

Industrial Hemp Industry Development Working Group

July 28 – 2:30 to 5:00 p.m.

Hosted by VDACS

- 2:30 Call meeting to order, welcome, overview and participant introduction
~ Stephen Versen, Program Manager, VDACS Office of Agriculture and Forestry Development
- 2:40 Review of last meeting, SWOT analysis, industrial hemp target segments
- 3:00 Case Studies:
Golden Piedmont Labs, LLC (formerly Blue Ribbon Extraction)
~ Rick Gregory, Owner
Appalachian Biomass Processing
~ Susan and Christopher Moore, Owners
- 3:30 Overview of VEDP Economic Development Resources and Target Recruitment
~ Michaela Martin, Project Manager, VEDP Products Team
- 3:50 Revise/update SWOT Analysis, target industry segments
- 4:00 Discussion/input on areas specified in legislation:
(iii) anticipated job growth and wage expectations;
(iv) talent and skill requirements;
(v) site and building needs;
- 4:15 Final comments, recommendations, detail next steps
- 4:30 Public comment period
- 5:00 Adjourn

PUBLIC PARTICIPATION

Members of the public may listen to the meeting via the Cisco WebEx platform using the link, access code, and password below.

Event address for attendee:

<https://covaconf.webex.com/covaconf/onstage/g.php?MTID=e156bb6b0509ba65eb8beef48096bd6f9>

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If you would like to comment during the public comment portion of the meeting, please sign up to do so using the WebEx Q&A feature. Via the Q&A feature, send the Meeting Host your first and last name as well as the name of the organization, if any, on whose behalf you will be commenting (e.g., Joe Smith with ABC Organization). If you join the meeting using the audio conference only or are unable to locate the WebEx Q&A feature to sign up for the public comment portion of the meeting, please email your first and last name as well as the name of the organization, if any, on whose behalf you will be commenting to Erin.Williams@vdacs.virginia.gov. During the public comment portion of the meeting, the Meeting Host will unmute your microphone and announce that it is your turn to comment. Please minimize the background noise at your location.

Should any interruption of the broadcast of this meeting occur, please call 804-363-9201 or email Erin.Williams@vdacs.virginia.gov to notify the agency. Any interruption in the broadcast of the meeting shall result in the suspension of action at the meeting until repairs are made and public access is restored.



GOLDEN PIEDMONT LABS



CASE STUDY REPORT

PRESENTED TO

THE INDUSTRIAL HEMP INDUSTRY DEVELOPMENT WORK GROUP

JULY 28, 2020

I. INTRODUCTION

Over the past decades southern Virginia's economy has been hit hard by the decline of the textile, furniture and tobacco industries. In particular, farmers have been searching for cash crops to replace tobacco. With passage of the Farm Bill of 2018, Congress authorized the growing of industrial hemp by farmers on a national scale, creating attractive opportunities for growers and processors of cannabidiol ("CBD") and other products made from industrial hemp ("CBD Raw Ingredients").

Virginia's southern Piedmont region is the logical location for Virginia's expanding CBD Hemp industry. The taste, consistency, scent and body profile of CBD products, like tobacco or wine, depend on where the hemp is grown geographically. The blends of cannabinoid and terpene profiles are related to the area it was grown and the type of genetic strain. Virginia's southern Piedmont region is blessed with ideal soil pH balance, moderate climate, and annual rainfall conditions, which yields desirable hemp biomass. Given this advantage, its agricultural profile, existing infrastructure, and labor skillsets, Virginia's southern Piedmont Region is well positioned to take advantage of the demand for CBD products. In 2019, using techniques and facilities similar to tobacco production, many farmers grew hemp. **However, the major obstacle to the growers' success was the lack of a CBD extraction facility in Virginia.**

The founders of Golden Piedmont Labs ("GPL") are both Halifax County natives, with deep family ties to Southside Virginia. The founders shall a concerned about the decline of southern Virginia and decided to form GPL to help revitalize the Piedmont region of southern Virginia's economy and gave GPL the following mission:

Golden Piedmont Labs was founded with the principle objective of revitalizing rural economies, by combining new investment technology, with energy and honesty, to make products of the highest purity, quality and consistency."

II. "STATE OF ART" CBD PROCESSING FACILITY

In a textbook example of public/private partnerships, which leverage public and private funding, GPL, in cooperation with the Commonwealth of Virginia, the Virginia Tobacco Commission, Halifax County, and the Town of South Boston, is developing a CBD processing facility. The Halifax County Economic Development Authority purchased an existing 38,000 sq. ft. building, located at 2525 Houghton Avenue, South Boston, in Halifax County, Virginia ("GPL Processing Facility"), which is leased to GPL. The building is undergoing a \$2,610,000 renovation and installation of approximately \$2,552,000 of "state of art" extraction and distillation equipment. The GPL Processing Facility is scheduled to being production in mid-September. In addition to the funds provided by the Commonwealth of Virginia, the Virginia Tobacco Commission and Halifax County, GPL raised approximately \$6,025,000 to build and equip the GPL Processing Facility. This new processing facility will permit GPL to be the low-cost provider for CBD Raw Ingredients.

The GPL Processing Facility is being built to satisfy the following requirements:

A. Industrial Scale: To obtain orders from large purchasers of CBD Raw Ingredients, GPL must have the ability to supply the purchaser with a dependable and reliable supply of product on a large scale. To meet this requirement, the GPL Processing Facility has been built to produce CBD Raw Ingredients on a large industrial scale. With one shift the GPL Processing Facility has the capacity to process 1,050,000 pounds of hemp per year (i.e., 52,500 liters of CBD crude oil). A second shift ups the yield to 2,025,000 pounds (i.e., 101,250 liters of CBD crude oil), and a third shift output is increased to 3,025,000 pounds per year (i.e., 151,250 liters of CBD crude oil). **Additionally, GPL's Processing Facility has been designed to double its capacity by adding a second processing line.**

B. Efficient Production. Working with some of the best minds and companies involved in the CBD extraction business, GPL has developed a singular extraction process. This process exceeds most other processing methods, in terms of the speed and extraction of a more complete array of oils, terpenes and other plant compounds.

C. Health and Safety Compliance. Much has been written about the safety and health concerns related CBD products, and the FDA has expressed concern that:

the quality of many CBD products [are] in question. The FDA [is] concerned that a lack of appropriate processing controls and practices can put consumers at additional risks."

This uncertainty has created an opportunity for unscrupulous suppliers to take advantage of the public. Our goal is to work constructively with our regulators as they continue to implement a comprehensive regulatory framework for CBD products. We believe science- and evidence-based regulation will help address concerns about CBD products and promote and protect public health.

GPL understands that the CBD industry is a part of the health and wellness industry, and to succeed it must be committed to making quality CBD products, which requires a commitment to *transparency, traceability and compliance*. **The GPL Processing Facility is being built to comply with VDACS' requirements regarding the manufacture of a hemp product intended for human consumption. It will comply with the food laws and regulations pertaining to food manufacturing, including 21 C.F.R. Part 110, Current Good Manufacturing Practice in Manufacturing, Packing, or Holding Human Food (GMP).** Additionally, GPL uses advanced inventory management systems to follow and track the supply chain. Beginning with our Growers, every link of GPL's supply chain, from seed selection, soil profile, grower techniques, extraction and distillation process to product delivery, is inputted into our inventory management system. GPL's inventory management system is robust, capturing more important information than most processing companies.

II. BUSINESS STRATEGY

GPL's Business Strategy is divided into three (3) components:

A. Build Strong Partnership With Growers. To succeed, GPL must establish a reliable supply of high-quality CBD Hemp biomass, at reasonable prices. GPL's business strategy to accomplish this requirement, involves the establishment of a strong working relationship with local growers.

1. Grower's Prior Experience. Last year was Virginia growers' first experience with hemp and it left growers with uncertainty and skepticism. Over the past 24 months, prices for both CBD Hemp biomass and CBD extracts have seen tremendous volatility. For example, the price for CBD Hemp biomass has dropped from a high of \$51.50 per lb. in July of 2019, to last month's low of \$8.30 per lb. Similarly, the price for CBD crude oil has dropped from a high of \$6,550 per liter in January 2019, to last's low of \$338 per liter.¹ Anticipating that the high price for CBD extracts would continue, most CBD extraction companies entered into contracts with growers, agreeing to purchase hemp biomass at unrealistic prices. As a result, most grower contracts were not honored, leaving growers without payment and many CBE extraction companies bankrupt.

2. Split Contracts. Learning from last year's problems, an integral part of GPL's business plan is to enter into contracts with growers, which set the price of hemp biomass based on the price the CBD Raw Ingredients are sold ("Split Contracts"). With Split Contracts, the grower will deliver its CBD hemp to GPL for processing, the CBD Raw Ingredients are then sold by GPL, and proceeds from the sale distributed as follows:

- First, to cover extraction costs. GPL will be paid between \$60 and \$200 per liter, depending on the type of CBD extract produced.
- Second, the remaining sale proceeds are split 50% / 50% between the grower and GPL (with organic hemp, the split 60% for the grower and 40% for GPL).

Using this business model, GPL has partnered with 125 experienced Growers for over 1,250,000 lbs. of hemp. Assuming value of \$10.00 to \$15.00 per lb. for the hemp, this aspect of our business, alone can inject \$12,500,000 to \$18,750,000 into the southern Virginia economy.

3. Grower Education. GPL provides assistance to its Growers in a variety of ways, for example: (i) direct contracting model, incentive programs and (ii) our staff of agronomists who provide best practices to optimize for high-quality yields. GPL's Grower Education program enables GPL to obtain a consistent supply of hemp biomass and allows GPL to control batch variability, purity, and ultimately deliver a consistent product, time after time.

B. SALE OF CBD RAW INGREDIENTS. Once CBD Raw Ingredients are processed and packaged by GPL, they are sold to consumer packaging companies that will further refine, package CBD product, including, tinctures, capsules, and gummies, topicals, cosmetics, beverages and pet products ("CBD Wellness Products") and market them to the consumer. Below is a list of the CBD Raw Ingredients made by GPL:

¹ Source: Panexchange Report, June 2020.

1. Full Spectrum” Raw Crude Oil is the least processed industrial hemp extract and is the base for all of our CBD products. It has the highest levels of all the cannabinoids (including CBDs), terpenes, lipids, chlorophyll, and sugars from the plants, including legal limits of THC.

2. “T-Free” Raw Crude Oil, is Raw Crude Oil, which has been further refined to remove THC to non-detectible levels. Like Full Spectrum Raw Crude, it retains all of other beneficial aspects of the hemp plant without THC. THC-Free (or Non-Detectible THC) is important to formulators of CBD products because it protects the end customer from inadvertent consumption of THC and it opens up CBD to a larger market.

3. Full Spectrum Distillate is Raw Crude Oil that has been distilled to remove chlorophyll and certain flavonoids contained in the Raw Crude Oil, but retains the CBDs and federal limits of THC. Studies show that one of the main benefits of Full Spectrum Distillate is the “*entourage effect*”, which show that THC and CBD work well together & help to increase the distillate’s efficacy.

4. Broad Spectrum Distillate is Full Spectrum Distillate, which is further refined to remove THC to non-detectible levels. Like Full Spectrum Distillate, Broad Spectrum Distillate retains all of other beneficial aspects of the plant, such as CBDs, essential vitamins, minerals, fatty acids, protein, chlorophyll, terpenes, flavonoids, and fiber. Broad Spectrum Distillate is perfect for the end consumer who is concerned about THC content, but wants all the other benefits of a Full Spectrum Distillate

5. CBD Isolate is distillate that is formulated and refined into a crystalline solid or powder. It is over 98% CBD, meaning that other minor cannabinoids, terpenes, flavonoids, and essential oils that are found in Full Spectrum or Broad Spectrum Distillate are almost entirely removed from this ingredient. This process removes virtually all of the hemp taste or smell, making CBD Isolate the perfect ingredient for those looking to have high volumes of CBD, without THC, or the taste and smells of hemp found in Full Spectrum or Broad Spectrum Distillate

6. Water Soluble CBD is a type of broad spectrum distillate, which has been further refined to create a chemical formation that dissolves in water. Water Soluble CBD is the perfect ingredient for the beverage industry.

7. Special Formulations. The combination of GPL’s new Facility, “state of art” extraction equipment and experienced staff, provides GSL with the ability to: (i) accurately anticipate customer needs; (ii) develop new products that meet these needs (allows special formations, changing % of CBD,CBG, CBN, etc., types of terpenes, including the ability to create ND-THC product and water soluble products; (iii) price products competitively; (v) manufacture and deliver products in sufficient volumes and on a timely basis, and (vi) differentiate product offerings from those of competitors.

C. Production of CBD Wellness Products. The third phase of GPL’s business strategy is to manufacture CBD Wellness Products for sale directly to the retail consumer. It is

anticipated that this phase will begin, as or when, the sale of CBD products intended for human consumption is approved by the U.S Food and Drug Administration (“FDA”).

IV. COMPETITIVE ADVANTAGES

As described above, GPL believes that it has several competitive advantages over other CBD extraction companies.

A. Location.

1. Southern Virginia’s Farming Heritage. Given its agricultural tradition, existing infrastructure, and labor skillsets, Virginia’s southern Piedmont region, is well positioned to take advantage of the expanding demand for CBD products. GPL has partnered with 125 experienced Growers for over 1,250,000 lbs. of hemp. This partnership is a form of vertical integration, which: (i) ensures a reliable supply of consistently high quality hemp biomass (no dependence on international sources or spot market sources) and (ii) enables GPL to produce a consistent product by controlling the genetics, soil types and farming techniques.

2. Soils, Climate. The taste, consistency, scent and body profile of CBD products, like tobacco or wine, depend on where the hemp was grown geographically. The blends of cannabinoid and terpene profile are related to the area it was grown and the type of genetic strain. The southern Virginia agricultural region is blessed with ideal soil pH balance, moderate climate, and annual rainfall conditions, which yields desirable hemp biomass.

3. Opportunity Zone. Additionally, GPL’s ability to raise private equity is increased because the GPL Processing Facility is located in a certified “Opportunity Zone” (GEOID 510839308000) and GPL has been organized for the purpose of being a “qualified opportunity zone business, allowing investors to qualify for important tax incentives.

B. Government And Community Support. Government and Community Support come from three places:

1. Financial Support. As described above, delivering high-quality CBD products is an extremely capital intensive business and over the past year many extraction companies have gone out of business, because of under-capitalization. The financial support from the Commonwealth, the Virginia Tobacco Commission and the County of Halifax, Virginia, has provided additional capital, which was needed to allow GPL to fully execute its business plan. With this funding GPL has a substantial advantage over other CBD extraction businesses.

2. Favorable Legislative and Regulatory Climate. GPL believes science- and evidence-based regulation will promote and protect public health. The Commonwealth has taken the lead in providing

“a path forward for Registered Industrial Hemp Processors . . . the Northam Administration has formulated a policy for VDACS to follow in order to

provide some oversight over hemp-derived extracts intended for human consumption.”²

We look forward to working constructively with the General Assembly, VDACS and other regulators to implement a safe and successful hemp industry in the Commonwealth.

B. “State of Art” Processing Facility. Over the past year technology and equipment has advanced greatly improving the efficiency of cannabis extraction. Many of the Company’s competitors are operating with older equipment, making them inefficient and obsolete compared to GPL’s new “*state of art*” Production Facility. This new equipment will permit GPL to be the low-cost provider for CBD Raw Ingredients. Additionally, GPL anticipates stricter regulatory requirements in the future and the GPL Processing Facility has been to meet or exceed those requirements. The facility will be constructed using a clean room and food-grade production Standard Operating Procedures and equipment. This initial step should provide GPL with a significant competitive advantage over existing facilities, which must be upgraded at significant cost to meet new requirements.

C. “Clean Start”. Generally, being “*first to market*” provides an advantage to companies entering new businesses. However, the CBD market, especially the CBD extraction business, has undergone revolutionary change during the past 24 months, and GPL believes that being a new start-up company provides it with a significant competitive advantage over existing companies. For example:

1. No Inventory of Over-Priced CBD Hemp Biomass. GPL is not saddled with inventories of CBD biomass purchased at prices over current market prices, which would tie-up large amounts of valuable capital. Additionally, GPL does not hold inventory of CBD Raw Ingredients, which have also lost value. Meaning that GPL has a competitive advantage, because its capital is not tied-up in over-priced inventory and can purchase CBD biomass at prices in line with the current value of CBD Raw Ingredients.

2. No Broken Promises with Growers. Anticipating that the unrealistically high price for CBD Raw Ingredients would continue, last year most CBD extraction companies entered into grower contracts agreeing to purchase CBD Hemp biomass at those inflated prices. As a result, most grower contracts were not honored, leaving growers without payment and. This first experience has tarnished grower opinion of CBD extraction companies and many growers are reluctant to do business with these companies. However, as a new entrant in the CBD extraction business and armed with the founders’ good reputation in the farming community, GPL is building a strategic partnership with growers. By establishing a solid strategic partnership with growers, GPL will enjoy a competitive advantage over CBD extraction companies.

V. CHALLENGES

1. LACK OF RECOGNITION THAT VIRGINIA IS A HIGH VOLUME PRODUCER OF SAFE, HIGH QUALITY CBD HEMP. Given their longer time in the market, the states of California, Washington, Colorado and Kentucky are better known for their

² Letter from Ryan Davis dated July 25, 2019.

CBD Hemp. To compete, Virginia need to implement a comprehensive marketing plan to educate the market about Virginia's growing CBD industry. America should know that Virginia has a long heritage with Hemp, as it was first grown and marketed in Virginia.

2. LACK OF GUIDANCE FROM THE FDA. Unlike Virginia, the FDA has failed to issue regulations **regarding the manufacture of a hemp products intended for human consumption.** Although the federal Drug Enforcement Agency no longer regulates hemp, the FDA retains its authority to regulate ingestible and topical products, including those that contain hemp and hemp extracts such as CBD. Until the FDA issues regulations, many large companies are reluctant to sell CBD Wellness Products.

On March 5, 2020, FDA Commissioner Dr. Stephen M. Hahn issued a statement on the FDA's work related to CBD products. Importantly, the report confirms that the FDA is actively considering pathways to allow the marketing of CBD as a dietary supplement. GPL believes that once the FDA regulations are published and legal ambiguity is removed, the demand for CBD Raw Ingredients will grow exponentially.



VIRGINIA FREEDOM OF INFORMATION ADVISORY COUNCIL
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**ELECTRONIC MEETINGS
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1. Name of the public body holding the meeting: _____

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3. What are your overall thoughts or comments about this meeting? _____

4. Where did you attend this meeting -- main meeting location OR from a remote location? (circle one)

5. Technology used for the meeting (audio only or audio/visual, devices and/or software used--please be as specific as possible--for example, speakerphone, iPad, Skype, WebEx, Telepresence, etc.):

6. Were you able to hear everyone who spoke at the meeting (members of the body and members of the public)?

Poor				Excellent
1	2	3	4	5

COMMENT _____

7. How easy was it for you to obtain agenda materials for this meeting?

Easy				Difficult
1	2	3	4	5

COMMENT _____

8. Could you hear/understand what the speakers said or did static, interruption, or any other technological problems interfere?

Easy				Difficult
1	2	3	4	5

COMMENT _____

9. If the meeting used audio/visual technology, were you able to see all of the people who spoke?

Poorly				Clearly
1	2	3	4	5

COMMENT _____

10. If there were any presentations (PowerPoint, etc.), were you able to hear and see them?

Poorly				Clearly
1	2	3	4	5

COMMENT_____

11. Were the members as attentive and did they participate as much as you would have expected?

Less				More
1	2	3	4	5

COMMENT_____

12. Were there differences you noticed in how the members interacted?

With the other members present:

Very Different				No Difference
1	2	3	4	5

With members participating from other locations:

Very Different				No Difference
1	2	3	4	5

With the public:

Very Different				No Difference
1	2	3	4	5

COMMENT_____

13. Did you feel the technology was a help or a hindrance?

Hindered				Helped
1	2	3	4	5

COMMENT_____

14. How would you rate the overall quality of this meeting?

Poor				Excellent
1	2	3	4	5

COMMENT_____

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