CAVALIER COUNTY, ND

Biofuel Development Opportunity Zone

RATING GRADE: 'A'

Date of Issue: April 13, 2026

A
High Quality

Rating Parameters:

Category	Rated Quantity	Delivered Price	Supply Zone Size
Canola Seed	**565,000 tons/yr**	**$350 - $550**	**75-mi drive distance from Munich, ND**

BDO ZONE ASSETS

- One of the strongest producing canola seed regions on the continent.
- Over 5,000 multi-generational canola farmers in the Supply Zone, of which 35% have over 1,000 acres.
- Mature market and experienced workforce.
- Strong transportation redundancy and favorable regulations.
- Robust on-farm storage.

BDO ZONE LIABILITIES

- Climate and drought vulnerability.
- Historical canola seed price volatility.
- Potentially intensifying future demand.
- Infrastructure gaps.
- Potential labor shortages during peak seasons.

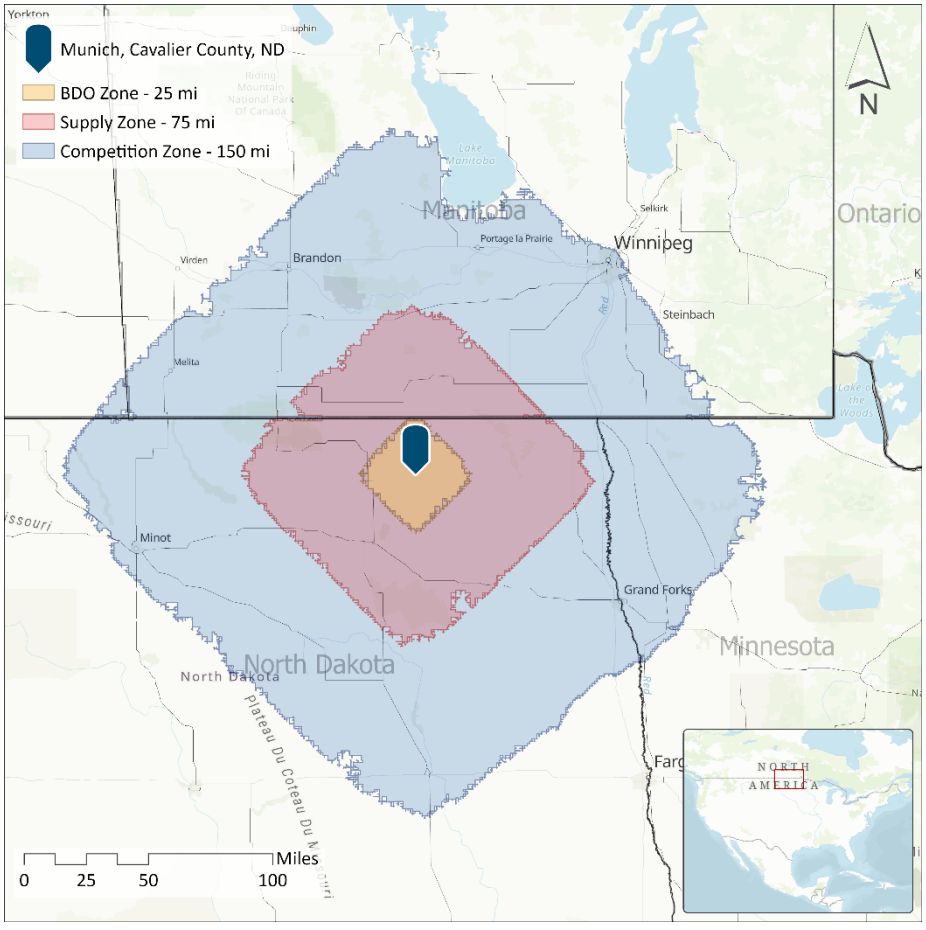
RATING GRADE

The Cavalier County, ND, Biofuel Development Opportunity Zone, is rated 'A', or 'low' risk.

Risk Rating Grades are defined as follows: AAA (extremely low), AA (very low), A (low), BBB (low-moderate), BB (moderate), B (moderate-high), and C (high).

'A' ratings denote high prospective viability of Feedstock Supply and Infrastructure and low expectations of default risk in the Zone. Capacity to support new biobased plant operations is considered strong. This capacity may, nevertheless, be more vulnerable to adverse weather, supply chain, economic, or infrastructure conditions than is the case for higher ratings.

CAVALIER COUNTY, ND BDO ZONE



ANALYST NOTES

The Cavalier County BDO Zone Supply Zone spans over 11 U.S. counties and four Canadian census areas, serving as a mature, traditional canola-growing region. Over the past decade, roughly 876,000 acres of planted canola yielded an average of 837,600 tons per year within the 75-mile Supply Zone. Production is highly mechanized and predominantly managed by 5,000 independent multi-generational cropland farms, of which 35% farm over 1,000 acres.

Four major competitors currently operate within the 150-mile Competition Zone, consuming an estimated 2.67 million tons of canola seed annually. Approximately 800,000 tons of this consumption is drawn within the Supply Zone. However, based on equal-distance analysis, a new project sited in Munich, ND, would benefit from a strong locational advantage, capturing competitive access to 81% of the local canola seed production, equivalent to roughly 678,000 tons per year.

A total of 565,000 tons/yr of canola seed is rated as available for new projects at a low-to-medium risk level. This rated quantity was determined by dividing the competitive availability estimate by a Biomass Availability Multiple (BAM) of 1.2 to conservatively account for uncertainty in existing models and producer participation. The average delivered price is expected to range between $350 and $550 per ton, reflecting historical variations and spot market volatility driven by international trade dynamics and global fertilizer costs.

BDO ZONE ASSETS

The region features a highly experienced agricultural sector composed of multi-generational family farms that have successfully cultivated canola for decades. The supply chain is highly resilient to seasonal fluctuations due to significant on-farm storage infrastructure. Growers utilize hopper bins equipped with aeration fans to condition the seed and stagger deliveries year-round.

Approximately 75% of local growers own transport fleets. The supply chain relies on ubiquitous hopper bottom trailers, providing a high degree of transportation redundancy. The region benefits from regulations that permit high-capacity transport, allowing double trailers with a gross vehicle weight of up to 105,500 pounds, which helps maintain low transportation costs.

BDO ZONE LIABILITIES

Canola seed availability is susceptible to cyclical severe droughts and seasonal weather volatility. For instance, a severe drought in 2021 drastically reduced crop yields to 1,602 lbs/acre, in comparison to an expected ~2,000 lbs/acre. Additionally, historical canola seed pricing shows significant volatility driven by global market dynamics, geopolitical trade policies (like tariffs), and correlating fertilizer and diesel input costs.

The expansion of the renewable diesel and sustainable aviation fuel (SAF) sectors is expected to cause a structural shift in the market, which may have a tightening effect on the supply-demand balance and drive-up competition and prices for feedstock.

INFRASTRUCTURE PROFILE

The evaluated industrial site is a 130-acre greenfield parcel situated in western Cavalier County, near Munich, ND. The property is privately owned, but the owner has indicated a willingness to sell or lease the land for industrial use. Geologically, the site features flat, low-relief glacial tills with high bearing strength, making it highly suitable for conventional construction and reducing overall development complexity. The site is positioned outside of high-risk flood areas and has no history of heavy industrial contamination.

However, the site is currently active agricultural land and is not shovel-ready. Development poses moderate risks due to a lack of existing industrial zoning and the fact that a Phase I Environmental Site Assessment (ESA) has not yet been conducted. Future projects will need to navigate both county and state-level permitting, though North Dakota's regulatory environment is generally considered streamlined and business-friendly. Developers should also expect to implement standard mitigation measures for soil erosion and stormwater runoff due to the area's clay-heavy soils and wind erosion tendencies.

Some of the challenges for a potential project include the lack of access to natural gas and wastewater infrastructure limitations. Although basic electricity service is provided via a nearby distribution line, supporting high-capacity, industrial-scale loads will likely

necessitate substantial investments to upgrade to 3-phase power and improve substation capacities.

SCORING & RATING METHODOLOGY

In assessing the biomass supply chain risk for the Biofuel Development Opportunity (BDO) Zone, 75 Risk Indicators from the US Standards for Biomass Supply Chain Risk (BSCR) were applied. These BDO Zone Risk Indicators are the subset of BSCR Risk Indicators applicable to evaluating feedstock risk within a BDO Zone.

- The BDO Zone is a 25-mile drive distance from the center point, which represents the siting area for future biomass projects and is where the industrial site is located.
- The Supply Zone is a 75-mile drive distance from the center point, where feedstock availability was assessed.
- The Competition Zone is a 150-mile drive from the center point, where consumers can compete for feedstock generated in the Supply Zone.

Feedstock quantities are expressed in tons per year (tons/yr), while feedstock costs are expressed in United States dollars (USD). Maximum transport distance is based on a 75-mile driving distance from the center point (Munich, ND).

The BDO Zone rating is based on an aggregation of the scores assigned to each BDO Zone Risk Indicator (RI) assessed in this report. First, each BDO Zone Risk Indicator is given a **Raw Risk Likelihood (RRL)** score, which denotes the likelihood of a risk to future BDO Zone projects due to the Risk Indicator. RRL Scores are scaled as either very low (2), low (4), medium (6), high (8), or very high (10).

Each BDO Zone Risk Indicator is given a **Raw Risk Impact (RRI)** score, which denotes the impact on a future BDO Zone project due to the Risk Indicator. RRI scores are scaled as either very low (2), low (4), medium (6), high (8), or very high (10). Impact level scores are based on the impact level of a risk on the successful development and deployment of a BDO Zone project with no mitigation measures.

The **Gross Risk Indicator (GRI)** score is then calculated as the product of the RRL and the RRI scores. For example, if an indicator is scored at an RRL of 2 and an RRI of 8, then the GRI for this risk indicator is 2 X 8 = 16.

If the analyst deems that a typical bio-based project could implement economically reasonable measures or best practices that mitigate the likelihood (RRL), the impact (RRI), or both, then the GRI will be notched accordingly.

The **Loaded RI** score for each Risk Indicator is the product of the GRI score and any notched scores. Loaded RIs are the final score for a Risk Indicator.

Loaded RI scores of 4 or less are deemed very low risk; scores between 5 and 16 are deemed low risk; scores between 17 and 36 are deemed medium risk; scores between 37 and 64 are deemed high risk; and scores of 65 and greater are deemed very high risk.

The total risk rating for the BDO Zone is the average of all Loaded RI scores and Infrastructure Indicators. The BDO Zone score for Cavalier County, ND is ***20 out of 100, resulting in an 'A' designation.***

All scoring and rationale for each Risk Indicator are provided in Section D.



PROJECT TEAM

SENIOR ANALYST
Jordan Goodnough
Ecostrat Inc.
Jordan.goodnough@ecostrat.com

INFRASTRUCTURE ANALYST
Jaidan Hunt
Ecostrat Inc.
jaidan@ecostrat.com

TECHNICAL CONTACT
Marcin Lewandowski
Vice-President, Operations & Risk
Ecostrat Inc.
marcin@ecostrat.com

BUSINESS CONTACT
Jordan R. Solomon
President & CEO
Ecostrat Inc.
jordan.solomon@ecostrat.com

SECTION A: RISK INDICATOR SUMMARY

Figure A-1. All Risk Indicators Sorted by Risk Level

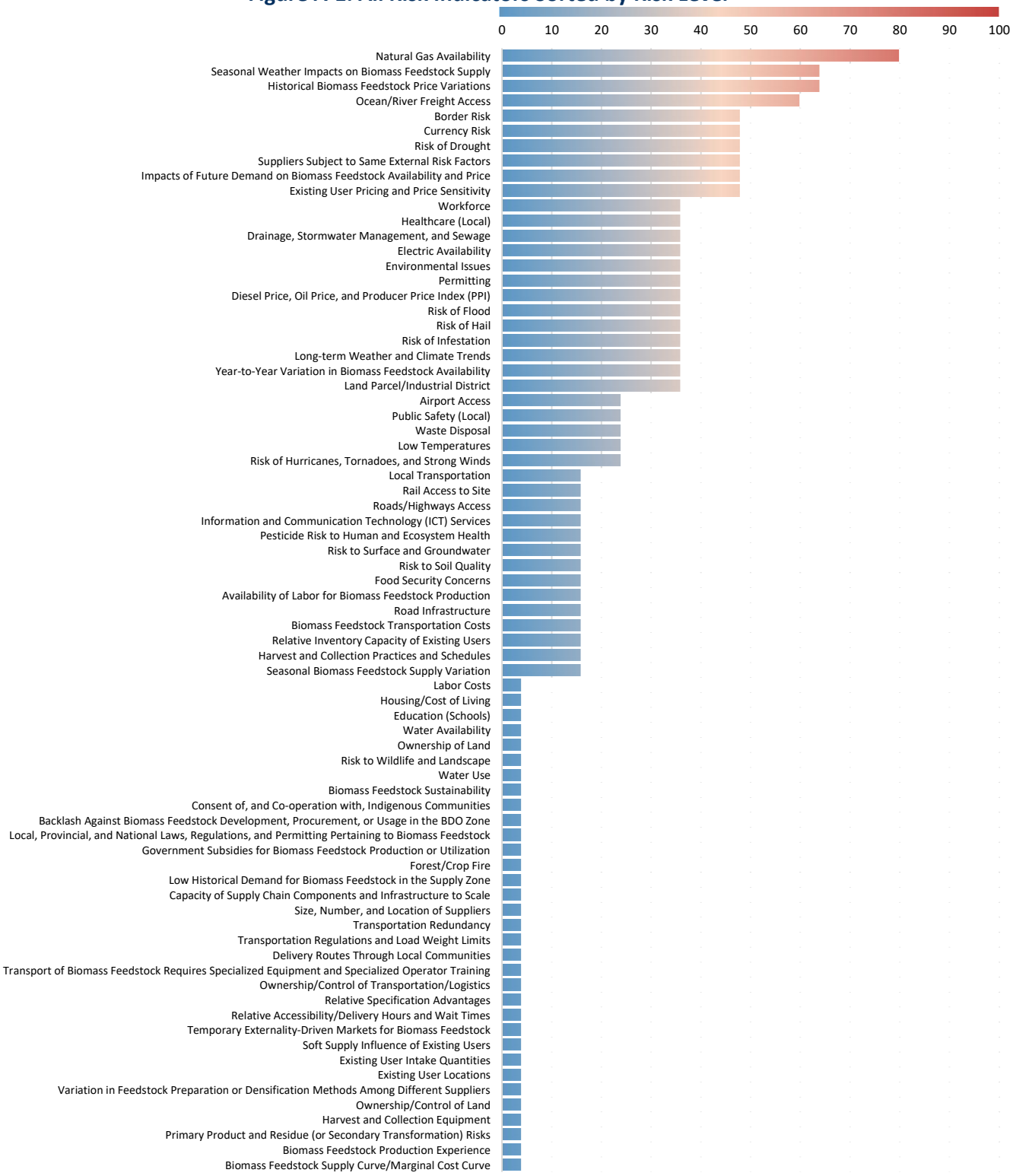


Table A-1. Risk Indicators and Associated Scores

Feedstock Supply Chain Risk Indicators	Raw Risk Likelihood	Raw Risk Impact	Gross Risk Indicator	Mitigation /Notching	Loaded RI Score
Category 1.0: Supply Chain Risk					
1.1 Risk Factor: Quantity and Delivered Cost of Available Biomass Feedstock					
1.1.1 Biomass Feedstock Supply Curve/Marginal Cost Curve	2	2	4	NN	4
1.1.2 Seasonal Biomass Feedstock Supply Variation	4	4	16	NN	16
1.1.3 Year-to-Year Variation in Biomass Feedstock Availability	6	6	36	NN	36
1.1.4 Historical Biomass Feedstock Price Variations	8	8	64	NN	64
1.2 Risk Factor: Harvest and Collection Risk					
1.2.1 Biomass Feedstock Production Experience	2	2	4	NN	4
1.2.2 Primary Product and Residue (or Secondary Transformation) Risks	2	2	4	NN	4
1.2.3 Harvest and Collection Practices and Schedules	4	4	16	NN	16
1.2.4 Harvest and Collection Equipment	2	2	4	NN	4
1.2.5 Ownership/Control of Land	2	2	4	NN	4
1.2.6 Variation in Feedstock Preparation or Densification Methods Among Different Suppliers	2	2	4	NN	4
1.3 Risk Factor: Existing Users					
1.3.1 Existing User Locations	2	2	4	NN	4
1.3.2 Existing User Intake Quantities	2	2	4	NN	4
1.3.3 Existing User Pricing and Price Sensitivity	6	8	48	NN	48
1.3.4 Impacts of Future Demand on Biomass Feedstock Availability and Price	6	8	48	NN	48
1.3.5 Soft Supply Influence of Existing Users	2	2	4	NN	4
1.3.6 Temporary Externality-Driven Markets for Biomass Feedstock	2	2	4	NN	4
1.3.7 Relative Inventory Capacity of Existing Users	4	4	16	NN	16
1.3.8 Relative Accessibility/Delivery Hours and Wait Times	2	2	4	NN	4
1.3.9 Relative Specification Advantages	2	2	4	NN	4
1.4 Risk Factor: Transportation					
1.4.1 Biomass Feedstock Transportation Costs	4	4	16	NN	16
1.4.2 Ownership/Control of Transportation/Logistics	2	2	4	NN	4
1.4.3 Transport of Biomass Feedstock Requires Specialized Equipment and Specialized Operator Training	2	2	4	NN	4
1.4.4 Delivery Routes Through Local Communities	2	2	4	NN	4
1.4.5 Transportation Regulations and Load Weight Limits	2	2	4	NN	4
1.4.6 Road Infrastructure	4	4	16	NN	16
1.4.7 Transportation Redundancy	2	2	4	NN	4
1.5 Risk Factor: Risks Related to Supply Chain Resiliency					
1.5.1 Size, Number, and Location of Suppliers	2	2	4	NN	4
1.5.2 Suppliers Subject to Same External Risk Factors	8	6	48	NN	48
1.6 Risk Factor: Biomass Feedstock Scale-up					
1.6.1 Capacity of Supply Chain Components and Infrastructure to Scale	2	2	4	NN	4
1.6.2 Availability of Labor for Biomass Feedstock Production	4	4	16	NN	16
1.6.3 Low Historical Demand for Biomass Feedstock in the Supply Zone	2	2	4	NN	4
1.7 Risk Factor: Climate and Natural Risks					
1.7.1 Seasonal Weather Impacts on Biomass Feedstock Supply	8	8	64	NN	64
1.7.2 Long-term Weather and Climate Trends	6	6	36	NN	36
1.7.3 Forest/Crop Fire	2	2	4	NN	4
1.7.4 Risk of Infestation	6	6	36	NN	36
1.7.5 Risk of Hail	6	6	36	NN	36
1.7.6 Risk of Flood	6	6	36	NN	36
1.7.7 Risk of Drought	6	8	48	NN	48
1.7.8 Risk of Hurricanes, Tornadoes, and Strong Winds	6	4	24	NN	24
1.7.9 Low Temperatures	4	6	24	NN	24
1.8 Risk Factor: Non-Weather Based Externalities					
1.8.1 Diesel Price, Oil Price, and Producer Price Index (PPI)	6	6	36	NN	36
1.8.2 Currency Risk	6	8	48	NN	48
1.8.3 Border Risk	6	8	48	NN	48
1.9 Risk Factor: Political and Social					
1.9.1 Government Subsidies for Biomass Feedstock Production or Utilization	2	2	4	NN	4
1.9.2 Local, Provincial, and National Laws, Regulations, and Permitting Pertaining to Biomass Feedstock	2	2	4	NN	4
1.9.3 Backlash Against Biomass Feedstock Development, Procurement, or Usage in the BDO Zone	2	2	4	NN	4
1.9.4 Consent of, and Cooperation with, Indigenous Communities	2	2	4	NN	4
1.9.5 Food Security Concerns	4	4	16	NN	16
1.10 Risk Factor: Sustainability and Environmental Concern					
1.10.1 Biomass Feedstock Sustainability	2	2	4	NN	4

1.10.2 Risk to Soil Quality	4	4	16	NN	16
1.10.3 Risk to Surface and Groundwater	4	4	16	NN	16
1.10.4 Water Use	2	2	4	NN	4
1.10.5 Pesticide Risk to Human and Ecosystem Health	4	4	16	NN	16
1.10.6 Risk to Wildlife and Landscape	2	2	4	NN	4
Category 2.0: Infrastructure					
2.1 Risk Factor: Physical Infrastructure					
2.1.1 Land Parcel/Industrial District	6	6	36	NN	36
2.1.2 Ownership of Land	2	2	4	NN	4
2.1.3 Permitting	6	6	36	NN	36
2.1.4 Environmental Issues	6	6	36	NN	36
2.2 Risk Factor: Utilities					
2.2.1 Natural Gas Availability	10	8	80	NN	80
2.2.2 Electric Availability	6	6	36	NN	36
2.2.3 Water Availability	2	2	4	NN	4
2.2.4 Drainage, Stormwater Management, and Sewage	6	6	36	NN	36
2.2.5 Waste Disposal	4	6	24	NN	24
2.2.6 Information and Communication Technology (ICT) Services	4	4	16	NN	16
2.3 Risk Factor: Transportation/Logistics					
2.3.1 Roads/Highways Access	4	4	16	NN	16
2.3.2 Rail Access to Site	4	4	16	NN	16
2.3.3 Airport Access	6	4	24	NN	24
2.3.4 Ocean/River Freight Access	10	6	60	NN	60
2.4 Risk Factor: Social Infrastructure					
2.4.1 Healthcare (Local)	6	6	36	NN	36
2.4.2 Education (Schools)	2	2	4	NN	4
2.4.3 Local Transportation	4	4	16	NN	16
2.4.4 Public Safety (Local)	4	6	24	NN	24
2.4.5 Housing/Cost of Living	2	2	4	NN	4
2.5 Risk Factor: Labor					
2.5.1 Workforce	6	6	36	NN	36
2.5.2 Labor Costs	2	2	4	NN	4
				Average	**20**

SECTION B: BIOMASS AVAILABILITY AND PRICING

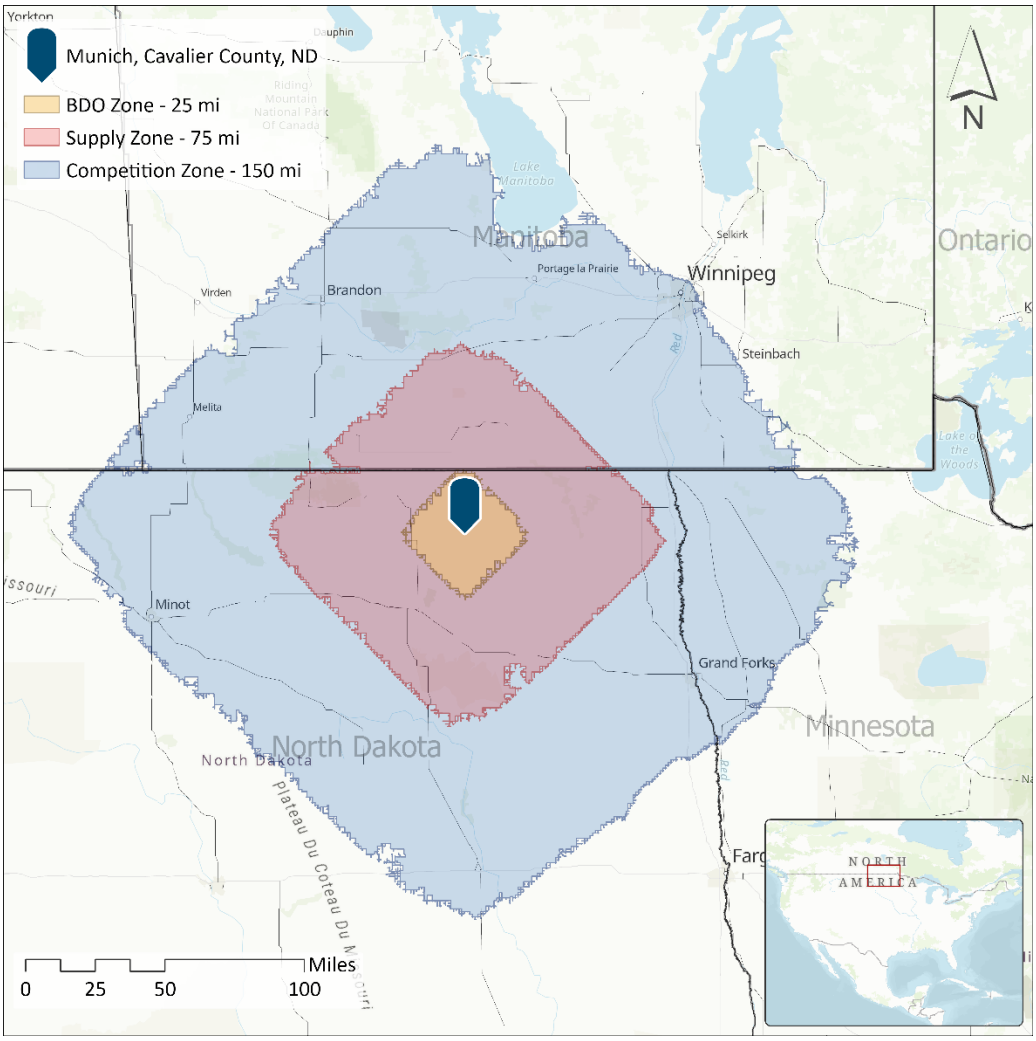
OVERVIEW

BDO Zone Risk Indicators are scored with reference to rated quantities and prices. The rated canola seed quantity is determined by estimating the potential quantity produced within the BDO Supply Zone, defined by 75-mi drive distance from Munich, ND (Map B-1).

To estimate biomass availability for new projects, the current demand for canola seed in the Competition Zone (150-mi drive distance from Munich, ND) is subtracted from the potential production estimate. The rated quantity is determined by dividing the availability estimate by a Biomass Availability Multiple (BAM) of between 1.0 and 4.0. The BAM is applied to account for uncertainty in underlying data, models, assumptions, producer participation, and future operating conditions for new bio-projects. The resulting rated quantity is a conservative, low-risk estimate of canola seed availability for a new project located in Munich, ND.

The price range associated with the rated quantity is determined through outreach and market analysis in the Competition Zone and reflects the expected delivered price a new bio-project would need to pay to secure the rated quantity.

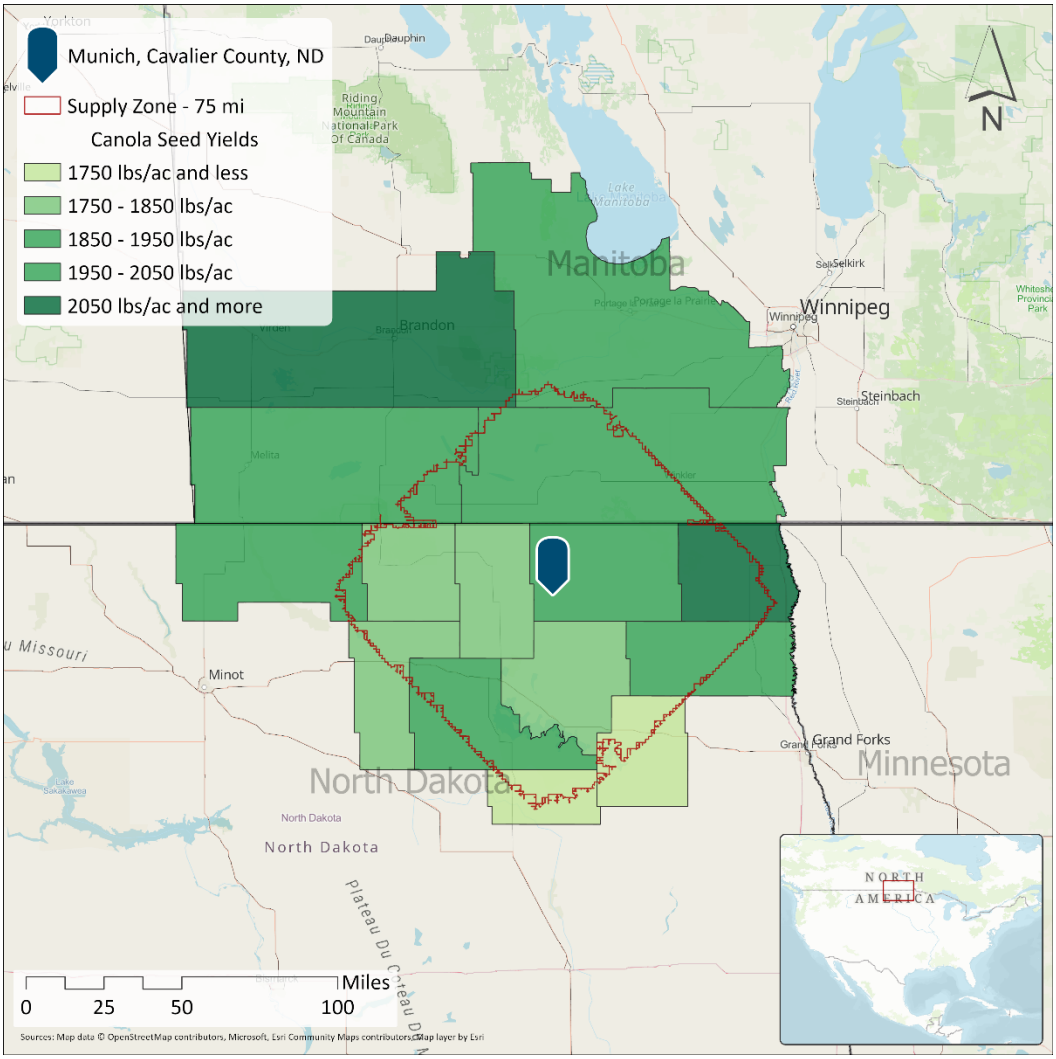
Map B-1. Map of BDO Zone, Supply Zone, and Competition Zone



SUPPLY ANALYSIS

The Cavalier BDO Zone is located in the northeastern part of the State of North Dakota, close to the border with the Province of Manitoba Canada (Map B-2) with the center point in Munich, ND. Three quarters of the Supply Zone are located in North Dakota and one quarter in Manitoba Canada. The Supply Zone spans over 11 US counties and four Canadian Census areas and includes on average 876,000 acres of planted canola annually. Average canola seed yields of between 1,500 lbs/ac and 2,200 lbs/ac are obtained annually in the counties located in the Supply Zone, with large variations between counties (Map B-2). According to the 2022 USDA Census data,[1] there were 5,000 cropland farms in the Supply Zone with a total cropland area of 5.2 million acres and an average size of 1,046 acres. Half of the farms in the BDO Zone are below 500 acres, 15% between 500 and 1,000 acres, and 35 % above 1,000 acres. Overall, between 2012 and 2022 a significant drop in both cropland area and number of cropland farms were recorded in the Supply Zone (Figure E-1 in Section E).

Map B-2. Map of Supply Zone – Location and Canola Seed Yield Values, by County[2]



[1] quickstats.nass.usda.gov
[2] Ibid.

Figure B-1 indicates that, while the total planted area in the Supply Zone increased slightly, the average canola seed yield varied between 1,601 and 2,090 pounds per acre in the past ten years.[3] A significant yield drop occurred in 2021 due to a severe drought that affected the region.

Figure B-1. Historical Planted and Harvested Areas and Seed Yield in the Supply Zone

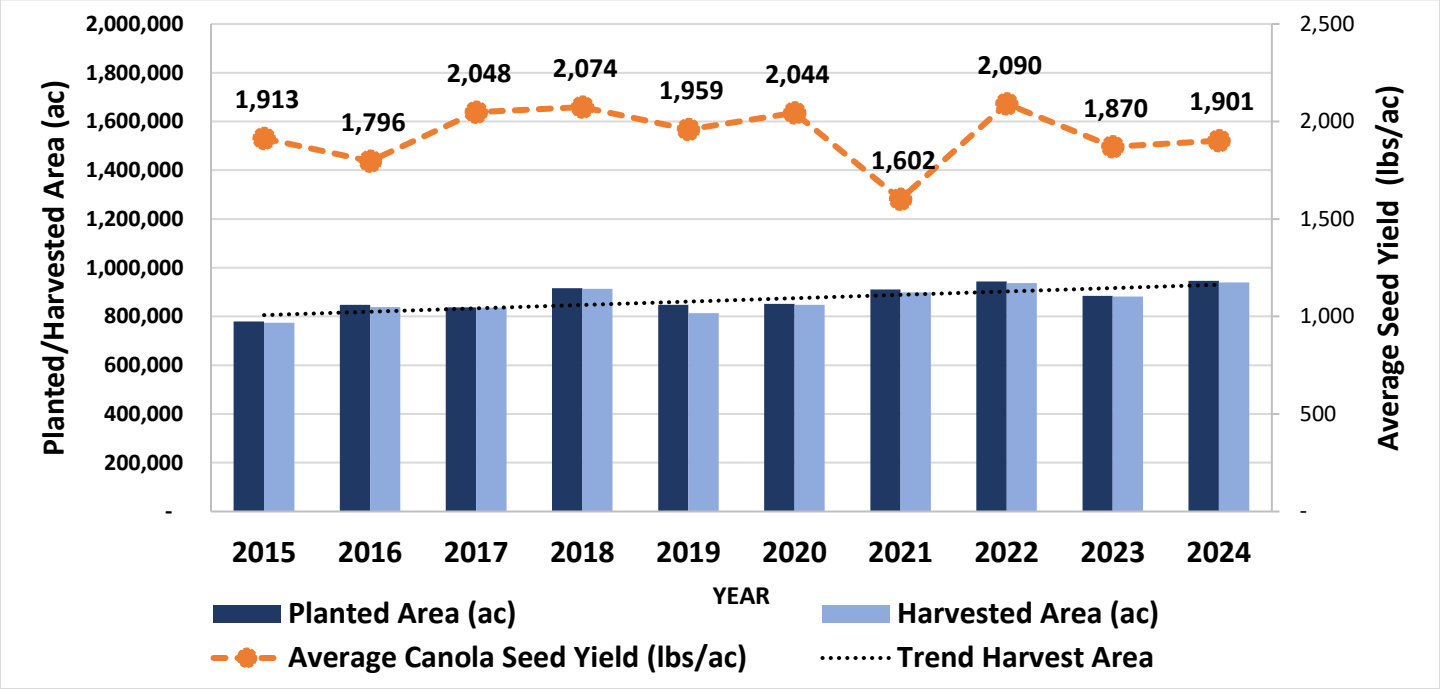


Table B-1 presents that an average quantity of **837,600 tons per year of canola seed** can be produced in the Cavalier Supply Zone, which could be available to a project located in Munich, ND.

Table B-1. Annual Average Canola Seed Planted/Harvested Area, Yield, and Production

YEAR	Planted Area (ac)	Harvested Area (ac)	Average Yield (lbs/ac)	Production (tons)
2015	779,570	774,779	1,913	741,076
2016	848,155	838,582	1,796	752,950
2017	837,891	835,452	2,048	855,535
2018	915,610	912,877	2,074	946,653
2019	848,291	813,135	1,959	796,262
2020	851,424	847,993	2,044	866,747
2021	911,081	899,076	1,602	720,010
2022	943,156	937,312	2,090	979,671
2023	884,889	881,960	1,870	824,633
2024	945,852	939,102	1,901	892,818
AVERAGE	**876,592**	**868,027**	**1,930**	**837,600**

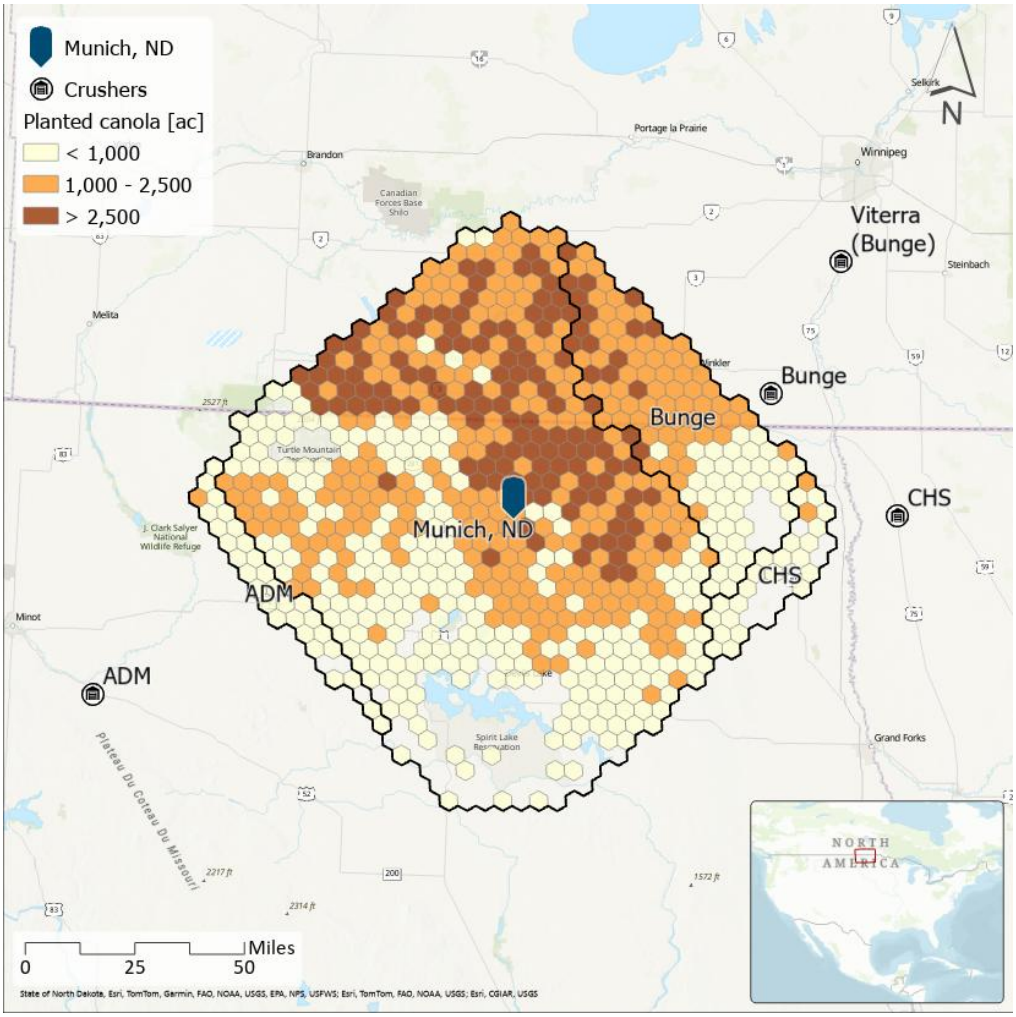
[3] quickstats.nass.usda.gov

COMPETITION ANALYSIS

Four competitors operate in the Competition Zone, two seed crushing facilities in Manitoba and two in North Dakota (Map B-3). The closest facilities are Bunge in Altona, MB at 89 miles drive distance from Munich and CHS in Kennedy at 100 miles drive distance. These are the two seed crushing facilities to which most of the canola seeds produced in the Supply Zone is most likely to be processed.

The four competitors currently consume an estimated 2.67 million tons of canola seed per year. Approximately 800,000 tpy of this total is sourced from within the Supply Zone[4]. However, if a new project is constructed in Munich, ND, it should have *competitive access* to 81% of the total generated seed, or 678,040 tpy. The competitive access is based on the *equal distance analysis*, which assumes that canola seed will gravitate towards the facility that is the closest to its source (the farm). Map B-3 and Table B-2 show how the Supply Zone is divided between consumers based on the equal distance analysis, with Munich, ND having competitive access to 81% of canola seed production.

Map B-3. Competitors for Canola Seed and Their Impact on the Supply Zone



[4] This estimate is based on the assumption that up to 5% (equivalent to 41,880 tpy) is exported outside the Competition Zone, as far as Mexico. This data point was provided by a local expert.

Table B-2. Feedstock Production, Demand, and Project Availability, based on Equal Distance Analysis

Crushers and Project	Canola Planted Area Split in the Supply Zone (%)	Canola Seed Production Split (tpy)
Munich, ND	81%	678,040
Bunge	17%	143,787
CHS	1%	5,346
ADM	1%	10,427
Total	100%	837,600

RATED QUANTITY AND PRICING

Table B-3 indicates the rated, low-risk canola seed quantity of **565,000 tons/year** available for a new project in Munich, ND.

A **BAM of 1.2** was selected to account for uncertainty in the accuracy of existing data, scale-up readiness, historical harvesting practices and volumes, farmer participation, and annual changes in canola production and demand. Among these factors, scientists and experts recognize that farmer participation is the most challenging to estimate and quantify. A review of literature reveals that several factors impact producers' decision to participate in a new biomass project, such as: yield, market price, harvest timeliness, crop rotation, contract terms, and distance to the processing facility. However, canola seed is a well-established crop in the Supply Zone, thus a small BAM of 1.2 was considered appropriate. The delivered price range of $350-$550 per ton was obtained through outreach to local producers and experts and are in line with the historical prices (Figure E-2).

Table B-3. Available/Rated Quantities and Delivered Price Range

Feedstock	Available Quantity (tons/yr)	Biomass Availability Multiple (BAM)	Rated Quantity (tons/yr)	Delivered Price Range ($/ton)
Canola Seed	**678,040**	**1.2**	**565,033**	**$350-$550**

SECTION C: INFRASTRUCTURE



PROPERTY OVERVIEW

Address:	Highway 20 & 88th St NE
City:	Munich
State:	North Dakota
County:	Cavalier
Acres:	130
Pricing Note:	Unknown
Topography:	Flat
Zoning:	Unknown

SITE CONTACTS

Economic Development Contact
Shannon Duerr
Cavalier County Job Development Authority, ND
shannon@utma.com

Site Owner
Griffin Zimmer
griffin.zimmer@gmail.com

ADDITIONAL NON-RATED SITES

Infrastructure Site Contact
Jaidan Hunt
Manager of Advisory Operations
jaidan@ecostrat.com

TRANSPORTATION

The site has robust intrastate highway access, situated directly along Highway 20, which becomes Route 34 at the Canadian border. Highway 5 is located 7 miles north, and Highway 66 is 3 miles south. For interstate transit, I-29 is 80 miles east and I-94 is 140 miles south. The site is adjacent to a short-line railroad operated by Northern Plains Railroad. Commercial air travel is accessible via Devils Lake Municipal Airport (40 miles), Jamestown Regional Airport (121 miles), and Grand Forks International Airport (127 miles).

ELECTRIC SERVICE

Electric service is provided by Cavalier Rural Electric Cooperative, which has a line running along 88th Street to the North of the site. **Contact:** Marty Tetrault, Manager, Cavalier Rural Electric Cooperative, 701-256-5511

NATURAL GAS

There is no natural gas accessible to the site.

WATER

Water service is available at the site via two 4-inch lines on the west side of the property, drawn from the Langdon Rural Water System. **Contact:** Jeremy Schuler, General Manager, NRWD, (701) 265-8503, jeremy@nrwd.us

WASTEWATER

The City of Munich has a lagoon located approximately one mile from the site, but not a mechanical wastewater treatment plant. If a future project requires onsite treatment, there is a permitting process through the Lake Region District Health Unit. **Contact:** Craig Schommer, Mayor of Munich, cjschom@gmail.com

TELECOMMUNICATIONS

The site is served by United & Turtle Mountain Communications (UTMA), and there is a pedestal on the corner of the site by 88th street and the highway. This could currently serve the site as with up to 10 gig internet. **Contact:** Ross Feil, (701) 256-5156

SECTION D: RISK INDICATOR SCORING METRICS

CATEGORY 1.0: SUPPLY CHAIN RISK

1.1 Risk Factor: Quantity and Delivered Cost of Available Biomass Feedstock

1.1.1 Biomass Feedstock Supply Curve/Marginal Cost Curve

Rationale: The greater the feasible transport distance, the more feedstock is accessible to the Issuer, but at a higher delivered cost. The feedstock supply curve, sometimes referred to as the marginal cost curve, is a function of feedstock availability over its cost, which is primarily, but not exclusively, a function of distance. The feedstock supply curve is used to determine the availability of redundant feedstock at various price points, as well as the cost of replacing feedstock with substitutes located at different distances.

Feedstock cost curves are useful in determining supply chain resilience; they provide information about the cost of feedstock availability in times of supply disturbance. Biomass supply chains are prone to supply disturbances over time; suppliers can become insolvent, or weather events can temporarily disrupt feedstock availability. When a disturbance occurs, the Issuer may need to source replacement feedstock from different suppliers at different locations and at different costs. A biomass supply curve indicates quantities of feedstock available at various price levels from suppliers generally located further away than the core supplier.

Risk Information: The biomass feedstock supply curve for the region illustrates a steady accumulation of available canola seed as the transport radius extends from the center point in Munich, North Dakota. Data indicates that over 52% of the total generated feedstock can be procured within a 55-mile driving distance. The supply curve does not exhibit significant inflection points or jumps, suggesting a relatively uniform distribution of production across the Supply Zone without major geographic barriers or isolated pockets of high-cost supply. As the collection radius expands to 75 miles, the total generated quantity reaches its maximum, fully supporting the facility's rated requirements. Up to 837,636 tons/yr of canola seed is generated for the rated price range of $350 - $550/ton.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.1.2 Seasonal Biomass Feedstock Supply Variation

Rationale: Biomass supply can present significant seasonal variations. Seasonal supply variations, combined with limitations associated with longer-distance transportation and storage, can lead to BDO Zone biomass supply imbalances,[5] which can manifest in shortages and higher costs for Issuers.

Risk Information: Canola is an annual crop with a distinct seasonal harvest window typically occurring in August and September, which creates inherent supply variations that must be managed through logistical planning. These seasonal fluctuations can be exacerbated by longer transportation distances, particularly during the spring thaw when local road weight restrictions (frost laws) limit truck payloads and access to rural collection points. To mitigate these risks, local agricultural operations utilize extensive on-farm storage capacities, often equipped with aeration fans to maintain seed quality during winter months, allowing for a steady flow of feedstock to market year-round. Furthermore, the presence of established elevator networks in Cavalier County and neighboring regions provides additional buffer capacity to smooth out delivery schedules and counteract seasonal availability gaps.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**16**

1.1.3 Year-to-Year Variation in Biomass Feedstock Availability

Rationale: Biomass can have significant year-to-year supply variations due to variability in yield from biomass harvesting operations, particularly with agricultural biomass.

Risk Information: Historical production data models demonstrate significant year-to-year variation in canola feedstock availability within the Supply Zone, primarily driven by environmental factors such as drought and disease pressure. For instance, while the region averaged approximately 837,600 tons of production annually between 2015 and 2024, severe drought conditions in 2021 caused a sharp decline in average yield to 1,602 pounds per acre, dropping total production to roughly 720,000 tons. Conversely, favorable conditions in 2022 saw yields rebound to 2,090 pounds per acre with production nearing 980,000 tons, highlighting the resilience and recovery potential of the local agronomic system. Long-term crop rotation strategies, typically involving wheat and soybeans, are employed by producers to manage disease risks like clubroot and blackleg, which helps stabilize long-term yield variability despite annual weather fluctuations.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**

[5] Golecha & Gan, 2016.

Gross Risk Indicator (GRI)	Score
The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	36
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	36

1.1.4 Historical Biomass Feedstock Price Variations

Rationale: If the historical feedstock price shows volatility, then the risk of future price fluctuation is elevated. If feedstock prices have historically exceeded the price at which the Issuer would have to cease operations or breach a financial covenant (i.e., the "red line" feedstock cost), then mitigation measures should be put in place.

Risk Information: An analysis of historical canola seed pricing reveals volatility driven by a combination of global market dynamics, geopolitical trade policies, and regional agronomic conditions. Over the past five years, prices have fluctuated significantly; local growers reported prices ranging from the high $20s per hundredweight (cwt) during peak demand periods down to approximately $19 per cwt in recent assessments. Key factors influencing these variations include international trade tensions, such as tariffs imposed by major importers like China, and global conflicts that have disrupted fertilizer supply chains and inflated input costs for nitrogen and sulfur. Additionally, competition from local processing facilities in nearby counties and cross-border demand from Canadian crushers contributes to local price discovery and competitive bidding for available supply.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed high, therefore the RRL is 8 out of 10.	8
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed high, therefore the RRI is 8 out of 10.	8
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 64 out of 100.	64
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 64 out of 100.	64

1.2 Risk Factor: Harvest and Collection Risk

1.2.1 Biomass Feedstock Production Experience

Rationale: Risk is higher when suppliers have limited experience with planting, growing, harvesting, processing, and/or collecting biomass. Limited experience may be common for stover or other agricultural residue supply chains where farmers or producers may have no previous experience.

Risk Information: The region boasts a mature and highly experienced agricultural sector, with many local producers farming canola since the 1980s or 1990s and operating multi-generational family farms. These businesses typically manage rotations of 2,000 to over 10,000 acres, utilizing advanced agronomic practices and modern equipment to maintain consistent production. Operations are fully mechanized utilizing high capacity combines, contrasting with semi-mechanized chainsaw felling crews which are not applicable to this agricultural feedstock; furthermore, the sector is characterized by a consolidation trend where successful family operations are expanding, effectively acting as companies with multiple crews. Harvesting data indicates a stable harvested area averaging around 868,000 acres annually over the last decade, with producers increasingly adopting direct combining (straight cutting) methods over traditional swathing to improve efficiency and reduce shattering losses.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.2.2 Primary Product and Residue (or Secondary Transformation) Risks

Rationale: If the feedstock is a new/secondary crop or a by-product, suppliers may either lack sufficient experience to mitigate risk or be unable to react to such risk. Secondary crops or by-product producers may be less likely to prioritize production. For new crop types, inexperience in planting, harvest, collection, and yield data may pose higher levels of risk. If the feedstock is a secondary transformation (i.e., wheat straw, corn stover), then production can be subject to variables beyond suppliers' control (e.g., changing demand for primary crop prices).

Risk Information: The primary market for canola seed in the region is driven by robust demand from the vegetable oil sector for human consumption and an increasingly significant demand from the biofuel industry, particularly for renewable diesel and sustainable aviation fuel feedstocks. Historical data indicates a strong supply base, with the Supply Zone producing an average of approximately 837,600 tons of canola seed annually, although production can fluctuate due to weather events like drought. While the primary product is the seed, the agricultural residue (straw) is typically chopped and left on the field to maintain soil health and is not currently recovered for secondary transformation, eliminating interference risks associated with residue collection windows. Recent market dynamics have shown volatility; for instance, export prices for canola seed declined by approximately 32 percent over a twelve-month period leading into early 2024.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**

The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

1.2.3 Harvest and Collection Practices and Schedules

Rationale: Differences in harvest timing and practices used can create risk to both the quantity and quality of feedstock. For example, feedstock harvested by different suppliers in different windows can undergo varying levels of exposure to sun, wind, and moisture, leading to variations in delivered feedstock quality. For example, agricultural feedstocks and energy crops have optimal harvesting windows to ensure minimal moisture content. In certain BDO Zones, these harvesting windows may coincide with heightened weather risks, such as frost or rain.

Risk Information: Canola cultivation in the region follows a distinct seasonal schedule, with planting typically occurring in late April to early May and harvesting taking place from late August through September. Producers utilize two main harvesting practices: swathing, where the crop is cut and placed in windrows to mature, and straight combining, which has become increasingly popular (practiced by approximately 50% of growers) due to the availability of shatter-resistant varieties and efficiency gains. The harvest window is relatively short, spanning 30 to 45 days, requiring intense logistical coordination.

Raw Risk Likelihood (RRL) The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**Score** **4**
Raw Risk Impact (RRI) The risk impact is deemed low, therefore the RRI is 4 out of 10.	**Score** **4**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**Score** **16**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**Score** **16**

1.2.4 Harvesting and Collection Equipment

Rationale: Different types of harvesting and collection equipment used by suppliers in a BDO Zone can have a significant impact on the quality and availability of feedstock. Using different types and combinations of harvesting, collection, and processing equipment among suppliers can lead to non-homogeneous feedstock. Equipment that is not designed specifically for biomass cultivation, harvesting, and collection can increase feedstock quality risks. Relevant equipment should be specified for the sake of product consistency and risk reduction.

Risk Information: The region's agricultural sector utilizes advanced, high-capacity machinery, with producers predominantly owning their own fleets of air drills, swathers, and class-eight combines capable of harvesting 12 to 15 acres per hour. While the cost of new equipment has risen significantly—often ranging between $500,000 and $1 million per unit—farmers have adapted by expanding their operational scale to justify these capital investments. Reliance on third-party contractors is minimal for harvesting, although approximately 25% of the transportation logistics are handled by external trucking companies, ensuring that equipment availability does not pose a significant bottleneck to feedstock supply.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.2.5 Ownership/Control of Land

Rationale: Suppliers that own land or a production facility where feedstock is produced tend to have better control of supply chains and present lower degrees of supply risk.

Risk Information: Land tenure in the Supply Zone is characterized by a stable base of multi-generational family farms rather than large corporate entities, with hundreds of independent growers managing operations. A significant portion of the land is farmed under rental agreements, with rental rates varying between $30 and $300 per acre depending on the specific location and soil quality. This ownership structure facilitates strong, direct relationships between suppliers and landowners, allowing for flexible crop rotation decisions without the complexities often associated with accessing biomass on public lands, which is not a primary factor in this region's canola production.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**

Loaded RI Score	Score
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	4

1.2.6 Variation in Feedstock Preparation or Densification Methods Among Different Suppliers

Rationale: The shape and density of the unit in which feedstock is supplied can impact feedstock cost and quality. Standard feedstock densification modes for biomass consist of round or square bales, pellets, cubes, chips, or grindings. Bales of different densities can absorb moisture at different rates. In certain cases, round bales have been viewed as problematic due to their uneven moisture content distribution.[6]

Risk Information: Feedstock preparation methods vary primarily between swathing and straight cutting, which can influence the moisture content and maturation uniformity of the delivered seed, though densification equipment is not required as canola seed flows freely and has a high bulk density naturally. To manage these variations, producers utilize on-farm storage bins with aeration fans to condition the seed and lower moisture levels and green seed counts before delivery. Swathers and combine harvesters are widely available and owned by producers, ensuring that both harvest methods can be deployed effectively to meet quality standards regardless of the specific preparation technique chosen.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	2
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	2
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	4
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	4

1.3 Risk Factor: Existing Users

1.3.1 Existing User Locations

Rationale: Competitors' locations relative to siting locations within a BDO Zone can affect the viability of procuring feedstock and the cost of that feedstock. Accurate and detailed competitor mapping provides an understanding of a competitor's geographical influence on new plants within a BDO Zone, including competitive advantages such as short hauling.

Risk Information: The competitive landscape for canola seed within the region is defined by four major processing facilities located between 89 and 139 miles from the center of the Supply Zone in Munich. Estimation of available canola seed has already taken account of demand from these facilities (see Section B). For this reason, risk is deemed very low.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	2
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	2

[6] Huhnke, 2018.

Gross Risk Indicator (GRI)	Score
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	4
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	4

1.3.2 Existing User Intake Quantities

Rationale: Clear understanding of feedstock consumption by key competitors for each rated feedstock type in the BDO Zone is essential to quantifying competitor risk.

Understanding current consumption and historical trends of feedstock utilization can provide valuable information about feedstock price elasticity during shortages and insight into events that may impact future supply conditions. It can enable more accurate estimates of the sensitivity of feedstock availability to potential future consumption levels or the impact of external events (e.g., weather events, structural economic changes, seasonality, or policy change).

Risk Information: The aggregate annual intake capacity of the four primary competitors operating in the Competition Zone is estimated at approximately 2.67 million tons of canola seed. The facility in southern Manitoba represents the largest individual capacity in the immediate vicinity, processing approximately 964,500 tons annually, followed closely by the McHenry County, North Dakota facility with an intake of roughly 925,900 tons per year. The plant in Kittson County, Minnesota, is designed to process approximately 400,000 tons of local canola crop annually, while the facility in Ste. Agathe, Manitoba processes around 385,800 tons per year. Consumption of these facilities was already taken into account in the estimation of available quantities of canola seed in Section B. Therefore, the risk is deemed very low.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	2
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	2
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	4
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	4

1.3.3 Existing User Pricing and Price Sensitivity

Rationale: Understanding how much competitors pay (or receive) for different feedstock types is essential in determining the Issuer's competitiveness and accurately assessing the delivered cost range in the BDO Zone rating.

Current and historical prices paid/received by competitors provide insight into their procurement behaviors and exert pressure on suppliers in the BDO Zone, such as the ability/willingness to pay premiums for feedstock during times of feedstock shortage or reduce prices (or cut-off deliveries) during gluts. Competitors that have the ability to offer higher prices for feedstock during feedstock shortages can pose a significant risk to the Issuer.

Knowledge of competitor pricing and price sensitivity is also an essential prerequisite to formulating a feedstock cost curve, which can enable predictions of feedstock redundancy, i.e., how much feedstock could become available at different pricing levels.

Risk Information: Historical pricing data for canola seed reveals significant volatility driven by global events and market dynamics, with local elevator bid prices ranging from recent lows around $17–$19 per hundredweight (cwt) to highs near $40 per cwt during peak demand periods. While a portion of growers enter into forward contracts—typically covering about 50% of their volume to secure pricing—a substantial number of producers operate on a spot basis to capitalize on market fluctuations. Existing users in the processing sector often pay a premium of approximately $1.00 per cwt over local elevator prices to incentivize direct delivery, though growers must weigh this against transportation costs and logistics. Therefore, existing users have demonstrated they have a tolerance to price increases, which renders this risk medium-high.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed high, therefore the RRI is 8 out of 10.	**8**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 48 out of 100.	**48**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 48 out of 100.	**48**

1.3.4 Impacts of Future Demand on Biomass Feedstock Availability and Price

Rationale: Feedstock utilization in a BDO Zone can change over time. Expansion of feedstock demand by current competitors can put additional pressure on feedstock and lead to higher prices, feedstock disruptions, shortages, supplier breaches, or other types of supply chain disruption.

If current markets for feedstock have been publicly signaling the potential for increased demand for feedstock, high interest in a Supply Zone can make suppliers overconfident, leading to a supplier-controlled market where short-term contracting becomes the norm and supply chain reliability is compromised for the Issuer. If and when it occurs, increased demand on feedstock may decrease availability and increase cost for new plants within the BDO Zone.

Risk Information: Future demand for canola feedstock is projected to intensify significantly due to the aggressive expansion of the renewable diesel and sustainable aviation fuel (SAF) sectors, which has triggered a structural shift from food-based to energy-based consumption. While some proposed large-scale infrastructure projects in Regina, Saskatchewan, have faced delays or suspensions due to economic and regulatory uncertainty, other significant expansions in Yorkton, Saskatchewan, and a proposed SAF facility in Portage la Prairie, Manitoba, are poised to increase regional competition for seed. This "biofuel pivot" is expected to tighten the supply-demand balance, as federal mandates in both the U.S. and Canada incentivize capacity increases that could outpace production growth, potentially driving up feedstock prices and altering trade flows. Increasing cost of oil on international markets further increases the likelihood of increased SAF production.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed high, therefore the RRI is 8 out of 10.	**8**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 48 out of 100.	**48**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 48 out of 100.	**48**

1.3.5 Soft Supply Influence of Existing Users

Rationale: In some cases, existing markets for feedstock may be able to exert high degrees of pressure over local suppliers, effectively enabling control of feedstock, especially during times of shortage. This control can derive from qualitative or "soft" factors, such as long previous relationships between local suppliers and existing markets for feedstock.

Risk Information: Business relations between growers and existing users are often influenced by logistical convenience and the scale of farming operations, with larger growers sometimes receiving preferential treatment such as reduced wait times at processing plants. Although contracts are common, soft supply influence is moderated by the prevalence of the spot market, where producers retain the flexibility to sell to elevators or processors based on immediate pricing and transportation constraints. Furthermore, some growers have reduced direct deliveries to specific processors in Minnesota due to personal logistical factors and wear-and-tear on equipment, indicating that non-price factors also play a role in supply chain stickiness. These dynamics work in favor of a new entrant.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch)	**NN**

No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score **Score** The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100. **4**

1.3.6 Temporary Externality-Driven Markets for Biomass Feedstock

Rationale: Alternative, non-traditional, externality-driven competitors for feedstock can drive feedstock demand (and cost) in unusual circumstances. For example, an Issuer using corn stover as a feedstock would not typically compete with the higher-end animal feed market. However, in times of significant hay shortage (e.g., during drought), farmers may use corn stover as hay replacement, driving the price of stover feedstock and decreasing its availability for bio-projects.[7]

Risk Information: Temporary markets for canola seed are limited compared to residue feedstocks, as canola is a high-value primary crop rather than a byproduct; however, distinct markets exist for off-spec material driven by quality externalities. Interviews indicate that while the vast majority of seed is destined for food-grade crushing, canola with quality issues—specifically high green seed counts or heat damage—is often directed toward the renewable diesel facility in McHenry County, North Dakota, which can utilize feedstock unsuitable for human consumption. Unlike crop residues which may be diverted for livestock feed during drought (a roughly 1% market share for residues), canola seed does not face significant competition from such temporary externality-driven alternative markets, ensuring a stable supply focus on oilseed processing.

Raw Risk Likelihood (RRL) **Score** The risk likelihood is deemed very low, therefore the RRL is 2 out of 10. **2**
Raw Risk Impact (RRI) **Score** The risk impact is deemed very low, therefore the RRI is 2 out of 10. **2**
Gross Risk Indicator (GRI) **Score** The Gross Risk Indicator (RRL X RRI) is 4 out of 100. **4**
Mitigation/Notching **Notch** *RRL Mitigation (Notch)* **NN** No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score **Score** The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100. **4**

1.3.7 Relative Inventory Capacity of Existing Users

Rationale: The more inventory a competing biomass facility is able to store, the more competitive pressure it can exert on supply. The ability to store large inventories allows competitors to purchase inventory when the prices are low, potentially giving it an economic advantage. Additionally, the ability to store inventory during feedstock supply surpluses can enable competitors to continue to intake feedstock when the Issuer's plant (with lesser inventory

[7] Bergtold, 2018.

capacity) may be forced to put suppliers on quota. Larger inventory capacity on the part of competing markets creates supplier loyalty and can make it more difficult for new projects to secure supply without paying a significant premium.

Risk Information: The primary competitors in the region, particularly the large-scale processing facilities in Southern Manitoba and McHenry County, North Dakota, maintain substantial industrial inventory capacities sufficient to support continuous operations processing approximately 2,500 metric tonnes per day. Despite these large facility capabilities, the regional supply chain is structurally dependent on decentralized inventory, with producers managing significant on-farm storage in hopper bins equipped with aeration fans to condition seed and stagger deliveries. This extensive on-farm buffering capacity allows existing users to manage intake flows via contracts, though industry feedback suggests that these users rely on the growers to hold inventory for much of the crop year rather than stockpiling the entire annual requirement on-site immediately post-harvest. However, as the demand posed by competitors has been taken account of, the risk related to the relative inventory capacity of existing users is deemed low.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**16**

1.3.8 Relative Accessibility/Delivery Hours and Wait Times

Rationale: The value attributed by suppliers to local competing markets for biomass is often directly related to the degree of flexibility the market provides in terms of delivery hours and the more efficient discharge can occur.

Risk Information: Operational accessibility varies among regional competitors, with the processing plant in Kittson County, Minnesota, offering the most flexible receiving window, operating from 7:00 am to 7:00 pm, Monday through Friday. Other major facilities, such as those in Southern Manitoba and McHenry County, North Dakota, typically close their receiving scales earlier, between 4:00 pm and 5:00 pm. The receiving infrastructure is robust, with the Minnesota facility notably accommodating North Dakota truck configurations, including double trailers with a gross vehicle weight of up to 105,500 pounds; however, producer feedback highlights that larger farming operations often receive preferential treatment regarding delivery slots and wait times, potentially disadvantaging smaller suppliers at these high-volume intake points. Generally, this indicator is deemed very low risk.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**

RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

1.3.9 Relative Specification Advantages

Rationale: When choosing a market for biomass feedstock, suppliers not only look at price but also at relative quality requirements or specifications. It is important to understand feedstock quality specifications for competing markets within the BDO Zone in order to accurately quantify the risk that competitors can exert on the Issuer's supply chain.

Risk Information: Existing competitors maintain distinct feedstock specifications based on their end-product focus, creating relative advantages depending on crop quality. Food-grade crushers in Manitoba and Minnesota enforce strict quality standards, particularly regarding green seed counts, where levels exceeding 2 to 3 percent trigger significant price discounts to ensure oil quality for human consumption. In contrast, the biofuel-focused facility in McHenry County, North Dakota, possesses a relative specification advantage for lower-grade material, as it can accept and process canola with quality defects that would be rejected or heavily penalized by food-grade competitors, thereby capturing a specific "off-spec" segment of the supply curve. In general, however, this indicator is deemed very low risk.

Raw Risk Likelihood (RRL) The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**Score** **2**
Raw Risk Impact (RRI) The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**Score** **2**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**Score** **4**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

1.4 Risk Factor: Transportation

1.4.1 Biomass Feedstock Transportation Costs

Rationale: Transportation can be one of the most significant cost components of biomass supply chains. The average transport cost and percentage of total feedstock cost attributable to transport should be known.

Transport distances of 50-75 miles for biomass feedstocks are typical, but larger distances can be common. Where the average transport distance from suppliers to Issuers is high, the supply chain is subject to greater sensitivities to risks, such as increases in diesel cost, weather impacts, mechanical breakdown, and the demand for scarce feedstock from competitors closer to the source.

Understanding average transport distance can help flag higher-risk BDO Zones where transport distance materially exceeds the average.

Risk Information: Transportation logistics within the Supply Zone are defined by a standard truck payload of approximately 24 tons, with producers typically hauling feedstock over distances of 50 to 60 miles to delivery points. While specific diesel pricing fluctuates, the cost structure for transportation is heavily influenced by rising capital expenses, with equipment costs for trucks and machinery reported to have increased by over 200 percent in recent years. To mitigate these costs per ton, the region benefits from regulatory exemptions that allow for high-capacity transport, such as the allowance for double trailers up to 105,500 pounds gross vehicle weight in cross-border transit to Minnesota, which materially lowers the average transportation cost per unit compared to standard weight limits. Finally, compared to agricultural residue markets, the cost of transportation is relatively low compared to the cost of delivered canola seed. That said, some larger growers have noted that rising equipment costs and wear-and-tear are influencing decisions to shorten haul distances, preferring closer delivery points over distant terminals despite potential price premiums. This risk indicator is deemed low.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**16**

1.4.2 Ownership/Control of Transportation/Logistics

Rationale: In most cases, suppliers that own or lease transportation equipment necessary to transport biomass from fields are at lower risk than those that do not. However, in some circumstances, reliance on third parties to transport biomass is common practice and does not contribute to risk.

Risk Information: The ownership structure of transportation assets within the Supply Zone heavily favors producer-controlled logistics, with approximately 75 percent of local growers owning their own fleets of trucks and trailers. Interviews with industry representatives indicate that while some trucking companies operate in the area—handling roughly 25 percent of the volume—most farming operations have scaled up to include sufficient transport capacity to move their own commodities to local elevators or processing points. This high degree of producer ownership provides a layer of supply chain security, although it also places the burden of maintenance and fuel cost volatility directly on the feedstock suppliers.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**

Gross Risk Indicator (GRI)	Score
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	4
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	4

1.4.3 Transportation of Biomass Feedstock Requires Specialized Equipment and Specialized Operator Training

Rationale: Requirements for specialized transport equipment (e.g., walking-floor trailers) can increase supply chain risk. Where there is low availability of required transportation equipment, equipment owners have increased leverage over transportation prices, and supply chain resiliency can be lower.

Risk Information: Transporting canola seed does not require highly specialized equipment beyond standard agricultural grain trailers, specifically hopper bottom trailers which are ubiquitous in the region. Local producers and elevators are well-equipped with this standard infrastructure, ensuring high availability of trucks suitable for feedstock delivery without the need for unique operator training beyond standard commercial driving requirements. The logistics of harvesting and moving canola are functionally identical to cereal grains, utilizing air drills for planting and combines for harvesting, meaning no new capital investment in specialized transport fleets is necessary for a new entrant. However, maximizing efficiency often involves utilizing high-capacity configurations, such as double trailers capable of gross vehicle weights up to 105,500 pounds, which requires adherence to specific axle spacing and bridge formulas.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	2
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	2
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	4
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	4

1.4.4 Delivery Routes Through Local Communities

Rationale: Transportation of biomass can become a nuisance to local communities, especially if a large number of trucks pass through residential and school areas. Local communities often have the power to force regulations regarding truck transport, impeding the ability of BDO Zone suppliers to transport feedstock.

Risk Information: The Supply Zone is predominantly rural, and there is no recorded history of significant public opposition to agricultural traffic or delivery routes through local communities. Current logistics involve transporting feedstock out of the zone to large canola-intaking facilities located in neighboring regions, such as a processing plant in Kittson County, Minnesota, and facilities in southern Manitoba. The absence of a large-scale crusher directly within the center of the zone means that heavy truck traffic is currently dispersed toward these external hubs rather than concentrated in a single local municipality. Future projects would benefit from this existing acceptance of heavy agricultural transport, provided that routing minimizes disruption to residential sectors in smaller towns like Munich or Langdon.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.4.5 Transportation Regulations and Local Weight Limits

Rationale: In many BDO Zones, transportation is regulated based on seasonal road conditions. These regulations (e.g., "frost laws") often take the form of weight restrictions or limits on the number of trucks allowed on roads. Such regulations can impede the project's ability to source sufficient feedstock or increase the cost of doing so at certain times of the year.

Risk Information: Transportation within the zone is governed by a complex framework of weight limits that varies by jurisdiction and season, posing a significant logistical constraint during the spring thaw. While North Dakota state highways generally allow gross vehicle weights up to 105,500 pounds for qualified combinations, interstate routes are restricted to 80,000 pounds without permits, and cross-border transit into Manitoba is subject to RTAC standards and strict spring road restrictions (frost laws). These seasonal restrictions, which can limit axle weights to 60-90% of normal capacity to prevent pavement damage, force shippers to reduce payloads or increase trip frequencies during the thaw period. Furthermore, while reciprocity agreements exist for farm vehicles operating within 20 miles of the border, commercial hauling further inland requires navigating divergent permitting systems (e.g., MOOVES in Manitoba and E-Permits in North Dakota) and customs documentation, which some growers cite as a deterrent to cross-border delivery. This plays in favor of a new project in Munich, ND.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**

Mitigation/Notching	Notch
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	4

1.4.6 Road Infrastructure

Rationale: Feedstock cost and availability can be a function of road infrastructure, in particular the accessibility the infrastructure provides to feedstock. Issues with road networks will translate directly to risks to feedstock supply.

Risk Information: The road infrastructure in the region is essential for connecting the "canola belt" to processing markets, but it faces challenges related to climate and heavy agricultural use. The network comprises a mix of paved state highways and gravel county roads, with the latter being particularly susceptible to deterioration during wet cycles and spring thaws. Research indicates that extreme weather events, such as flash floods and winter storms, can disrupt these transportation networks, negatively impacting basis spreads by increasing the cost of moving crops to market. Additionally, local soil health specialists have noted issues with soil erosion filling roadside ditches and affecting drainage, which can compromise roadbed stability over time. Despite these challenges, the primary corridors are designed to handle heavy agricultural loads, provided that seasonal weight restrictions are strictly observed to mitigate long-term infrastructure damage.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	4
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	4
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	16
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	16

1.4.7 Transportation Redundancy

Rationale: Transport equipment redundancy is important for dealing with seasonally variable feedstock supplies as well as the risk of equipment breakdowns.

Risk Information: Transportation redundancy in the region is secured by a high prevalence of producer-owned logistical assets, specifically hopper bottom trailers, which are ubiquitous among local farming operations. Interviews with industry stakeholders indicate that nearly every producer possesses hopper bottom trailers, facilitating a high degree of self-reliance for grain movements. While the majority of feedstock transport is managed directly by growers using

their own fleets, approximately 25 percent of transportation requirements are met by commercial trucking companies operating within the area. This mix of private and commercial transport capacity ensures that the supply chain can accommodate seasonal surges in volume and mitigate potential equipment breakdowns, aligning with industry standards for transportation resilience.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.5 Risk Factor: Risks Related to Supply Chain Resiliency

1.5.1 Size, Number, and Location of Suppliers

Rationale: In general, a supply portfolio involving multiple suppliers of various sizes (and from multiple BDO Zones) is important for ensuring steady and uninterrupted feedstock supply with minimal price fluctuations. If a small number of large suppliers provides a high proportion of total feedstock, a disruption or supplier breach will have greater impact on the supply chain. In such cases the risk of disruption is lower, but the impact of those disruptions is higher. Conversely, many small suppliers are less likely to have the capacity to withstand internal disruptions and thus may be more likely to breach. Here, risk of disruption is higher, but their likely impact is lower. The number of suppliers as well as the ratio of small to large suppliers should be optimized. There is no pre-determined number or optimal ratio of suppliers, although having too many or too few can both pose higher degrees of risk.

Risk Information: According to the 2022 USDA Census data, there were 5,000 cropland farms in the Supply Zone with a total cropland area of 5.2 million acres and an average size of 1,046 acres. Half of the farms in the BDO Zone are below 500 acres, 15% between 500 and 1,000 acres, and 35% above 1,000 acres. This is considered a large number of potential suppliers with varying sizes, rendering this indicator as very low risk.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)*	**NN**

No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

1.5.2 Suppliers Subject to Same External Risk Factors

Rationale: When a single risk event can impact the feedstock production ability of all (or most) suppliers, then feedstock risk is higher and supply chain resiliency is lower. Resilience is maximized when biomass supply chains exhibit diversity in spatial location (i.e., geography), production practices, and other elements of supply chain structures such that the impact of single high-risk events has varying impacts on suppliers.

Risk Information: All suppliers of canola seed are subjected to the same risks, including disease, weather events, increased costs of inputs, etc. However, the geographic distribution of the growers somewhat mitigates this risk. The impact is further mitigated by historical data, indicating rather stable production of canola seed, despite the fluctuation in 2021. Risk is deemed medium-high.

Raw Risk Likelihood (RRL) The risk likelihood is deemed high, therefore the RRL is 8 out of 10.	**Score** **8**
Raw Risk Impact (RRI) The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**Score** **6**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 48 out of 100.	**Score** **48**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 48 out of 100.	**Score** **48**

1.6 Risk Factor: Biomass Feedstock Scale-up

1.6.1 Capacity of Supply Chain Components and Infrastructure to Scale

Rationale: Scale-up risk increases if supply chain components or underlying feedstock infrastructure necessary for these components cannot scale to handle Issuer feedstock requirements and throughput capacity. Capacity to scale should be demonstrated.

Risk Information: The supply chain is already at the scale necessary to deliver the rated quantities of canola seed.

Raw Risk Likelihood (RRL) The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**Score** **2**
Raw Risk Impact (RRI) The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**Score** **2**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**Score** **4**
Mitigation/Notching *RRL Mitigation (Notch)*	**Notch** **NN**

No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score — **Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100. — **4**

1.6.2 Availability of Labor for Biomass Feedstock Production

Rationale: Skilled labor shortages can be difficult to remedy in the short term. The availability of suitable labor in an area can impact the ability to procure sufficient feedstock quantities on required schedules. Labor risks are higher where supply chains are not yet active or for Issuers for whom large feedstock requirements or the development of new (or expanded) supply chains demand significant additions to the local labor force.

Risk Information: Labor availability presents a constraint for the region, with local stakeholders identifying it as a primary restriction for agricultural expansion; however, producers have actively adopted mitigation strategies such as the H-2A Temporary Agricultural Workers visa program to bridge workforce gaps. Operations frequently recruit skilled labor from countries such as South Africa to operate heavy machinery and grain carts during critical planting and harvesting windows. While competition for labor exists—particularly from local elevators that can offer higher wages—the agricultural workforce is sustained by multi-generational family farms where succession is not reported as a major issue, ensuring a continuity of experienced operators.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment.	**NN**
RRI Mitigation (Notch) No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**16**

1.6.3 Low Historical Demand for Biomass Feedstock in the Supply Zone

Rationale: If Issuer BDO Zone does not have a history of developed large-scale feedstock procurement, suppliers may not have sufficient expertise in feedstock production to ensure reliable supply, especially in the early years. Where supply chains are not well-established, risk can be mitigated when new bio-based plants control a higher degree of feedstock processing.

Risk Information: Contrary to a scenario of low historical demand, the Supply Zone is a well-established and mature market for canola seed, having been the traditional canola-growing region of the United States since the 1980s or 1990s. The region supports robust demand from four major processing competitors located within a 150-mile radius, including facilities in neighboring Minnesota and Manitoba counties that procure food-grade oilstock. Consequently, the risk

associated with introducing a new project is not a lack of supply chain familiarity, but rather the competitive pressure of an existing, highly active market where approximately 95 percent of seed is processed locally rather than exported by rail.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.7 Risk Factor: Climate and Natural Risks

1.7.1 Seasonal Weather Impacts on Biomass Feedstock Supply

Rationale: Seasonal weather impacts are defined as those deriving from natural weather variations (e.g., spring thaws, rainy seasons, or dry seasons—as opposed to singular weather events like fires, droughts, or hurricanes). Seasonal weather changes can be a significant risk factor affecting feedstock availability, quality, and price.

Given the significant influence that weather has on multiple aspects of growing, harvesting, and transporting biomass, it is difficult to predict the availability of biomass at a specific location at different points in the future with a high degree of certainty. However, it is still possible, using past data and statistical models, to generate reasonable upper/lower bound estimates of biomass production in any given year in a wider supply zone. Such estimates are essential in assessing feedstock risk and enable accurate assessment of the efficacy of the Issuer's mitigation methods.

Risk Information: Seasonal weather volatility poses the most significant risk to feedstock supply, with fluctuations in temperature and precipitation directly impacting yields and disease pressure. Historical data highlights that excess moisture can exacerbate diseases such as Sclerotinia stem rot (white mold) and clubroot, while hot, dry conditions during flowering—such as the severe drought in 2021—can cause heat blast and significantly reduce production. Furthermore, the region is susceptible to early fall frosts which can lock in green seed counts and downgrade quality, as well as severe hail events which historically rank North Dakota high for economic crop losses. To mitigate these risks, producers utilize advanced forecasting tools for fungicide application and select shorter-season or resilient hybrids to navigate the narrow frost-free window.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed high, therefore the RRL is 8 out of 10.	**8**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed high, therefore the RRI is 8 out of 10.	**8**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 64 out of 100.	**64**
Mitigation/Notching	**Notch**

RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 64 out of 100.	**Score** **64**

1.7.2 Long-Term Weather and Climate Trends

Rationale: In certain BDO Zones, climatic trends and significant potential changes to future weather patterns can create feedstock risk.

Risk Information: Long-term climate data for North Dakota indicates a landscape defined by significant volatility, where agricultural success often hinges on navigating cycles of extreme moisture and drought. Historical analysis reveals that drought is the most economically devastating climate stressor, accounting for over 70% of the total costs associated with billion-dollar disaster events in the state between 1980 and 2024. While long-term trends show a modest warming and a slight increase in precipitation, the region remains susceptible to distinct wet and dry cycles, such as the prolonged wet cycle beginning in 1993 which raised water tables and exacerbated soil salinity issues in Cavalier County. Conversely, severe drought years, like 2021, have caused sharp yield declines, though data suggests that drought frequency itself has not statistically increased over the last century.

Raw Risk Likelihood (RRL) The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**Score** **6**
Raw Risk Impact (RRI) The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**Score** **6**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**Score** **36**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	**Score** **36**

1.7.3 Forest/Crop Fire

Rationale: Forest/crop fires, especially when occurring on a large scale, destroy feedstock and create shortages. Fire-prone conditions are predicted to increase across North America. This could potentially result in a doubling of the amount of area burned by the end of this century compared with amounts burned in recent decades. Boreal forests, which have been historically greatly influenced by fire, will likely be especially affected by this change.

Other climate change impacts that could add damaged or dead wood to the forest fuel load (e.g., as a result of insect outbreaks, ice storms, or high winds) may increase the risk of fire activity. New research is aimed at refining these climate change estimates of fire activity and investigating adaptation strategies and options to deal with future fire

occurrences. There is growing consensus that as wildfire activity increases, fire agency suppression efforts will be increasingly strained. However, analyses of fire history suggest that the effect of climate variability on precipitation regimes is the primary reason for the decreasing fire activity.

Risk Information: The risk of fire within the Supply Zone is primarily associated with grass and crop residue fires during periods of drought, rather than large-scale forest fires, given the region's agricultural dominance. While North Dakota has experienced significant wildfire events, such as the large grass fires in the northwestern part of the state in October 2024, the frequency of such events has not shown a statistically significant upward trend since record-keeping began in 2006. In the context of canola production, fire risk is generally considered low compared to other environmental stressors; however, dry conditions can create fuel loads from crop residues, necessitating careful management during harvest to prevent equipment-ignited field fires.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.7.4 Risk of Infestation

Rationale: Risk of future infestation, including its estimated consequences on feedstock supply, should be calculated into the overall risk profile. Since insect populations are influenced by environmental conditions, future changes in climate can be expected to significantly alter the outbreak dynamics of certain insect species. In some cases, larger and more frequent insect outbreaks may occur, but in other cases, recurring outbreaks may be disrupted or diminished.

Risk Information: The region faces persistent biotic pressures from a complex of insect pests and diseases that fluctuate with weather conditions. Flea beetles remain a primary concern, with recent warm springs accelerating their emergence and development, forcing producers to rely heavily on seed treatments and foliar insecticides. Additionally, the Diamondback moth poses a periodic threat, particularly in warmer, drier years like 2021 and 2023, where infestations during the flowering stage caused notable yield reductions. Disease pressures such as blackleg and white mold are endemic, while Clubroot has become a localized issue specifically within Cavalier County, and Verticillium stripe is identified as an emerging "silent killer" that has recently impacted yields, requiring rigorous crop rotation strategies for mitigation. Risk is deemed medium.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**36**

Mitigation/Notching	Notch
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	**36**

1.7.5 Risk of Hail

Rationale: Hail is one of the principal destroyers of agricultural crops in North America. There is much uncertainty about the effects of anthropogenic climate change on the frequency and severity of extreme weather events like hailstorms and their subsequent economic losses. Some studies indicate a strong positive relationship between hailstorm activity and hailstorm damage, as predicted by minimum temperatures using simple correlations. This relationship suggests that hailstorm damage may increase in the future if global warming leads to further temperature increases.

Risk Information: North Dakota historically ranks among the highest in the United States for economic crop losses due to hail, posing a severe risk to canola, which is particularly vulnerable to shattering during pod development. Recent seasons have demonstrated this volatility; for instance, in June 2025, golf ball-sized hail caused extensive damage to crops in parts of the state, and widespread storms in August 2025 destroyed crops just prior to harvest across the neighboring Canadian Prairies. To mitigate these destructive events, western North Dakota has long operated a cloud modification project to suppress hail severity, though the eastern regions rely heavily on crop insurance and the natural recovery capacity of canola during its vegetative stages to manage financial risk. Despite the historical occurrence of hail damage, however, the region has historically maintained steady production of canola seed, and the most significant drop in production occurred due to a drought, not hail. Risk is deemed medium.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**36**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	**36**

1.7.6 Risk of Flood

Rationale: Floods can cause catastrophic disruption and delay in feedstock supply. Where there is a high risk of flood and thus a negative impact on feedstock supply, the BDO Zone rating should account for this risk.

Risk Information: While less frequent than drought, flooding and excessive moisture represent a critical risk to feedstock supply, accounting for approximately 28% of the costs associated with major disaster events in the state since 1980. The region has endured significant flood events, notably the historic floods of 1997 and 2011, as well as recent wet springs in 2022 and 2024 that delayed planting and hindered crop establishment. Canola is notably intolerant of waterlogged soils, and prolonged wet cycles have historically contributed to secondary issues such as rising water tables and increased soil salinity, which can permanently reduce the productive land base if not managed through drainage and crop selection. Risk is deemed medium.
Raw Risk Likelihood (RRL) **Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10. **6**
Raw Risk Impact (RRI) **Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10. **6**
Gross Risk Indicator (GRI) **Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100. **36**
Mitigation/Notching **Notch**
RRL Mitigation (Notch) **NN**
No adjustment.
RRI Mitigation (Notch)
No adjustment.
The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score **Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100. **36**

1.7.7 Risk of Drought

Rationale: Droughts can cause significant disruptions to feedstock supplies across entire BDO Zones for extended periods of time, especially in the case of agricultural residues and energy crops.
Risk Information: Drought represents the most economically significant natural hazard for the region, accounting for over 70% of the total costs associated with billion-dollar disaster events in North Dakota between 1980 and 2024. Recent production history underscores this vulnerability; for instance, severe drought conditions in 2021 caused average canola yields to plummet to approximately 1,600 pounds per acre, a sharp decline from the higher averages typical of favorable moisture years. Although long-term state climate assessments indicate a slight trend toward increased precipitation and no statistical rise in drought frequency since 1895, the region remains subject to cyclical moisture deficits that can severely restrict feedstock availability and negatively impact farm income stability.
Raw Risk Likelihood (RRL) **Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10. **6**
Raw Risk Impact (RRI) **Score**
The risk impact is deemed high, therefore the RRI is 8 out of 10. **8**
Gross Risk Indicator (GRI) **Score**
The Gross Risk Indicator (RRL X RRI) is 48 out of 100. **48**
Mitigation/Notching **Notch**
RRL Mitigation (Notch) **NN**
No adjustment.
RRI Mitigation (Notch)
No adjustment.

The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score — **Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 48 out of 100. — **48**

1.7.8 Risk of Hurricanes, Tornadoes, and Strong Winds

Rationale: Hurricanes, tornadoes, and strong winds can destroy timber stands, crops, and feedstock piles. They can also delay agricultural operations. Hurricanes and tornadoes can indirectly cause temporary shortages of available transportation as available trucking moves to handle higher-value disaster-related contracts. For example, Katrina cleanup limited the availability of live-bottom trailers in the North and South East of the US for several months as truckers shifted operations to handle more lucrative government contracts.

Although scientists are uncertain whether climate change will lead to an increase in the number of hurricanes, warmer ocean temperatures and higher sea levels are expected to intensify their impacts. Recent analyses conclude that the strongest hurricanes occurring in some BDO Zones, including the North Atlantic, have increased in intensity over the past two to three decades.

Risk Information: While the Supply Zone is geographically isolated from hurricane activity, it is susceptible to severe convective storms that frequently generate tornadoes and damaging straight-line winds. Local agronomic feedback highlights that strong winds pose a specific operational risk during the fall harvest, where they can cause ripe canola pods to shatter, resulting in immediate yield losses before the crop can be collected. Recent meteorological reports from June 2025 document the occurrence of massive thunderstorms and tornadoes in eastern North Dakota, which inflicted severe damage on crop fields and farm infrastructure, demonstrating the ongoing physical risks to the biomass supply chain. Generally, however, the impact posed by hurricanes, tornadoes and strong winds is considered low.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 24 out of 100.	**24**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 24 out of 100.	**24**

1.7.9 Low Temperatures

Rationale: Low temperatures can cause crop failure, leading to shortages of biomass. Additionally, low temperatures can have adverse impacts on the operations of feedstock processing equipment in Northern BDO Zones.

Risk Information: The risk of low temperatures, particularly early fall frosts, is a critical concern for canola quality, as freezing before the seed fully matures can lock in chlorophyll and lead to high "green seed" counts that devalue the feedstock. Historical precedents, such as the devastating frost of August 2004, illustrate the economic severity of this risk, where widespread freezing temperatures damaged immature crops across the prairies. Despite a long-term

climatological trend showing a significant decrease in the frequency of "very cold" days and an increase in winter nighttime temperatures, the region's narrow growing window necessitates careful management of planting dates to avoid season-ending freeze events. Generally, however, the risk related to low temperatures is considered low-medium.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 24 out of 100.	**24**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 24 out of 100.	**24**

1.8 Risk Factor: Non-Weather Based Externalities

1.8.1 Diesel Price, Oil Price, and Producer Price Index (PPI)

Rationale: CPI and PPI can impact feedstock cost of harvest and collection over time. Sensitivities to worst-case scenarios should be run.

Risk Information: The economic landscape for feedstock production has been altered by sharp increases in the Producer Price Index (PPI), with local growers reporting that capital costs for machinery and equipment have surged by 200 to 250 percent over the past five to eight years. This inflationary pressure is compounded by volatility in diesel fuel prices, which are a primary determinant of freight rates and the delivered cost of biomass. Additionally, the price of oil correlates with the price of fertilizer, further driving the risk up.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**36**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	**36**

1.8.2 Currency Risk

Rationale: Where feedstock is purchased in a currency different than that which a new bio-based plant will locate in a BDO Zone, currency exchange rates and volatility can constitute risk exposure. BDO Zones that cross the US-Canada border, for example, which intake feedstock from both countries, are exposed to such currency risk.

Risk Information: Situated near the Canadian border, the Supply Zone is exposed to currency risk as the regional pricing benchmark for canola is the ICE Futures exchange in Winnipeg, which operates in Canadian dollars. This structural link means that the exchange rate between the U.S. dollar and the Canadian dollar directly influences local elevator bids and the competitiveness of cross-border procurement. Although trade agreements facilitate tariff-free movement, volatility in currency values can shift the economic incentive for growers to export rather than sell domestically.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed high, therefore the RRI is 8 out of 10.	**8**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 48 out of 100.	**48**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 48 out of 100.	**48**

1.8.3 Border Risk

Rationale: Where feedstock is transported cross-border to another country, risk exposure to border closures and crossing delays becomes present. The availability of trucks willing to do cross-border runs is limited, which can decrease supply chain flexibility and resilience. Plants near the US-Canada border, which intake feedstock from both countries, are exposed to these risks.

Risk Information: Situated directly on the international boundary between the United States and Canada, the Supply Zone is subject to distinct border risks governing the cross-border transfer of biomass. While reciprocity agreements exist to facilitate the movement of farm-registered vehicles hauling their own products within 20 miles of the border, commercial transport is often hindered by administrative burdens; local growers have reported ceasing direct deliveries to Canadian processing facilities due to the difficulty of navigating customs paperwork. Despite these frictional costs, the region functions as an integrated logistical corridor where canola seed flows bi-directionally to optimize refining capacity, though recent trade frictions—such as retaliatory tariffs on seed and new tax credit eligibility rules requiring North American feedstock origin—introduce volatility to these transnational supply chains.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed high, therefore the RRI is 8 out of 10.	**8**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 48 out of 100.	**48**
Mitigation/Notching	**Notch**

RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 48 out of 100.	**Score** **48**

1.9 Risk Factor: Political and Social

1.9.1 Government Subsidies for Biomass Feedstock Production or Utilization

Rationale: Feedstock that is directly subsidized through government programs can pose greater long-term risk than feedstock that is not. Subsidies may be subject to amendment or repeal, sometimes with minimal notice.

NOTE: This risk indicator refers to direct feedstock subsidies only; it does not apply to government subsidies that pertain indirectly to the Issuer's operations, such as Loan Guarantees, or to the markets for products produced by the Issuer.

Risk Information: Government support for canola production in the region is primarily delivered through standard agricultural safety net programs rather than direct production subsidies that would distort long-term viability. Producers in Cavalier County have access to federal assistance such as the Supplemental Disaster Relief Program (SDRP) and the Farmers Bridge Assistance (FBA) to mitigate revenue losses from extreme weather events. On the utilization side, demand for the feedstock is heavily incentivized by federal biofuel policies, including the U.S. Clean Fuel Production Tax Credit (45Z) and Canada's incoming Biofuels Production Incentive, which are critical for processing economics but do not directly subsidize the farming operation itself, suggesting a stable production base independent of volatile support schemes.

Raw Risk Likelihood (RRL) The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**Score** **2**
Raw Risk Impact (RRI) The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**Score** **2**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**Score** **4**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

1.9.2 Local, Provincial, and National Laws, Regulations, and Permitting Pertaining to Biomass Feedstock

Rationale: Feedstock whose production is directly dependent on local, provincial, or national laws or government regulations can pose greater long-term risk than feedstock which is not, since laws and regulations may be subject to amendment or repeal.

If biomass utilization requires specific permits (e.g., percentage removal of corn stover, air emission, storage permits, rights-of-way, overweight permits for trucks, cross-border permitting for shipment of biomass, chain of custody, or certification of sustainability), the likelihood of obtaining such permits and/or complying with permitting requirements should be examined.

Risk Information: No special permits are necessary for production of canola seed.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.9.3 Backlash Against Biomass Feedstock Development, Procurement, or Usage in the BDO Zone

Rationale: Public backlash against biomass development in the Issuer BDO Zone can directly impact the Issuer's ability to procure, transport, trans-load, store, or utilize feedstock by affecting local policies, regulations, and the Issuer's ability to obtain necessary permitting.

Risk Information: There is no recorded history of public opposition or significant environmental NGO activity targeting canola seed development within the immediate Supply Zone, which is deeply rooted in agricultural production. Interviews with local stakeholders and economic development officials indicate a lack of socio-economic friction regarding bio-manufacturing projects, with communities generally viewing such developments as vital for economic vibrancy.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.9.4 Consent of, and Cooperation with, Indigenous Communities

Rationale: Where new project development on or near Indigenous land, or where near Indigenous communities exert influence over feedstock producing areas, consent of, and cooperation with, Indigenous communities decrease Issuer risk.

Risk Information: Within the immediate North Dakota Supply Zone, land tenure is predominantly private family farms, and outreach indicates no specific conflicts with Indigenous communities regarding feedstock production. State-level economic development frameworks include support programs for Native American small businesses, fostering a cooperative environment for future regional development that respects local rights and resources.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

1.9.5 Food Security Concerns

Rationale: Despite the fact that any significant correlation between food prices and biofuel production is unclear, claims that biofuel production has driven up food prices, taken food from communities or had a negative impact on land use can fuel public backlash. For example, the removal of biomass may raise public concerns relating to food security if Issuer feedstock requires the use of land that would otherwise be used for growing food.

Risk Information: Food security concerns regarding canola feedstock in the region are minimal, primarily because the crop serves a dual purpose where the oil is used for both human consumption and renewable fuels, while the meal byproduct remains a critical protein source for the livestock and dairy industries. The recent expansion in canola acreage is largely driven by renewable diesel demand, yet this growth supports rather than displaces food markets by generating additional meal for animal feed. Local outreach indicates no significant community backlash regarding the diversion of crops to fuel; instead, producers view the increased demand from the biofuel sector as a positive driver for commodity prices and farm income stability. Furthermore, established agronomic practices allow for the integration of canola into rotations without compromising the production of other staple food crops like wheat and soybeans. Nonetheless, public perception may be that canola seed used for renewable fuel production increases agricultural product prices; this potential public perception increases the risk slightly.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**

The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**Score** **16**

1.10 Risk Factor: Sustainability and Environmental Concern

1.10.1 Biomass Feedstock Sustainability

Rationale: Public concerns about the sustainability of feedstock production can jeopardize biomass feedstock operations. Sustainability certification schemes should be utilized where applicable to ensure that feedstock comes from sustainable sources.

Risk Information: Sustainability in the biomass supply chain is rigorously governed by federal frameworks such as the Canadian Clean Fuel Regulations (CFR), which impose strict Land Use and Biodiversity (LUB) criteria on feedstocks used for credit generation. Feedstocks originating from the United States have received legislative recognition for aggregate compliance with these LUB criteria, facilitating seamless cross-border trade for renewable fuel production. To demonstrate compliance at the farm level, third-party certification schemes like the International Sustainability and Carbon Certification (ISCC) are increasingly utilized. These regulatory mechanisms ensure that the intensified production of canola for the bioeconomy adheres to environmental standards regarding wildlife habitat protection and sustainable land management practices.

Raw Risk Likelihood (RRL) The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**Score** **2**
Raw Risk Impact (RRI) The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**Score** **2**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**Score** **4**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

1.10.2 Risk to Soil Quality

Rationale: Soil sustainability can be defined as the management of soil in a way that does not exert any negative or irreparable effects either on the soil itself or any other systems. There is a diversity of approaches to soil sustainability in jurisdictional guidelines for biomass harvesting and production. For different feedstock types, there are also different thresholds at which feedstock removal causes significant negative consequences on the soil.

Poor soil quality that negatively impacts the long-term sustainability of the feedstock can entail long-term feedstock risk. Sub-optimal soil management can leave exposed soil post residue-harvest, which can lead to soil wash-off and soil carbon loss from precipitation and wind. Over-harvesting of biomass also depletes the carbon stock in the soil and creates a negative feedback loop that can degrade the soil and its nutrients.

Risk Information: Risks to soil quality in the Supply Zone are primarily linked to erosion and salinity, exacerbated by specific local farming practices and hydrological conditions. Outreach with local soil health specialists reveals that heavy tillage, often performed twice a year in Cavalier County to dry out clay soils, significantly increases susceptibility to wind and water erosion, leading to the accumulation of valuable topsoil in roadside ditches. Additionally, the region faces challenges with soil salinity caused by rising water tables during prolonged wet cycles, which can be aggravated by road infrastructure impeding natural drainage. While canola contributes to a diversified rotation, it is not highly salt-tolerant, necessitating careful site selection and the potential adoption of cover crops or reduced tillage methods to mitigate long-term degradation of the productive land base.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**16**

1.10.3 Risk to Surface and Groundwater

Rationale: Excessive nutrient runoff from biomass feedstock production can accumulate in surface waters and result in algal blooms and hypoxia, which can lead to habitat loss for aquatic species higher up the food chain and alter aquatic ecosystem food webs. Damage to aquatic ecosystems can cause social and regulatory backlash. Water intake issues can also increase risk.

Risk Information: The risk to surface and groundwater quality stems largely from agricultural runoff associated with soil erosion and the leaching of inputs in areas with high water tables. The physical movement of nutrient-rich topsoil into drainage ditches and waterways poses a contamination risk that is managed through best management practices, though the prevalence of intensive tillage remains a complicating factor. Furthermore, the management of diseases such as blackleg and white mold often requires the application of fungicides; however, adherence to integrated pest management (IPM) protocols and regulatory usage guidelines helps minimize the potential for chemical runoff. Saline seeps, which discharge brackish water in hilly landscapes, also present a localized risk to surface water quality that must be managed through cropping strategies that regulate soil moisture levels.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**

The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**Score** **16**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**Score** **16**

1.10.4 Water Use

Rationale: Biomass feedstock operations can have significant impacts on the hydrological flux (infiltration, groundwater recharge, interception, and transpiration) of ecosystems. This can lead to water shortages, lower yields, and backlash from regulatory bodies if management plans are not properly instituted.

Risk Information: Water use risks for canola production in this Supply Zone are negligible regarding resource depletion, as the crop is predominantly rain-fed and does not rely on irrigation from aquifers or surface bodies. The primary water-related risks are meteorological, involving either yield losses from drought or crop damage from excess moisture and waterlogging, rather than the sustainability of water withdrawal for cultivation. Consequently, the expansion of canola acreage for biomanufacturing does not compete with municipal or industrial water needs, nor does it threaten local water supplies, making the feedstock highly sustainable from a water-consumption perspective compared to irrigated crops.

Raw Risk Likelihood (RRL) The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**Score** **2**
Raw Risk Impact (RRI) The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**Score** **2**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**Score** **4**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

1.10.5 Pesticide Risk to Human and Ecosystem Health

Rationale: Application of pesticides (i.e., herbicides, fungicides, and insecticides) on agricultural landscapes can result in adverse health effects for humans and ecosystems. If pesticide application is required in feedstock production, the impact must be considered in the BDO Zone rating.

Risk Information: The production of canola in the Supply Zone necessitates a robust chemical management regime to combat persistent biotic stressors, introducing potential risks to ecosystem health that are managed through Integrated Pest Management (IPM) protocols. Approximately 95 percent of canola seed planted in the region is treated with systemic insecticides, primarily neonicotinoids, and fungicides to protect against early-season flea beetle feeding and seedling diseases. When seed treatments fail due to high pest pressure or environmental factors, producers frequently deploy foliar rescue treatments utilizing pyrethroids or organophosphates, which pose distinct risks to non-target beneficial organisms, particularly pollinators foraging during the flowering stage. To mitigate these risks, extension services recommend applying chemicals during early morning or late evening hours when bee activity is minimal. Furthermore, the reliance on herbicides such as glyphosate and glufosinate for weed control in herbicide-tolerant varieties requires strict adherence to rotation and application guidelines to prevent resistance and minimize environmental loading, although current outreach indicates that chemical prices and usage patterns remain relatively stable within the local agricultural economy.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**16**

1.10.6 Risk to Wildlife and Landscape

Rationale: Biomass production and supply chain operations with negative impacts on wildlife and landscape are at a greater long-term risk of encountering project setbacks and disruptions.

Risk Information: The expansion of canola cultivation significantly alters the visual landscape of the region, creating a distinctive aesthetic characterized by vast fields of bright yellow blooms that are generally viewed positively by the local community and are not considered a detriment to visual quality. From a wildlife perspective, the primary interaction concerns the balance between pest management and the preservation of beneficial insect populations; while the crop provides a substantial food source for pollinators, the intensive management required to control pests like the diamondback moth and flea beetles creates an inherent risk to these non-target species. There is no evidence suggesting that current canola production involves the conversion of virgin land or critical wildlife habitat, as the crop is integrated into existing agricultural rotations on established cropland. However, landscape degradation risks exist related to soil management; heavy tillage practices used to manage clay soils in Cavalier County have been linked to wind erosion that fills roadside ditches with topsoil, negatively impacting the local hydrological landscape and potentially affecting water quality for downstream ecosystems.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**

The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**Score** **4**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

CATEGORY 2.0: INFRASTRUCTURE RISKS

2.1 Risk Factor: Physical Infrastructure

2.1.1 Land Parcel/Industrial District

Risk Information: The industrial site is an optioned 130-acre greenfield parcel in western Cavalier County, near Munich, North Dakota. The property's geological composition consists predominantly of low-relief glacial tills with high bearing strength and low to moderate compressibility, making it highly suitable for most types of construction including conventional slab-on-grade foundations and shallow spread footings. Primarily consisting of active agricultural land, the site is not currently shovel-ready and would require standard site preparation and grading for industrial development. However, the property is available for lease or purchase, and local stakeholders indicate there is significant land in the area that could be acquired and developed for industrial use. Agricultural land values in Cavalier County remain comparatively low relative to national averages, keeping acquisition costs manageable. While the site has favorable soil conditions, the non-shovel-ready status increases the risk, resulting in a medium risk level.

Raw Risk Likelihood (RRL) The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**Score** **6**
Raw Risk Impact (RRI) The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**Score** **6**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**Score** **36**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	**Score** **36**

2.1.2 Ownership of Land

Risk Information: The proposed 130-acre greenfield site is currently privately owned, but the owner has indicated the site would be available for purchase or lease for industrial use. Unlike publicly owned industrial parks where title transfer processes are already complete, private ownership introduces additional steps in the acquisition process,

including price negotiation, due diligence, and title clearance. However, the owner's expressed willingness to sell or lease significantly reduces the risk of protracted negotiations or unwillingness to transact.
Raw Risk Likelihood (RRL) **Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10. **2**
Raw Risk Impact (RRI) **Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10. **2**
Gross Risk Indicator (GRI) **Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100. **4**
Mitigation/Notching **Notch**
RRL Mitigation (Notch) **NN**
No adjustment.
RRI Mitigation (Notch)
No adjustment.
The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score **Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100. **4**

2.1.3 Permitting Description

Risk Information: The necessary permits for industrial development at the Munich site may differ based on the scope and nature of a future project but would involve both state-level and county-level permits. At the county level, permits are generally related to zoning and land use. Cavalier County maintains a Planning and Zoning Commission that meets on an as-needed basis when requests are received, and applications are typically addressed quickly. The county has zoned townships including several within proximity to the proposed site, and the process for rezoning or securing land use approvals is streamlined relative to larger jurisdictions. At the state level, construction permits would be obtained through the North Dakota Department of Commerce's Division of Community Services and relevant state agencies for environmental and building compliance. North Dakota's regulatory environment is generally regarded as business-friendly, with a streamlined permitting process that facilitates industrial development. Nonetheless, the lack of existing zoning for industrial development elevates the risk.
Raw Risk Likelihood (RRL) **Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10. **6**
Raw Risk Impact (RRI) **Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10. **6**
Gross Risk Indicator (GRI) **Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100. **36**
Mitigation/Notching **Notch**
RRL Mitigation (Notch) **NN**
No adjustment.
RRI Mitigation (Notch)
No adjustment.
The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score **Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100. **36**

2.1.4 Environmental Issues

Risk Information: A standard Phase I ESA has not been completed for this site and would be required prior to industrial development. The Munich area is generally characterized by flat, arable land situated outside of high-risk Special Flood Hazard Areas as identified by FEMA, and the region lacks heavy historical industrial contamination that would indicate the presence of recognized environmental conditions. The geological profile of low-relief glacial tills is typical of the northeastern North Dakota landscape and does not present unusual environmental challenges. As with similar agricultural-to-industrial conversions, standard mitigation measures for soil erosion and stormwater runoff would be expected during development. However, the absence of a completed Phase I ESA at this time introduces moderate uncertainty regarding potential subsurface conditions, historical agricultural chemical use, or other environmental liabilities that have not yet been formally assessed. Cavalier County does have documented soil management challenges, including wind erosion associated with heavy tillage practices on clay soils, which could necessitate erosion control measures during and after construction.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**36**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	**36**

2.2 Risk Factor: Utilities

2.2.1 Natural Gas Availability

Risk Information: The site does not currently have access to natural gas service. There are no natural gas distribution lines serving the immediate Munich area or the proposed industrial site. The absence of natural gas infrastructure represents a significant constraint for industrial operations that may require natural gas for process heat, steam generation, or other energy-intensive applications common in biofuel production. Any future project requiring natural gas would need to evaluate alternative energy sources such as propane, electric heating, or biomass-derived thermal energy, or invest in extending gas pipeline infrastructure to the site, which could involve substantial capital expenditure and extended timelines. The lack of natural gas access is a definitive infrastructure gap that elevates this risk indicator to high, as the likelihood of unavailability is certain and the impact on industrial operations could be substantial depending on the specific project requirements.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very high, therefore the RRL is 10 out of 10.	**10**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed high, therefore the RRI is 8 out of 10.	**8**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 80 out of 100.	**80**

Mitigation/Notching	Notch
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 80 out of 100.	**80**

2.2.2 Electric Availability

Risk Information: The property is served by Cavalier Rural Electric Cooperative, which has an existing distribution line running along 88th Street to the north of the site. Cavalier Rural Electric Cooperative is a public utility cooperative based in Langdon, North Dakota, serving as the electric distribution utility in northeast North Dakota, primarily within Cavalier and northern Ramsey counties. While basic electric service is accessible to the site, the current rural distribution infrastructure may not support the high-capacity power demands typical of industrial-scale biofuel operations. Upgrading to 3-phase power and increasing capacity to industrial levels (e.g., multiple megawatts) would likely require significant investment in substation upgrades and new distribution lines. The timeline and cost for such improvements would need to be determined in consultation with the cooperative and Minnkota Power. The risk is deemed medium given the availability of existing service but the likely need for substantial upgrades to support industrial loads.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**36**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	**36**

2.2.3 Water Availability

Risk Information: A potential project could utilize water from two primary sources. Potable and process water would be drawn from the Northeast Regional Water District (formerly Langdon Rural Water District) via two 4-inch lines on the west side of the property. The district sources its treated water from the City of Devils Lake through approximately 70 miles of 8- to 16-inch transmission pipelines. For untreated water uses and fire protection, production wells would tap into the underlying Munich Aquifer, which is a glacial drift aquifer capable of providing abundant water for both initial development and future expansions. The combination of a reliable regional water distribution system and a local aquifer resource positions water availability as a low-risk factor for the proposed industrial site.

Raw Risk Likelihood (RRL)	Score

The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI) The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**Score** **2**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**Score** **4**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**Score** **4**

2.2.4 Drainage, Stormwater Management, and Sewage

Risk Information: The City of Munich has a lagoon-based wastewater system located approximately one mile from the proposed site but does not operate a mechanical wastewater treatment plant. If a future project requires onsite wastewater treatment, there is a permitting process available through the Lake Region District Health Unit. The absence of a mechanical treatment facility means that any industrial development with significant wastewater generation would likely need to construct onsite treatment capabilities, adding to project capital costs and timelines. For stormwater management and drainage, the site's flat topography is consistent with the broader Cavalier County landscape, which is characterized by low-relief terrain and glacial till soils. While the area is generally outside FEMA-designated Special Flood Hazard Areas, the flat terrain and clay-heavy soils may present drainage challenges requiring engineered stormwater management solutions. Standard site preparation measures including positive grading, detention/retention ponds, and controlled discharge systems would be necessary. The need for potential onsite wastewater treatment and engineered stormwater management elevates this indicator to a medium risk level.

Raw Risk Likelihood (RRL) The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**Score** **6**
Raw Risk Impact (RRI) The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**Score** **6**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**Score** **36**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	**Score** **36**

2.2.5 Waste Disposal

Risk Information: The City of Langdon provides garbage disposal service for the City of Munich. Additionally, the City of Munich operates an inert landfill for construction-type materials such as concrete, wood, and similar debris. For standard municipal solid waste, the Langdon service provides an adequate disposal pathway. However, industrial-scale biofuel operations may generate specialized waste streams that require more sophisticated disposal or recycling solutions beyond what is currently available through local municipal services. The distance to Langdon's waste services (27 miles) adds transportation costs but does not represent a prohibitive barrier. The availability of local inert landfill capacity for construction materials is beneficial during the site development phase. Overall, while waste disposal services exist and are functional for the area's current needs, the limited scale of available facilities relative to potential industrial waste volumes results in a low-to-moderate risk assessment.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 24 out of 100.	**24**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 24 out of 100.	**24**

2.2.6 Information and Communication Technology (ICT) Services

Risk Information: Information and Communication Technology services in the Munich and broader Cavalier County area are supported by regional providers. The site is served by United & Turtle Mountain Communications (UTMA). There is a pedestal on the corner of the site by 88th street and the highway, and it could currently serve the site as with up to 10 gig internet. This risk indicator is assessed as low.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**

The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**16**

2.3 Risk Factor: Transportation/Logistics

2.3.1 Road/Highway Access

Risk Information: The site has robust intrastate highway access, situated directly along Highway 20, which becomes Route 34 at the Canadian border approximately 20 miles to the north. Additional regional highways include Highway 5, located 7 miles north, and Highway 66, located 3 miles south, providing multiple routing options for freight and personnel transportation. For interstate transit, I-29 is approximately 80 miles east and I-94 is approximately 140 miles south. North Dakota permits standard gross vehicle weight (GVW) limits of 105,500 lbs, which is significantly higher than the federal standard of 80,000 lbs applicable in most states, providing a notable advantage for heavy freight transportation. However, spring thaw load restrictions may apply seasonally to protect rural roads from damage during freeze-thaw cycles, which could temporarily limit heavy truck access during certain months. The direct highway access and favorable weight limits are strong positives, though the considerable distance to major interstate highways (80+ miles to I-29) and seasonal load restrictions introduce moderate logistical considerations. Overall, road access is assessed as a low risk factor.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**16**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**16**

2.3.2 Rail Access

Risk Information: The facility is advantageously situated adjacent to the Munich branch line, a short-line railroad operated by Northern Plains Railroad (NPRR). NPRR is a regional railroad operating a 350-mile network in North Dakota and western Minnesota since 1997. The railroad provides connections to Class I rail carriers Burlington Northern Santa Fe (BNSF) Railway in Ardoch, North Dakota, and Canadian Pacific Kansas City (CPKC) in Thief River Falls, Minnesota. A connecting track was constructed near Munich to link the Sarles Subdivision with existing NPRR infrastructure, demonstrating active rail investment in the area. The primary commodities hauled on the NPRR network include wheat, barley, durum, soybeans, and other agricultural products, which aligns well with potential biofuel feedstock transportation needs. NPRR also operates terminal transload locations that can handle bulk products, steel, aggregates, and other industrial commodities. The adjacency of the site to an active rail line with Class I connections represents a significant transportation advantage, positioning rail access as a low risk factor.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**4**
Raw Risk Impact (RRI)	**Score**

The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**Score** **16**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**Score** **16**

2.3.3 Airport Access

Risk Information: Commercial air travel is accessible via Devils Lake Municipal Airport (approximately 40 miles from the site), Jamestown Regional Airport (approximately 121 miles), and Grand Forks International Airport (approximately 127 miles). Local general aviation airports include Cando Municipal Airport (approximately 31 miles) and Robertson Field in Langdon (approximately 32 miles). While general aviation access is reasonably proximate through the Langdon and Cando airports, the nearest commercial airport at Devils Lake is 40 miles away and offers limited scheduled service. The Grand Forks International Airport provides the most comprehensive commercial flight options but is over 125 miles distant. This distance to major commercial air service could present challenges for business travel, visiting executives, and time-sensitive personnel needs. The risk is assessed as medium given the moderate distance to the nearest commercial airport and the limited-service options available regionally.

Raw Risk Likelihood (RRL) The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**Score** **6**
Raw Risk Impact (RRI) The risk impact is deemed low, therefore the RRI is 4 out of 10.	**Score** **4**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 24 out of 100.	**Score** **24**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 24 out of 100.	**Score** **24**

2.3.4 Water Freight Access

Risk Information: Cavalier County is a landlocked region in northeastern North Dakota. There is no direct access to navigable river freight or ocean ports. Logistical transport relies exclusively on truck and rail. The nearest navigable waterway with commercial freight capacity is several hundred miles from the site. For a biofuel operation that may require export of finished products or import of equipment and materials, the absence of water freight access means all bulk transportation must be routed through truck and rail networks, which may increase transportation costs relative

to sites with multi-modal water access. However, the strong rail connectivity via Northern Plains Railroad partially mitigates this limitation by providing cost-effective bulk transportation alternatives. The risk likelihood is very high given the definitive absence of water freight, though the impact is assessed as medium-high since rail and truck alternatives are available and the landlocked location is typical for the region.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very high, therefore the RRL is 10 out of 10.	**10**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 60 out of 100.	**60**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 60 out of 100.	**60**

2.4 Risk Factor: Social Infrastructure

2.4.1 Healthcare (Local)

Risk Information: The Langdon Prairie Health Clinic Hospital is located approximately 27 miles from the proposed site in Langdon, North Dakota. Originally established in 1939, this facility is a 20-bed Critical Access Hospital with a fully equipped Level V Trauma Center operating 24 hours a day. The hospital provides a range of inpatient and outpatient services including emergency care, diagnostic imaging, laboratory services, and visiting specialist consultations. The Altru Hospital in Devils Lake is located approximately 42 miles from the site, offering a 25-bed facility with 24/7 emergency care, a swing bed program, extensive therapy services, a critical care unit, obstetrical care, and advanced radiology. While these facilities provide adequate healthcare coverage for the region, the 27-mile distance to the nearest hospital and the limited capacity of these rural facilities may present challenges for emergency response times and specialized care access for an industrial workforce. The risk is assessed as medium due to the distance from the nearest healthcare facility and the limited scope of services available locally.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10.	**6**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**6**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100.	**36**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**

Loaded RI Score	Score
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100.	36

2.4.2 Education (Schools)

Risk Information: The City of Munich operates a local K-12 school (Munich Public School), providing basic educational services for families in the immediate area. The nearest post-secondary institution is Lake Region State College (LRSC) in Devils Lake, approximately 40 miles away. LRSC offers several programs that may be beneficial to new industry, including a Precision Agriculture program that aligns with the agricultural and biofuel sectors. Additionally, LRSC is home to TrainND Northeast, which provides customized, employer-oriented workforce training programs that can be tailored to the specific needs of incoming industries. The Langdon Area School District also serves the broader Cavalier County area. While the local K-12 school supports family-oriented workforce relocation, the 40-mile distance to the nearest college or technical training institution could limit convenient access to continuing education and specialized workforce development. The TrainND partnership partially mitigates this by bringing training directly to employers. Overall, the educational infrastructure is assessed as a low risk factor given the availability of K-12 education locally and accessible post-secondary and workforce training options within a reasonable commuting distance.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	2
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	2
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	4
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	NN
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	4

2.4.3 Local Transportation

Risk Information: The primary mode of transportation in Cavalier County is personal vehicle travel, with approximately 74% of the workforce commuting alone via car, truck, or van. Average commute times in the county are approximately 15–16 minutes, well below the national average of nearly 27 minutes, reflecting the rural nature of the area and short distances between communities. Public transportation is available through Cavalier County Transit; however, this service is primarily utilized as a supplementary support service rather than a primary commuting mode. The transit service operates on a demand-response basis rather than fixed routes, which limits its utility for shift-based industrial workers. Ride-sharing services such as Uber and Lyft have minimal to no presence in this sparsely populated rural area. The heavy reliance on personal vehicles for commuting means that the workforce pool is largely constrained to individuals who own reliable transportation, which could limit recruitment from populations without vehicle access. Nonetheless, this is not considered a significant risk.

Raw Risk Likelihood (RRL)	Score
The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	4
Raw Risk Impact (RRI)	**Score**

The risk impact is deemed low, therefore the RRI is 4 out of 10.	**4**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 16 out of 100.	**Score** **16**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 16 out of 100.	**Score** **16**

2.4.4 Public Safety (Local)

Risk Information: The industrial site would be served by the City of Munich's public safety services. The Munich Fire and Ambulance department provides emergency response capabilities for the local area. The Cavalier County Sheriff's Office, led by Sheriff Matthew Wright as of January 2024, is headquartered in Langdon, approximately 27 miles from the proposed site, and serves as the primary law enforcement agency for the county. The sheriff's office provides patrol, investigations, emergency response, and jail operations. Cavalier County is characterized as a low-crime area with a small, close-knit population. The county's own website describes the area as offering "low crime and great schools." However, the 27-mile distance from the site to the sheriff's office and major emergency services in Langdon could result in longer response times for law enforcement and emergency incidents compared to urban or suburban locations. Local volunteer fire departments and EMS services help bridge this gap but have limited capacity. The risk is assessed as low-medium due to the distance from centralized emergency services and the reliance on volunteer-based local response capabilities.

Raw Risk Likelihood (RRL) The risk likelihood is deemed low, therefore the RRL is 4 out of 10.	**Score** **4**
Raw Risk Impact (RRI) The risk impact is deemed medium, therefore the RRI is 6 out of 10.	**Score** **6**
Gross Risk Indicator (GRI) The Gross Risk Indicator (RRL X RRI) is 24 out of 100.	**Score** **24**
Mitigation/Notching *RRL Mitigation (Notch)* No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**Notch** **NN**
Loaded RI Score The Loaded RI Score ((1-Total Notch) X GRI Score) is 24 out of 100.	**Score** **24**

2.4.5 Housing/Cost of Living

Risk Information: Approximately 57% of the BDO Zone resides in Cavalier County, 26% in Towner County, and 17% in Ramsey County. Cavalier County's overall cost of living score is approximately 28.5% below the US and 19.3% lower than the North Dakota average. Towner County's cost of living is 17.1% below the US average and 6.4% lower than the

North Dakota average. The median property value for the three counties is $147,500 and median gross rent is $755, with 73% of the population homeowners and 27% renters.
Raw Risk Likelihood (RRL) **Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10. **2**
Raw Risk Impact (RRI) **Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10. **2**
Gross Risk Indicator (GRI) **Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100. **4**
Mitigation/Notching **Notch**
RRL Mitigation (Notch) **NN**
No adjustment.
RRI Mitigation (Notch)
No adjustment.
The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score **Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100. **4**

2.5 Risk Factor: Labor

2.5.1 Workforce

Risk Information: In 2025, the BDO Zone had a population of approximately 5,648 people, with an average unemployment rate of 2.7%, compared to the national average of 4.1%. The three counties (Cavalier, Towner, and Ramsey) have an average prime age (25–54) employment rate of 88%. Approximately 92% of individuals over 25 years old across the three counties have a high school education or higher, and approximately 23% have a bachelor's degree or higher. This compares to national statistics of 89% and 35%. The low unemployment rate suggests a tight labor market with limited available workers, which could present recruitment challenges for a new industrial facility. However, the impact of this risk indicator is partially mitigated by the trade-oriented nature of most jobs likely to be created by a biofuel project, and the availability of customized workforce training through TrainND Northeast at Lake Region State College.
Raw Risk Likelihood (RRL) **Score**
The risk likelihood is deemed medium, therefore the RRL is 6 out of 10. **6**
Raw Risk Impact (RRI) **Score**
The risk impact is deemed medium, therefore the RRI is 6 out of 10. **6**
Gross Risk Indicator (GRI) **Score**
The Gross Risk Indicator (RRL X RRI) is 36 out of 100. **36**
Mitigation/Notching **Notch**
RRL Mitigation (Notch) **NN**
No adjustment.
RRI Mitigation (Notch)
No adjustment.
The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).
Loaded RI Score **Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 36 out of 100. **36**

2.5.2 Labor Costs

Risk Information: As of 2026, North Dakota's minimum wage, which applies to all three counties in the BDO Zone, is $7.25/hour, mirroring the federal minimum wage and remaining unchanged for many years. Cavalier County's average weekly wage for Q1 2025 was $1,015, Towner County's was $980, and Ramsey County's was $986, all of which are significantly lower than the U.S. average of $1,589/week, as well as below some of North Dakota's larger counties. As of 2024, the median household income in Cavalier County is $69,531, in Towner County $67,350, and in Ramsey County $61,006, compared to the state average of $76,657 and the national average of $80,734. As of 2025, 8.5% of the population in Cavalier County and Towner County is in poverty, and 15.2% in Ramsey County, compared to the national average of 12.5%. From an employer standpoint, the notably lower labor costs relative to national averages reduce operating expenses and financial strain, making the area competitive for labor-cost-sensitive industries such as biofuel production. The risk is deemed very low given the cost advantages available to employers in the region.

Raw Risk Likelihood (RRL)	**Score**
The risk likelihood is deemed very low, therefore the RRL is 2 out of 10.	**2**
Raw Risk Impact (RRI)	**Score**
The risk impact is deemed very low, therefore the RRI is 2 out of 10.	**2**
Gross Risk Indicator (GRI)	**Score**
The Gross Risk Indicator (RRL X RRI) is 4 out of 100.	**4**
Mitigation/Notching	**Notch**
RRL Mitigation (Notch) No adjustment. *RRI Mitigation (Notch)* No adjustment. The Total Notch (RRL Notch) X (RRI Notch) is NN (No Notch).	**NN**
Loaded RI Score	**Score**
The Loaded RI Score ((1-Total Notch) X GRI Score) is 4 out of 100.	**4**

SECTION E: TABLES AND FIGURES

Figure E-1. Historical cropland (ac) and number of farm/cropland operations (2012-2022)[8]

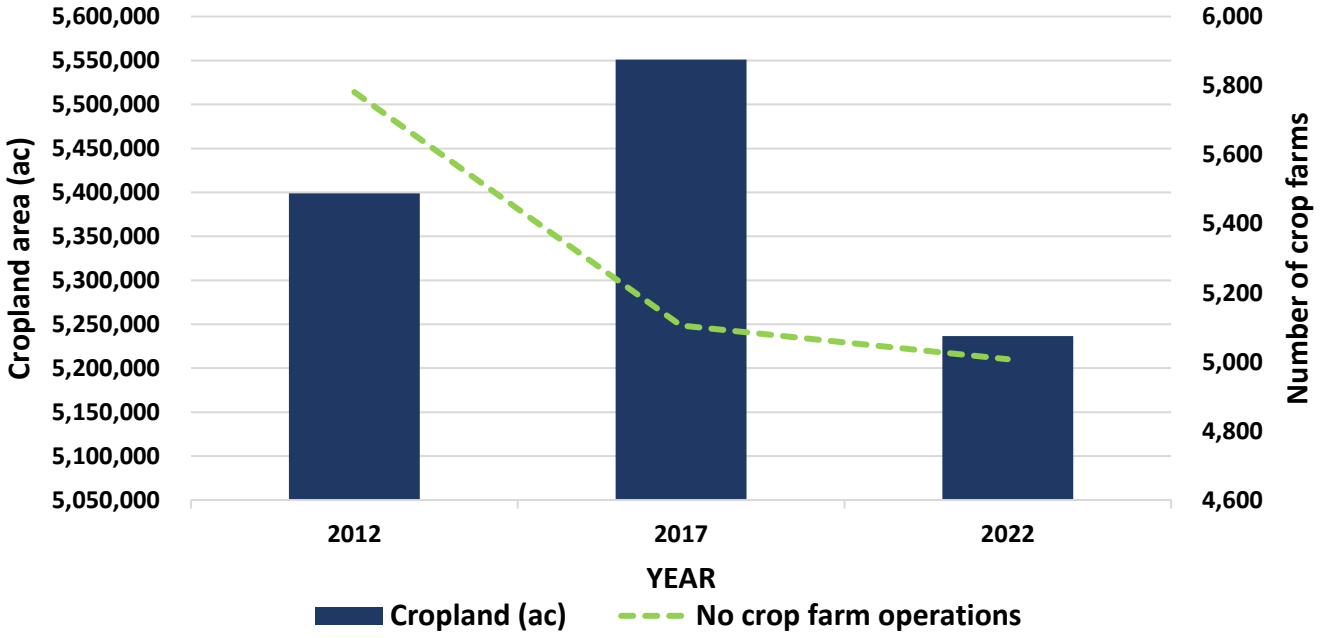
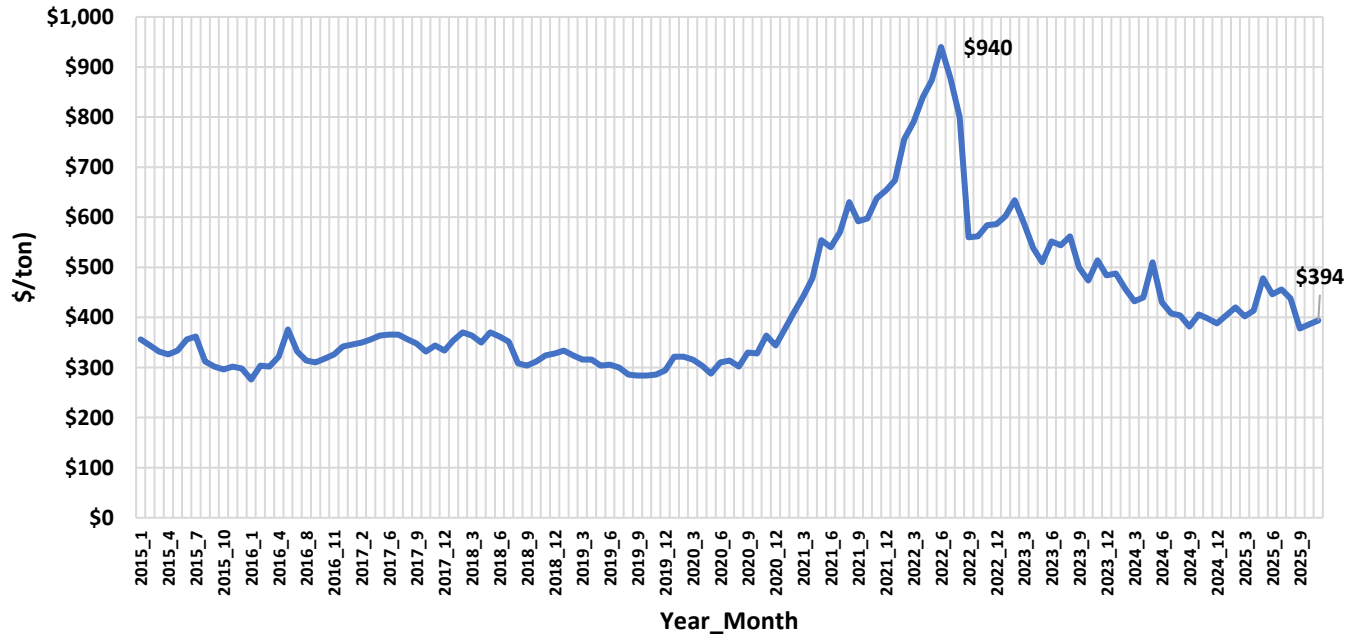


Figure E-2. Historical Canola Prices (2015-2025)[9]



[8] quickstats.nass.usda.gov
[9] Ibid.

Figure E-3. Supply/Marginal Cost Curve and Rated Quantity of Canola Seed Produced in the Supply Zone

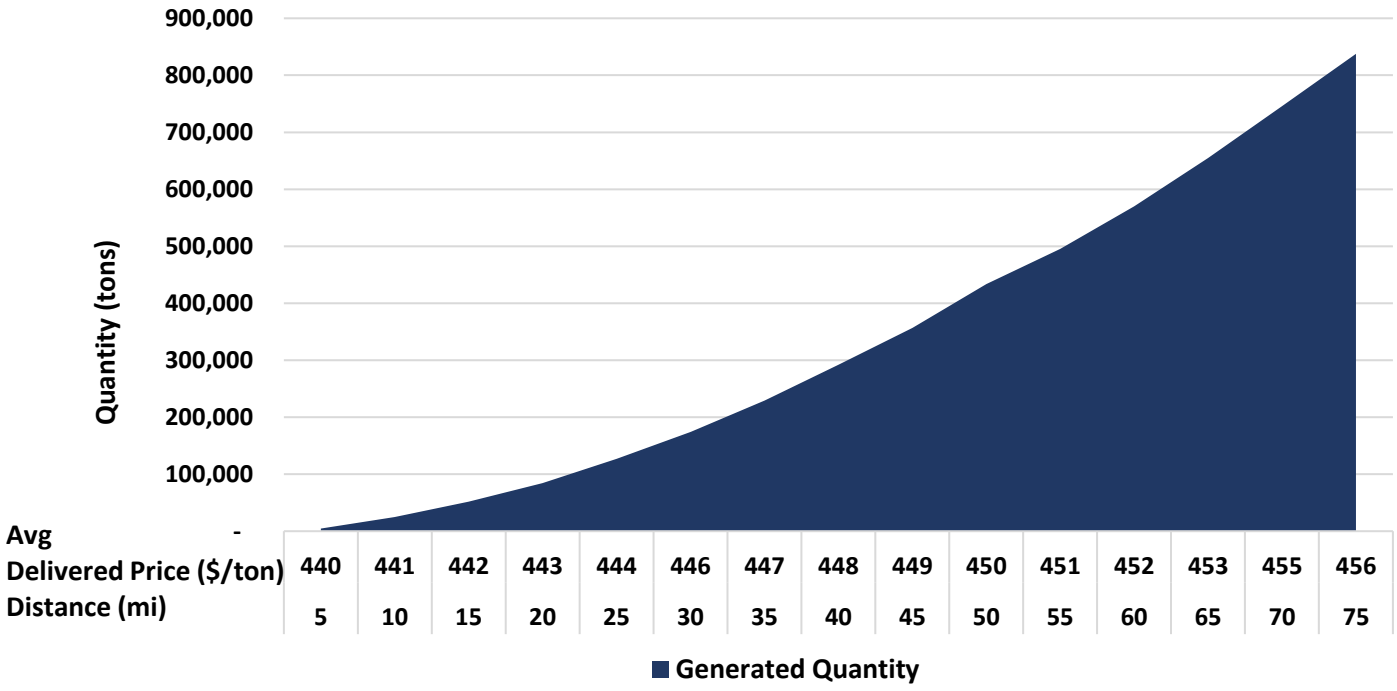
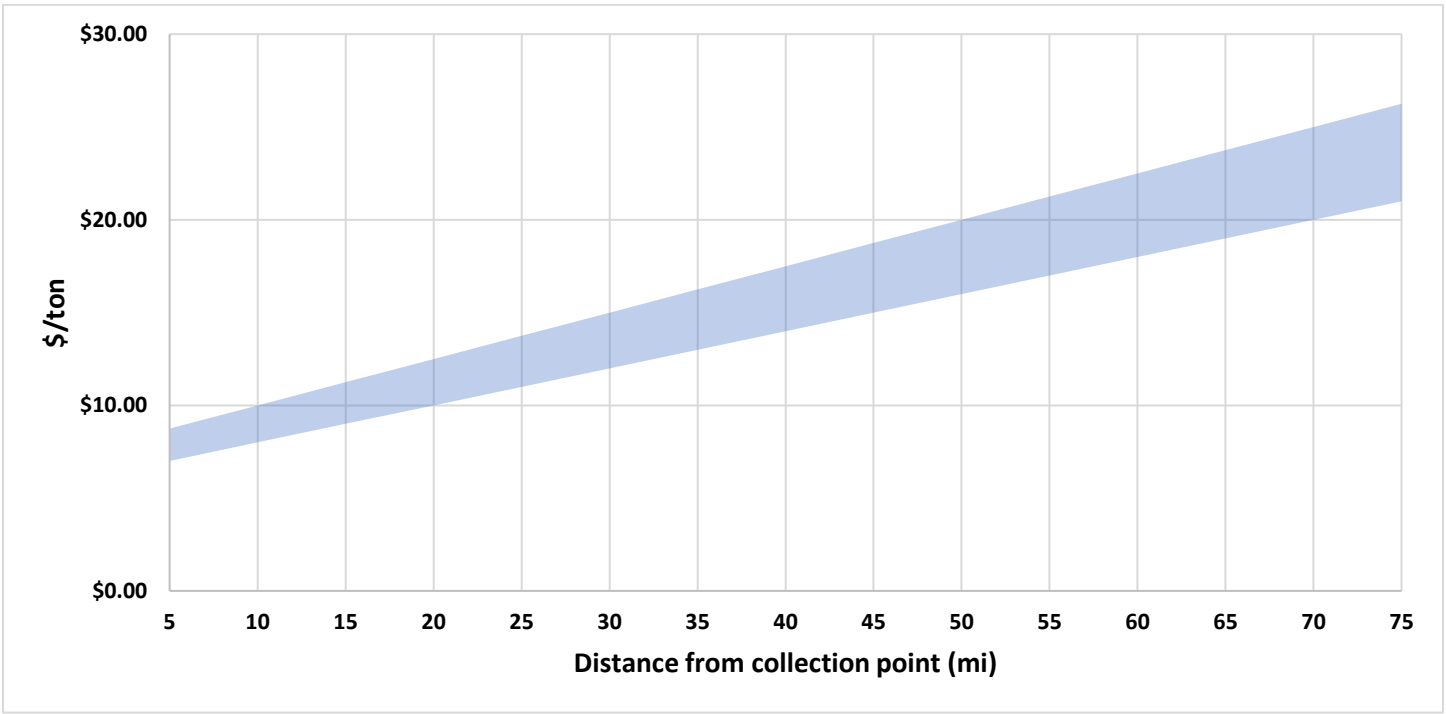


Figure E-4. Transportation Cost by Distance from Munich, ND



SECTION F: LEGAL DISCLAIMER

This BDO Zone Rating (the "Rating") is prepared for and provided to Cavalier County Job Development Authority and is intended to be read and used in its entirety and not in parts. Separation or alteration of any section or page from the main body of this Rating is expressly forbidden. In preparing this Rating, Ecostrat has used information obtained from third parties or otherwise publicly available. All such information has not been independently validated, verified, or confirmed by Ecostrat (except where otherwise specifically indicated) and Ecostrat makes no representation or warranty as to the accuracy or completeness of any information provided by third parties or otherwise publicly available.

Neither Ecostrat nor the members of the BDO Zone Advisory Committee make any representation or warranty as to the accuracy or completeness of the information and content in this Rating and shall have and accept no liability for any statements, opinions, information, or matters (expressed or implied) arising out of, contained in or derived from this Rating or any omissions from this Rating, or any other written or oral communication transmitted or made available to any other party in relation to the subject matter of this Rating. Any use which a third party makes of this Rating, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Decisions made, or actions taken based on or resulting from Ecostrat's work product shall be the responsibility of the parties directly involved in those decisions or actions. There are no third-party beneficiaries with respect to this Rating, and Ecostrat expressly disclaims any liability whatsoever (whether in contract, tort, or otherwise) to any third party. Ecostrat makes no representation or warranty (express or implied) to any third party in relation to this Rating. A decision by any entity to disclose this Rating to the public or privately to a limited number of potential institutional accredited investors or other qualified investors shall not constitute any permission, waiver, or consent from Ecostrat for any third party to rely on this Rating except for informational purposes, and as such, is provided on such basis. Access to this Rating and its use by any third party implies acceptance by the third party of the terms and conditions contained in this section and other parts of this Rating.

All information included is based on information available on the date hereof and neither Ecostrat nor the members of the BDO Zone Advisory Committee are under any obligation to update the information herein. No investor, security holder, or other person should rely on the content of this report in any way in connection with the purchase or sale of any security.