculture, and the Washington Association of Wheat Growers. An alliance might also be created with Shephard’s Grain to expand opportunities for mutual benefit.

One way for Lincoln County to utilize its fairgrounds for agricultural production would be to create a partnership with an existing flour mill company such as ADM to construct a small mill to produce flour on-site along with products made from other grains, possibly combined with other local ingredients. There is growing consumer support, known as the “locavore” movement, for buying locally-made products from locally-produced ingredients, generally within 100 miles of the growing site. A related trend is known as the farm-to-table movement, (or farm-to-fork and in some cases farm-to-school) which is a social



movement that promotes serving local food at restaurants and school cafeterias, preferably through direct acquisition from the producer.



One of the benefits of developing this capability at the fairgrounds is that it would be a demonstration project to call attention to the agricultural orientation of Lincoln County and would help promote attendance and participation at the Fair. It might also allow new product developments by local entrepreneurs with common branding to emphasize “made in Davenport” or “product of Lincoln County”.

A website description of a custom organic flour mill in Burlington, Washington is shown above. This type of mill would focus on supplying local consumer markets but could also develop larger regional and national markets through branding, on-line sales, and sales through distributors and retailers such as Whole Foods, now part of Amazon.

In 2012, the University of Vermont conducted a feasibility study for developing a multi-purpose grain processing facility in that state. The study found that a commercial scale mill in Vermont could break even on an EBITDA cash flow (earnings before interest, taxes, depreciation and amortization) selling certified organic flour at \$0.50 per pound if it could achieve a minimum operating capacity of 30% in a purchased land scenario and 40% in a leased land scenario.

If the Lincoln County Commission were to participate in developing this facility at the fairgrounds, that site would be leased from the County providing revenues from the land lease as well as a possible percentage of the net operating revenues (a participation lease). The economics of that arrangement would depend on the amount of the land lease, the size of the mill with associated volumes of supply and sales, along with supply acquisition and sales prices. A key variable for the land lease revenues would be amortization of infrastructure development costs. Whatever the gross amount of net revenues, this would make a positive contribution to off-setting the costs of maintaining and operating the fairgrounds facilities.

The picture below shows the main mechanical equipment required for operating the flour mill that was studied by the University of Vermont.



An example of the 75 ton per day AGREX DB 1000 mill. The following advantages are provided by the manufacturer.

- One milling line, grinding capacity: 25 Tons / 12:0 am.
- Ideal to grind soft and durum wheat, buckwheat, spent, kamut, rye and other cereals.
- Complete milling lines, horizontally developed: cleaning, tempering, resting and grinding units on one flow. They do not need specific buildings for the installation.
- Available in different models and versions to satisfy every client's needs with maximum flow flexibility, reduce the maintenance and running costs, obtain excellent qualities and outputs.
- Cut down installation time: all our milling lines are assembled and tested in our factory.
- AGS10 mills can be multi-line installed, allowing one to obtain different kinds of flours optimizing the production demands.
- According to AGREX, "the overall investment is not comparable to that of a traditional mill: the economic return is definitely quicker!"

Along with the mill itself, following is a complete list of capital equipment and infrastructure costs for the Vermont model:

CAPITAL COSTS

MILL	\$566,000
MILL TRANSPORTATION	\$15,000
STORAGE TANKS (EXTERNAL)- assume 8 100 ton silos, x 50,000	\$ 400,000
CONVEYORS	\$ 50,000
BUCKET ELEVATOR	\$ 20,000
FORKLIFT	\$ 6,000
WORK BENCH & TOOLS for maintenance	\$ 5,000
CLEANING EQUIPMENT (Shop vac- \$500, etc.)	\$ 5,000
CLEANER	\$ 45,000
DRYER	\$ 100,000
ASPIRATOR/AIRWASH	\$ 45,000
BUILDING/CONSTRUCTION, EXPLOSIVE PROOF	\$ 100,000
PLUMBING	\$ 50,000
ELECTRICAL SWITCH	\$ 13,000
ELECTRICAL WIRING	\$ 65,000
FLOUR BAGGER	\$ 200,000
TOTAL	\$ 1,685,000

On the supply side, it appears that a flour mill at the fairgrounds would be able to acquire the needed inputs from local sources. According to the U.S. Department of Agriculture data cited above, Lincoln County's wheat crop often exceeds 25 million bushels annually. At 60 pounds per bushel, that represents approximately 750,000 tons of wheat per year. The University of Vermont feasibility study used input consumption figures of 2,455 tons of local grain per year at 40% operating capacity and 6,150 tons at 100% capacity. Those numbers represent 0.33% and 0.82% of the total production of wheat in Lincoln County respectively. There may be issues with existing supply contracts but it is assumed that a sufficient supply could be negotiated.

LAND REQUIREMENTS

For its location, the University of Vermont model recommended a site of 3 – 4 acres which would allow for future expansion. Initially, however, the study stated that **“a minimum of ½ acre should be sufficient to house the mill itself”**. By reconfiguring some of the facilities at the fairgrounds, it is believed that a suitable site to house a flour mill could be developed. Existing streets and open spaces could be used to support the mill when they are not required for the annual fair.

The mill shown above would require a 6,200-square foot space with access to water, three phase power, truck loading/unloading docks, and room for at least three external storage tanks to hold raw grain and by-products.

There is discussion in the model about whether the facility would need to be located on rail. It stated that while this would be desirable, it is not a necessary requirement. If rail is not available, then the product would have to be transported by semi-trailer. The study stated that “transportation expense for the mill to acquire wheat is estimated at \$3/loaded mile assuming a semi-trailer transporting 22 tons an average of 200 miles per load”. However, as noted earlier, about 1.2 million acres are in agricultural production in Lincoln County with the bulk of that used for growing wheat. While most of that wheat goes to export, some of it finds its way to the ADM flour mills in Spokane and Cheney. It is expected that a sufficient supply could be diverted to a local flour mill in Davenport and the costs shown above would be reduced accordingly.

There could be significant benefits to Lincoln County from constructing a grain mill and developing a consumer product line from the fairgrounds site. The staffing requirements for the mill include a mixture of skilled (trained) operators along with management, maintenance, and professional personnel. According to the University of Vermont study, “At break-even, the mill is expected to be able to operate with two production staff per shift (four production staff to cover two shifts), one full time plant manager/head miller, one office manager, one part-time agronomist/lab/production/grower liaison, and one sales/marketing associate. As production increases, additional hourly wage production staff can be hired as needed”.

While the Vermont model provides a detailed list of requirements and costs to construct and operate the mill used in the model, the County could also look at smaller mills that would require less land and building space. Options are available that would require only a 1 – 2 acre land site and a smaller building but the economic benefits to the County from a smaller mill would also be smaller.

HOW TO MAKE THIS HAPPEN

The University of Vermont study provides a detailed list of steps that it would take to make this project happen. One of their first recommendations is to partner with an existing company in the business and create a unique brand – a Davenport or Lincoln County brand. “The best likelihood for success will be if the mill can enter into a mutually beneficial relationship with an established brand. In such a relationship, the mill could be independently owned and operated, or operated as a co-owned entity with the partner.

The mill would take responsibility for the risk and resources required to source and produce the product, and sell the product to the partner for resale. The partner brand would take ownership of championing the product in its established sales and marketing channels and would provide supportive technical expertise to the mill on production issues and concerns.”

Their recommendations for next steps are listed below. These would also generally apply to any sized mill the County would locate at the fairgrounds.



1. Approach each of the potential milling business partners to discuss their interest and possible involvement in the project. If there is interest from one or more entities, development of a business plan should ensue.
2. Approach individuals interested in owning/operating the mill. Several existing mill and feed operations have expressed interest in exploring opportunities to expand their businesses and might consider a commercial scale grain mill. Contacting Alex McGregor in Colfax could provide an expanded list of potential investors. The McGregor Company serves growers in Washington, Idaho and Oregon with the seed, crop inputs, equipment, research and advice needed to raise healthy, sustainable crops. It would also be worthwhile to contact Congressman Dan Newhouse, former director of the Washington Department of Agriculture, to seek federal support for the project.
3. Develop a business plan

- a. Identify a project lead to work on the development and coordination of the business plan and interested parties.
- b. Prior to investing in a new mill, existing milling companies may be willing to provide toll milling service or buy regional wheat and create a line of locally-grown grain products with their existing milling infrastructure. The transition to a new mill could come after the market is established.
- c. Work closely with partners, producers, state agencies, individuals, and organizations who have expressed an interest in the project to continue to build buy-in and support for the project.
- d. Finalize ownership and business model.
- e. Continue to research product specifications and mill infrastructure to ensure design-and-build infrastructure will meet product needs. For this study the AGREX AGS-1DB-1000 mill which is the mill used by La Meunerie Milanaise for its certified organic, All Purpose White Flour was used as the basis for production and cash flow analysis. However, some commercial bakers might prefer flour produced from the mill equipment used by other bakers.
- f. Finalize site selection and location with a lot size of 2-4 acres allowing for future expansion would be ideal.
- g. Refine cash flow and financial projections.
- h. Develop a target market prospect list with projected sales volumes, seek to secure placement for 2,500 tons of flour (which equals the volume produced at 40% operating capacity and is the default minimum volume required to break even to cover both a leased or purchased scenario).
- i. Explore additional products. Research the potential demand, production needs and feasibility for other grains and products. Let local entrepreneurs know of opportunities to create specialty projects that will be promoted under the common brand.
- j. Budget for a liaison with technical expertise in local wheat production to interface between the growers and the mill to coordinate product flow and provide technical assistance to growers while also providing technical assistance to the mill. This will boost the project's ability to produce more consistent grain but also help the mill adapt to potential variations in incoming product. While the goal is to produce consistent quality grain inputs, the study found that the nature of smaller scale production, and variations in soils and topography will naturally increase the likelihood that there will always be fluctuations in the raw inputs. Therefore to proactively minimize these weaknesses from threatening the business, developing a plan that includes partnering with an experienced miller who can adapt to

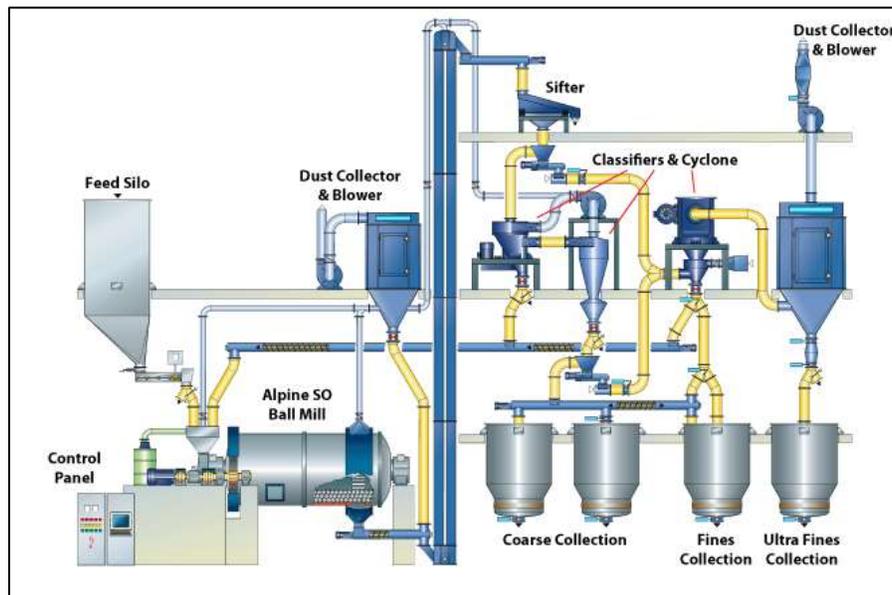
variations in raw inputs and having a technical liaison who can provide assistance both to the miller and the grower would be ideal.

Liaisons should also be built with Washington State University, Washington Wheat Commission/Grain Producers Association, and the Washington Department of Agriculture.

ALTERNATIVE OF A UNIFINE MILL

Another option to put a flour mill into the Lincoln County Fairgrounds would be to acquire a Unifine mill and operate it similar to the one being placed in Ritzville. This could be done at significantly less cost and space requirements than the standard roller mill described above.

Instead of grinding the grain (stone mill) or shredding & sifting the grain (roller mill), the Unifine Mill is a type of impact milling system similar to a hammer mill. The system pulverizes the grain on impact - resulting in minimal starch damage and a more optimum and uniform flour particle size compared to flour produced by other systems. The rotor and stator are extremely durable and offer long-term, dependable milling.



Unifine Flour Mill Process Diagram

According to an article in Washington State Magazine, "The wheat or other grain is blown into a high-speed flywheel which pulverizes the grain against the rough surface of the container. After one pass, the exploded material blows into a sifting system, producing whole grain flour with a very fine particle size. The result has a higher protein content, more nutrients, and a

longer shelf life. Roller mills require added moisture to process wheat which could explain reports of less rancidity for the drier Unifine flour”.

Rather than providing detailed descriptions of this milling equipment and process, it is recommended that the Commissioners review the information at <https://www.azurestandard.com>. Information from customers who use the flour produced by a Unifine flour mill also describe the very wide range of products that can be made, branded, and sold to the market. Also, Washington State University has been involved in researching all aspects of this type of mill since the early 1950s and can provide Lincoln County with specific information related to establishing and operating a Unifine flour mill at Davenport.

Other opportunities to utilize the agricultural products grown in Lincoln County and surrounding areas can also be explored but are not examined in this report. Some of these may include hydroponics, aquaponics, greenhouse farms that produce fruits and flowers, and assemblage of home-grown agricultural products to be sold under a common label. A wine and/or craft brewery or distillery tasting room would also draw tourist customers to the fairgrounds and could lead to a production operation there. There should be an opportunity to develop a Davenport or Lincoln County brand that could find markets outside the region and even for export.

STRATEGY #2: CREATE A “PRODUCT” CAPABILITY TO MARKET AS PART OF THE SUPPLY CHAIN TO SPOKANE AREA MANUFACTURERS

This strategy will take a great deal of dedicated effort, time, and capital investment to make it happen. However, it has the potential to diversify and strengthen the economy of Lincoln County. It could capture a sizable portion of the labor force that is currently commuting to Spokane County, which would significantly increase demand for retail products and services in Davenport and also in Reardan and other communities in Lincoln County.

- What is the product you want to sell?
- What is the market for that product?
- How do you produce and deliver that product to the market?

It all begins with having a product to sell. Several resources have been identified as potential assets for a product that could be made in Davenport including the fairgrounds buildings, a

commuter labor force that is already employed in Spokane County, and geographic proximity to businesses located there. Those assets can be combined in many different ways and this report has suggested several potential businesses that could be created from them. After extensive evaluation of all the options, the preferred recommendation is:

Formation of a new business/educational/innovation entity specializing in custom precision fabrication and additive manufacturing to make components of the supply chain for companies in the Spokane area that are engaged in manufacturing and final assembly operations in selected industry clusters.

For general reference, the enterprise is called Davenport Precision Machine (DPM) in this report.

This strategy would be starting from scratch since that kind of business does not exist in Davenport today. Developing the business will mean acquiring the necessary equipment and technically skilled operators to make component parts as inputs to end user companies rather than final products for business or consumer markets. The facility could also operate as a subcontractor to existing fabricators and machine shops in the Spokane area, providing them with additional operating capacity without having to add to their own equipment and employees.

As noted earlier in this report, there is a growing trend among U.S. companies, especially OEM companies (original equipment manufacturers) to bring their supply chains back into the United States from off-shore locations. This is being done to control the logistics of the supply chain, i.e. ensuring that deliveries of components match the timing of their use as well as to control quality and pricing. OEM manufacturers are looking for domestic companies that can meet these requirements as well as match costs to what they would pay to offshore suppliers and to cover transportation and handling costs.

In evaluating the dynamic business activity in Spokane County, much of the emphasis on business development, both recruitment and expansion, is on industrial clusters. The following description of industrial clusters was written by Kathryn Tacke, regional economist for the Idaho Department of Commerce.

Industrial clusters are groups of industries located in the same area and tied to each other by common products, services, supply chains, and/or workforce needs. The industries in the clusters may have developed to support another industry within the cluster. Firms in the cluster may compete against each other, because they make the same products or services, or they may cooperate as part of a common supply chain. They often have similar workforce needs, and workers who receive training in one firm in the cluster may be able to find work easily in another firm in the same cluster. Clusters generally form based on an area's comparative advantages.

The main clusters targeted by Greater Spokane Incorporated were identified in the profile of Spokane County as (1) Advanced Manufacturing; (2) Aerospace; (3) Health Sciences; (4) Clean Technology, Energy Efficiency, and Renewables; (5) Information Technology and Telecommunications; (6) Digital Media; and (7) Innovation / Entrepreneurship.

The State of Washington has also identified specific industry clusters as targets for business recruiting and development. Their approach is different, however, in that they are targeting types of businesses that they believe represent the emerging clusters that will be dominant in tomorrow's economy. Those consist of:

Cloud Computing Cluster	Nanophotonics Cluster
Advanced Materials Cluster	Global Development Cluster
Environmental Technology Cluster	Advanced Manufacturing Cluster
Freight Mobility Cluster	Value Added Food Processing Cluster
Smart Grid Cluster	Defense Technology Cluster
Health IT Cluster	Biomedical Device Cluster
Electric Vehicle Cluster	Clean Tech Cluster

These clusters were selected based on analysis by Washington's Workforce Training and Education Coordinating Board for the purposes of training the workforce of the future. Some of these are in the same categories as those targeted by Greater Spokane Inc. while others may apply specifically to Lincoln County such as the value added food processing cluster.

Since the Davenport area does not currently have an advanced machining capability or reputation for being a supplier of advanced materials components, it will be necessary to develop that capability quickly and effectively. The strategy recommended in this report is to create an advanced manufacturing “laboratory” containing a fully operational CNC machine shop along with an educational/training component with university support and an innovation center where skilled workers and entrepreneurs can develop their own products and delivery systems. The key to that strategy will be to partner with an existing private company that already has production capabilities and customers for its products.

Rationale for picking the supply chain Strategy

It is not intuitive that the strategy for developing businesses at the Lincoln County fairgrounds should rely on creating a technical capability that does not currently exist. Following is a brief explanation for the rationale of that strategy.

In the research on business trends and patterns in Spokane County, it became evident that the next several years will see significant growth of technology-oriented businesses in the West Plains area between Davenport and Spokane. While Fairchild Air Force Base already provides a major source of potential business, the creation of the West Plains/Spokane Airport Area Public Development Authority will add opportunities to expand the number of businesses that could be targets for a machine shop operation in Davenport. Passed by the Spokane City Council on July 17, 2017 the ordinance creating the PDA states its objective of enhancing economic development in the West Plains/Spokane Airport area which could be a parallel interest of eastern Lincoln County. With growth that has already occurred, plus this new plan for economic stimulus, the market for these kinds of services is moving toward Davenport. The proposed business/training/incubator center at the fairgrounds will provide a link to that market.

Rather than focusing on piecemeal, individual development of unrelated businesses at the fairgrounds, the rationale for this strategy is to begin the process of linking into the larger economy of Spokane County and establishing Davenport and Lincoln County as important contributors to the economic growth and prosperity of the region. This would be a major leap forward by creating a new economic sector in Lincoln County rather than taking incremental steps to expand existing economic sectors.

That will require building relationships with businesses and organizations that will assist Lincoln County to achieve these objectives. For example, Greater Spokane Inc. has been cited as having extensive and well-funded programs, along with personnel, to work toward expanding targeted business sectors in the region. In meetings with GSI executives, it was learned that they are not limited to working with companies in Spokane County only and would be receptive to assisting companies in Lincoln County that can help them achieve supply chain independence. It is recommended that the Lincoln County EDC participate in business forums and other programs of GSI (and consider becoming a member) in order to build relationships with their staff and other members. This strategy will also require strong organization support in Lincoln County and a commitment over a three-to-five year period to make this process work.

There may also be opportunities to recruit start-up companies from the Seattle Metropolitan Area. High land and building costs, scarcity of affordable housing, and extreme traffic congestion have encouraged smaller companies to seek locations where they can serve customers in the Seattle area while being able to operate more efficiently and less expensively. As they look to the Spokane area, the incubator facility at Davenport will show up on their radar.

Organizational structure

The organizational structure of this entity needs to be kept simple but still encompass three components that will work together to acquire funding and cross-utilization of resources:

- An advanced CNC machine shop to produce products for the supply chain.
- An educational component that can provide workforce training in support of Washington's Workforce Training and Education Coordinating Board's objectives.
- A product development laboratory providing innovation and shared workspace facilities for entrepreneurial development. This should include 3D printing capabilities.

The simplest approach will be to create the entity through an existing non-profit agency, such as the Lincoln County Economic Development Council. This will allow work to begin immediately on putting the resources together that are needed for the project. A business plan for the project is provided below that includes the key resources required. If a Port District or a PDA is

formed to oversee this process, then the details of the structure will depend on which form of governmental agency is created and how long it will take to become operational. If the Lincoln County Commission wants to pursue this strategy, it will need to carefully consider its options and make a decision on what kind of economic development entity it wants to spearhead the effort.

Fairground location

Several buildings at the fairgrounds could be made suitable for a small manufacturing facility/ machine shop with the addition of the utilities required for its operation. This report recommends using Building #15 located just south of the main hall at the entrance to the



fairgrounds. The main hall has a commercial kitchen that could be used as its own incubator to develop new food products in the value added food processing cluster.

←Interior of Building #15 – the Commercial Building

Building #15, known as the “commercial building”, is a Quonset hut that was

constructed in 1970 with ±4,800 square feet of interior space in dimensions of 40 feet wide by 120 feet long. It has no windows but does have skylights.

Establishing a commercial operation in Bldg. #15 would impose minimum conflicts with other activities at the fairgrounds, would provide easy access for cars and trucks from Hwy 2, and could utilize existing parking for employees and visitors. A building of this size should be sufficient to serve as an incubator for companies entering the supply chain but still is small enough to encourage them to relocate to permanent space as they expand.

Operating model / Business Plan

Following is an outline of a Business Plan that describes a step-by-step process to either buy an existing machine shop and relocate it to the fairgrounds site or develop a machine shop on-site and steadily expand its capabilities as its business grows. The Plan follows the standard format for SBA business plans but directs its major emphasis to the action steps required to establish the business at the fairgrounds.

PART 1: BUSINESS DESCRIPTION

The enterprise being proposed is an advanced machine shop operating Computer Numerically Controlled (CNC) metalworking machines. It would not initially produce its own products but would instead make component products under contracts with other manufactures. It would be classified under NAICS 332710 – Machine Shop. According to the U.S. Census Bureau, “This U.S. industry comprises establishments known as machine shops primarily engaged in machining metal parts on a job or order basis. Generally, machine shop jobs are low volume

using machine tools such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling”.



Typical Machine Shop Floor

While the initial focus is on metalwork and machining, future expansion should plan for new technologies such as additive manufacturing or 3D printing capabilities.

Definition of machine shops: NAICS 332710

A machine shop is generally described as a facility that has machine tools for working with metals or other relatively hard materials, such as some polymers. Various kinds of machine shops make and repair all types of metal objects, from machine tools, dies, and molds to mass-produced parts such as screws, pistons, or gears.

Machine shops use a wide variety of metal-working tools, including:

- drills
- lathes
- milling machines
- presses
- cutting and welding equipment
- grinding and polishing machines

Manually-operated equipment is used in metalworking shops that repair and refurbish mechanical equipment, such as agricultural implements, on an individual basis. Products that require high volumes and/or precision machining generally are controlled by computers in a process called Computer Numerical Control (CNC) machining. Tools that can be controlled in this manner include lathes, mills, routers and grinders.

On the surface it may look like a normal PC controls the machines but the computer's unique software and control console are what really sets the system apart for use in CNC machining.

Under CNC Machining, machine tools function through numerical control. A computer program is customized for an object and the machines are programmed with CNC machining language (called G-code) that essentially controls all features like feed rate, coordination, location and speeds. With CNC machining, the computer can control exact positioning and velocity. CNC machining is used in manufacturing both metal and plastic parts.

First a CAD drawing is created (either 2D or 3D), and then a code is created that the CNC machine will understand. The program is loaded and finally an operator runs a test of the program to ensure there are no problems. This trial run is referred to as "cutting air" and it is an important step because any mistake with speed and tool position could result in a scraped part or a damaged machine.

There are many advantages to using CNC Machining. The process is more precise than manual machining and can be repeated in exactly the same manner over and over again. Because of the precision possible with CNC Machining, this process can produce complex shapes that would be almost impossible to achieve with manual machining. CNC Machining is used in the production of many complex three-dimensional shapes. It is because of these qualities that CNC Machining is used in jobs that need a high level of precision or very repetitive tasks.

Skills required to operate CNC machines typically include a background in mathematics, industrial arts and mechanical drafting, as well as computer usage.

There are three ways that Davenport Precision Machine could be started:

(1) The standard way to start this business would be to contract with an experienced individual to manage the process of setting up and equipping the facility to engage in targeted production capabilities. This would allow the minimum of front-end capital investment and limit the operation to known types and quantities of output

(2) The second approach would be to buy an existing machine shop and plan to relocate it to the fairgrounds site. One way to do this would be to acquire majority ownership of a successful operation and keep it at the existing location performing work for its existing clients. This would allow the Lincoln County organization to use the company as a base for training and transitioning managers and employees into the operation prior to relocating it.

For example, an existing CNC machine shop was recently for sale in Boise, Idaho. Its description in the listing was: “Highly profitable CNC Machine shop with new equipment. The company provides high-precision machined parts for a number of different industries including electrical, semi-conductor, microwave, avionics, food processing and production, and medical devices. They offer quick-turn prototype parts and tooling for small to medium volume production runs”.

The asking price was \$1,920,000 with \$1,200,000 of FF&E (furniture, fixtures, and equipment) and \$70,000 of inventory. Seller financing was available. Gross sales were given as \$2,480,000 annually and the EBITDA earnings were \$461,521 (before interest, taxes, depreciation and amortization). The firm had 27 employees and was established in 1993. The firm operated in a facility with office and shop space of about 8,500 square feet although the real estate was not for sale.

The listing said that the seller was willing to provide support and training for three months and to facilitate a smooth transition.

This is only one example of an enterprise that could be acquired to jump start DPM in the business. There may be other machine shops for sale in the local area that could offer similar advantages or could be acquired for their equipment only.

(3) The third approach is the one that is recommended for the Lincoln County Fairgrounds: Form a partnership with an existing company that operates a machine shop specializing in the kinds of markets Lincoln County would most like to serve, i.e. the targeted industrial clusters described above such as the aerospace industry, and offer DPM as an independent branch operation of that company.

According to an industry directory, there are 50 machine shops in the area operating with Spokane addresses.

Machine Shops with Spokane Addresses

AAA Machine Shop 2824 N Nevada Street Spokane WA (509) 483-4000
Acme Machine Works 1220 N Bradley Road Spokane WA (509) 927-9066
Advanced Engines-Westberg 305 South Dishman Road, Spokane, WA 99206 (509) 926-1555
All Western Machine Works, Inc. 3800 N Sullivan Road Bldg. 10 Spokane WA (509) 924-6718
All-Cast Welding & Machine 2505 S Hayden Road Spokane WA (509) 535-9343
Allard Engines 5324 E Desmet Avenue Spokane WA (509) 534-6664
Alta Machine 2923 N University Road Spokane WA (509) 924-2089
Alutek, Inc. 3401 N Tschirley Road Spokane WA (509) 924-2689
Blazer Manufacturing & Powder Coating 3220 N Tschirley Road Spokane WA (509) 922-0149
Bowman Manufacturing 6002 E Alki Avenue Spokane WA (509) 532-0431
Briggs Machine & Fabrication 5308 E Sharp Avenue Spokane WA (509) 535-0125
Carlson Machine Works 3310 E Trent Avenue Spokane WA (509) 535-9925
Crescent Machine Works, Inc. 821 N Monroe Street Spokane WA (509) 328-2820
Dana-Saad Company 3808 N Sullivan Road Bldg. 105 Spokane WA (509) 924-6711
Danielson Tool & Die 9924 E Jackson Avenue Spokane WA (509) 924-5734
Eastern Electric 3712 N Flora Road Spokane WA (509) 922-2112
Ground Down Fabrication 4104 E Joseph Avenue Spokane WA (509) 484-6833
I-90 Express Finishing 7720 E Valleyway Avenue Spokane WA 509 922-2297
Inland Empire Plating 2401 N Eastern Road Spokane WA (509) 535-1704
Inland Machine & Manufacturing 12406 E 1st Avenue Spokane WA (509) 928-5798
Inspection Plus 6205 E Nixon Avenue Spokane WA (509) 534-9290
Intermountain Machine 3800 N Sullivan Road Bldg. 4 Spokane WA (509) 928-1276
Interstate Parts & Equipment 3511 E Trent Avenue Spokane WA (509) 535-0233
Kinetic Balancing & Machine 3117 E Glass Avenue Spokane WA (509) 489-2762
MacKay Manufacturing 10011 E Montgomery Drive Spokane WA (509) 922-7742
Machine Tech USA, Inc. 1112 N Nelson Street Spokane WA (509) 535-1967
Marlowe Machine 2718 N Perry Street Spokane WA (509) 484-5979
Master Machining & Manufacturing 2524 S Hayford Road Spokane WA 509 244-3523
Middco Tool & Equipment, Inc. 2401 N Eastern Road Spokane WA (509) 535-1701
Northwest Wire EDM, Inc. 1620 N Mamer Rd. Bldg C, Suite 300 Spokane WA 99216 (509) 893-0885
Novation, Inc. 2616 N Locust Road Spokane WA (509) 922-1912
Patterson Tool & Die 2921 N University Road Spokane WA (509) 926-0403
Precision Machine & Supply, Inc. 3808 N Sullivan Road # N7 Spokane WA (509) 922-1666
Precision West Machining, Inc. 6523 E Main Avenue Spokane WA (509) 534-0459
Proto Technologies 11808 E Mansfield Avenue Spokane WA (509) 891-4747
Proto Technologies, Inc 11808 E. Mansfield Spokane WA 509 891-4747
Quality Machine, Inc. 3512 E Crown Avenue Spokane WA (509) 487-8294
Romine Manufacturing Company 3353 E Trent Avenue Spokane WA (509) 533-0870
Scharff Manufacturing 1514 E Riverside Avenue Spokane WA (509) 536-4187
Schlosser Manufacturing 6009 N Julia Street Spokane WA (509) 483-1301

Shamrock Machining 5704 E 1st Avenue Spokane WA (509) 534-3031
Specialty Machining & Manufacturing Company 8012 W Geiger Boulevard Spokane WA (509) 747-1481
Spur Industries, Inc. 17404 E Euclid Avenue Spokane WA (509) 924-2800
Tek Manufacturing, Inc. 6315 E Alki Avenue Spokane WA (509) 534-9341
UTEC Metals - East 17305 Euclid Ave. Spokane, Washington 99216-1725 (509) 922-1832
Valley Machine Shop 3522 N Flora Road Spokane WA (509) 928-8464
Vestal Jobber Manufacturing Company 902 N Dyer Road Spokane WA (509) 534-4830
WMS 1717 E Grace Avenue Spokane WA (509) 489-6724
Wagstaff Engineering, Inc. 3910 N Flora Road Spokane WA (509) 922-1404

Competitive Landscape

This is a large number of companies and seems like a lot of competition for DPM but these firms cover a wide spectrum of capabilities and services. Most of them are small and offer specialized services to selected parts of the regional industrial base. Demand depends on national, regional, state and local manufacturing activity. The profitability of individual companies is linked to engineering expertise and operating efficiency. Larger shops have the ability to invest in advanced production machinery. Smaller shops can compete effectively by serving specialized customers, or by providing engineering services. The US industry is highly fragmented and the 50 largest companies generate only about 10 percent of total industry revenue.

Harrington Machinery Company Inc. at Davenport was not contacted as a potential partner because all of their website information is focused on agricultural implements and products. A more comprehensive model of the kind of partnership recommended in this report is a company located in the Airway Heights area, only about 25 miles east of Davenport: L&M Precision Fabrication, Inc. The information provided below is only intended to describe the capabilities of a partner company and it is not known if a relationship with L&M could be established. It was reported, but not confirmed, that this company has been recently acquired by another firm and may be relocated from Spokane County. As a model, however, it provides the desirable characteristics of a partner company for a machine shop at the fairgrounds in Davenport.

The following information is provided by the company's website:

L&M Precision Fabrication, Inc. is a full service precision sheet metal forming and machining manufacturer supplying metal, plastic and composite parts and assemblies to a wide range of national customers. L&M started in the Spokane area in 1991 and continues to add process capabilities and capacity at our Airway Heights, WA manufacturing facility. L&M's dedicated employees, computer integrated manufacturing (CIM) systems. Modern CNC equipment and ISO 9001:2008/AS 9100 quality management system make us a leading supplier of precision metal, plastic and composite products destined for customers worldwide

<p>L&M Precision Fabrication 13026 W. McFarlane Rd. Bldg. D1-4 Airway Heights, WA 99001</p>	<p>Toll-Free: 877.773.2322 Phone: 509.244.5446 Fax: 509.244.6341 Web Address: www.LMprecfab.com</p>
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L&M serves a broad base of clients and industries including:

- | | |
|----------------|-------------------|
| Aerospace | Electronic Gaming |
| Agriculture | Medical |
| Communications | Military |
| Electronics | Signal Control |
| Food | Transportation |

Information on the company's website shows that they are looking for qualified workers to join the company. Davenport might be able to offer those workers while also providing a support facility at the fairgrounds to provide the services.

L&M Precision Fabrication employs qualified personnel in the positions listed below.

- | | |
|----------------------------------|-------------------------|
| CNC Turret Punch Press Operators | Powder coat applicators |
| CNC Brake Press Operators | Machinists |
| Welder, thin metal | Hardware/Assembly |

In order to partner with an existing firm, Lincoln County will need to determine what assets it can offer. To confirm that there is an existing, qualified labor force, some economic development agencies have placed ads in local newspapers stating that an unidentified company was looking at locating in the area and needed to verify qualified workers would be

available. The ads asked that workers with identified skills who would be interested in working for such a firm submit their qualifications.

An alternative approach would be for Lincoln County to ask the regional economist for the Washington Department of Employment Security to conduct a survey of workers who commute to jobs in Spokane County to determine what skill sets might be available.

Another advantage that Lincoln County could offer is the existence of a HUB zone that qualifies companies for preferences in bidding on government contracts. Lincoln County currently has a HUB zone that runs until December 31, 2021, as shown below.