



**ANNUAL INFORMATION FORM  
FOR THE FINANCIAL YEAR ENDED DECEMBER 31, 2020**

**March 2, 2021**

**3365 Mainway  
Burlington, Ontario  
L7M 1A6**

**ECOSYNTHETIX INC.  
ANNUAL INFORMATION FORM  
FOR THE FINANCIAL YEAR ENDED DECEMBER 31, 2020**

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## INTRODUCTORY NOTES

### General Matters

The information in this annual information form is stated as at December 31, 2020, unless otherwise indicated.

Unless otherwise noted or the context otherwise indicates, “EcoSynthetix”, the “Company”, “we”, “us” and “our” refer to EcoSynthetix Inc. and its direct and indirect subsidiaries or other entities controlled by them.

### Cautionary Note Regarding Forward-Looking Statements

Certain statements contained in this annual information form constitute forward-looking statements. All statements other than statements of historical fact may be forward-looking statements. These statements relate to, but are not limited to, future events or future performance, our expectations regarding the Company’s growth, results of operations, estimated future revenues, and requirements for additional capital, production costs, future demand for latex-based products, business prospects and opportunities and our ability to successfully commercialize our products. Forward-looking statements are often, but not always, identified by use of words such as “may”, “will”, “should”, “could”, “seek”, “anticipate”, “contemplate”, “continue”, “expect”, “intend”, “plan”, “potential”, “budget”, “target”, “believe”, “estimate” and similar expressions. Such statements reflect our current views and beliefs with respect to future events, are subject to risks and uncertainties, and are based upon a number of estimates and assumptions that, while considered reasonable by us, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause actual results, performance or achievements to be materially different from any future results, performance, or achievements that may be expressed or implied by such forward-looking statements.

We have made material assumptions regarding, among other things: that our intellectual property rights are adequately protected; our ability to obtain the materials necessary for the production of our products; our ability to convert prospects from the industrial trial phase into full commercial customers; our ability to market products successfully to our customers; that we will continue to possess unique intellectual property rights; changes in demand for and prices of our products or the materials required to produce those products; labour and material costs remaining consistent with our current expectations; the price and availability of substitute or competitive products; and that we do not and will not infringe third party intellectual property rights. Some of our assumptions are based upon internal estimates and analysis of current market conditions and trends, management plans and strategies, economic conditions and other factors and are necessarily subject to risks and uncertainties inherent in projecting future conditions and results.

Some of the risks that could affect our future results and could cause those results to differ materially from those expressed in the forward-looking statements include, among other things: the impact of the novel coronavirus (COVID-19 and its variants) pandemic on our business, an inability to protect, defend, enforce or use our intellectual property and/or infringement of third-party intellectual property; dependence on certain customers and changes in customer demand; the availability and price of natural feedstocks used in the production of our products; the inability to effectively expand our production facilities; variations in our financial results; increase in industry competition; decrease in the price of substitute products; the risk of volatility in global financial conditions, as well as significant decline in general economic conditions; our ability to effectively commercially market and sell our products; our ability to protect our know-how and trade secrets; Company growth and the impact of significant operating and capital cost increases; changes in the current political and regulatory environment in which we operate;

the inability to retain key personnel; changes to regulatory requirements, both regionally and internationally, governing development, production, exports, taxes, labour standards, waste disposal, and use, environmental protection, project safety and other matters; enforcement of intellectual property rights; a significant decrease in the market price of petroleum; a shortage of supplies, equipment and parts; the inability to secure additional government grants; a deterioration in our cash balances or liquidity; the inability to obtain equity or debt financing; the ability to acquire intellectual property; the risk of litigation; changes in government regulations and policies relating to our business; losses from hedging activities and changes in hedging strategy; insufficient insurance coverage; the impact of issuance of additional equity securities on the trading price of the Common Shares (as defined herein); the impact of ethical, legal and social concerns relating to genetically modified organisms and the food versus fuel debate; the risk of business interruptions; the impact of changes in interest rates; the impact of changes in foreign currency exchange; and credit risk, as well as the factors identified in the “Risk Factors” section of this annual information form. Such factors are not intended to represent a complete list of the factors that could affect us. These factors should be considered carefully, and readers should not place undue reliance on forward-looking information.

Should one or more of these risks or uncertainties materialize, or should assumptions underlying those forward-looking statements prove incorrect, actual results may vary materially from those anticipated in such forward-looking statements.

Although the forward-looking statements contained herein are based upon what we believe to be reasonable assumptions, there can be no assurance that such forward-looking information will prove to be accurate and we cannot assure that actual results will be consistent with these forward-looking statements. Accordingly, readers should not place undue reliance on forward-looking statements. The information contained in this document, including the information provided under the heading “Risk Factors”, identifies additional factors that could affect the Company’s operating results and performance.

Forward-looking information contained herein is made as of the date of this annual information form and we disclaim any obligation to update any forward-looking information, whether as a result of new information, future events or results, except as may be required by applicable securities laws. Accordingly, readers should not place undue reliance on forward-looking information.

## **Market and Industry Data**

We have obtained the market and industry data presented in this annual information form from Company information and third parties, including from independent industry publications. While we believe the third-party information is reliable, we have not verified it, nor has it been verified by any independent sources. While we are not aware of any misstatements regarding the market and industry data presented in this annual information form, such data involves risks and uncertainties and is subject to change based on various factors, including those factors discussed under “Cautionary Note Regarding Forward-Looking Statements” and “Risk Factors”.

This annual information form contains references to metric tons and pounds. We use a conversion rate of one metric ton = 2,204.6 pounds.

## **Trade-Marks, Business Names and Service Marks**

This annual information form includes trade-marks, such as ECOSYNTHETIX®, ECOSPHERE®, BIOLATEX®, ECOMER® and ECOSTIX® which are registered in the United States, among other jurisdictions, in the name of EcoSynthetix Ltd. Solely for convenience, trade-marks and business names referred to in this annual information form may appear without the <sup>TM</sup> or ® symbol, but such references are

not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights. See “Description of the Business — Intellectual Property”.

### **Currency Presentation and Exchange Rate Information**

This annual information form contains references to United States dollars and Canadian dollars. The Company presents its consolidated financial statements in United States dollars. All dollar amounts referenced, unless otherwise indicated, are expressed in United States dollars and Canadian dollars are referred to as “Canadian dollars” or “C\$”.

The high, low and closing daily average exchange rates for Canadian dollars in terms of the United States dollar for each of the three years in the period ended December 31, 2020, as quoted by the Bank of Canada, were as follows:

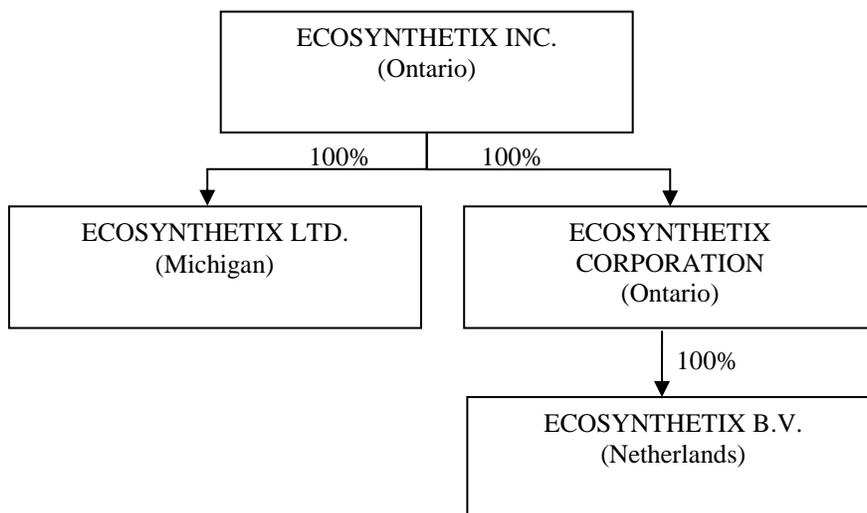
	<b><u>Year ended December 31</u></b>		
	<b><u>2020</u></b>	<b><u>2019</u></b>	<b><u>2018</u></b>
High.....	C\$1.45	C\$1.35	C\$1.36
Low .....	1.27	1.30	1.23
Closing .....	1.27	1.30	1.36

On March 2, 2021, the daily exchange rate for Canadian dollars in terms of the United States dollar, as quoted by the Bank of Canada, was US\$1.00 = C\$1.26.

## CORPORATE STRUCTURE

EcoSynthetix Inc. was incorporated under the *Business Corporations Act* (Ontario) (the “**OBCA**”) on May 20, 2011. The Company’s registered head office is located at 3365 Mainway, Burlington, Ontario L7M 1A6. The Company’s Common Shares trade on the Toronto Stock Exchange under the symbol “ECO” and commenced trading on August 4, 2011. As at December 31, 2020 an aggregate of 57,140,413 Common Shares were issued and outstanding and an aggregate of 57,247,040 Common Shares were issued and outstanding as of March 2, 2021.

The following chart illustrates the Company’s principal subsidiaries (collectively, the “**Subsidiaries**”), together with the governing law of each company and the percentage of voting securities beneficially owned or over which control or direction is exercised by the Company as of the date of this annual information form.



## DESCRIPTION OF THE BUSINESS

### Company Overview

EcoSynthetix is a renewable chemicals company specializing in bio-based materials that are used as inputs in a wide range of products. The Company offers a range of sustainable biopolymers that allow customers to reduce their use of harmful materials, such as formaldehyde and styrene-based chemicals, and enable carbon footprint reductions. The Company’s flagship products, DURABIND and ECOSPHERE BIOLATEX, are used to manufacture wood composites, paper and packaging, personal care products, and enable performance improvements, economic benefits and sustainability.

The purpose and fundamentals of the business have remained the same since our founding although our product applications have expanded. The world is highly dependent on synthetic chemistries that touch nearly everything we are exposed to in life. While chemistry has solved many of the world’s challenges with cost-effective, functional products, most of these solutions come without fully considering the health, safety and environmental impact they have on people and the planet. EcoSynthetix was founded to disrupt and transform the chemicals industry through the development and marketing of “Sustainable Polymers for Planet Earth”.

Our strategy is to commercialize a broad range of bio-based polymer and monomer products within specific market segments. We have developed processes that leverage “green” technology to produce bio-based materials from natural polysaccharide feedstocks, such as corn, potato and tapioca, as an alternative to petroleum-derived feedstocks. To date, we have developed the following two bio-based technology platforms that support broad application across industries: (i) a biopolymer nanosphere technology; and (ii) a bio-based sugar macromer technology. Our biopolymer nanosphere technology has generated two product families, ECOSPHERE BIOLATEX biopolymers and DURABIND biopolymers. Our bio-based sugar macromer technology has generated two product families, ECOMER biomonomers and ECOSTIX bio-based pressure sensitive adhesives. To date, the Company generates substantially all of its revenue from its biopolymer nanosphere technology platform.

## **Products**

### ***Current Products***

Based on our two bio-based technology platforms, our current product families are ECOSPHERE BIOLATEX, DURABIND biopolymers, ECOMER and ECOSTIX.

#### ***ECOSPHERE BIOLATEX***

ECOSPHERE BIOLATEX is derived from the biopolymer technology platform that performs as an alternative to petroleum based latex, primarily in paper and paperboard coatings. The ECOSPHERE BIOLATEX polymer platform targets applications requiring binding, encapsulation, coating and/or adhesion functionalities. Positioned at a price point generally lower than petroleum-based latex, ECOSPHERE BIOLATEX binders have demonstrated that they possess a strong market potential in a highly concentrated, very competitive industry that is focused on margin enhancement.

ECOSPHERE BIOLATEX polymers are in commercial use at coated paper and paperboard mills around the world, providing cost savings, quality and productivity improvements, and environmental benefits.

#### ***DURABIND BIOPOLYMERS***

Based on the biopolymer platform, the DURABIND biopolymer product is a sustainable technology that enables manufacturers of building products, such as wood composites, to decrease the amount of highly regulated chemicals, like formaldehyde and methyl diphenyl diisocyanate (“MDI”) chemistries, in their formulations.

DURABIND biopolymers are fully compatible with all urea formaldehyde (“UF”), phenol formaldehyde (“PF”), urea-melamine formaldehyde (“UmF”) and MDI resins, meaning that they can be substituted in current formulations, using existing equipment, and meeting the same performance and quality measures. Wood composites products made with DURABIND biopolymers can be used to meet global formaldehyde emission standards, including CARB Phase 2 in the United States, European E0 and Japanese F-Star regulatory standards. In addition, building products produced with DURABIND engineered biopolymers are eligible for LEED points for improved indoor air quality.

DURABIND biopolymers enable manufacturers of particle board, medium density fiberboard and oriented strand board to improve the safety of their work environment and reduce the complexity that comes from working with highly regulated chemicals – all while delivering a product that meets consumer demand for safer, more sustainable products.

## *ECOMER*

ECOMER is a family of novel, sugar-based macromers that are available to polymer manufacturers as bio-based building blocks to create new waterborne sugar-acrylic polymers and resins. ECOMER is derived from the bio-based sugar macromer technology. Just as ECOSPHERE BIOLATEX polymers can partially replace petrochemical polymers, such as Styrene Butadiene (“**SB**”) latex, ECOMER as a bio-monomer can partially replace a wide variety of petrochemical monomers such as acrylate monomers, vinyl monomers and many others. An example of an acrylate monomer is butyl acrylate, which is used to make polymers which are used in many industrial applications such as paints, adhesives, and surfactants. There are multiple reasons for substituting monomers with ECOMER, including the fact that traditional monomers are derived from oil, which make them non-renewable, unsustainable and subject to price volatility. ECOMER can also impart new properties and improved performance capabilities to the end-product over traditional petrochemical monomers.

As a bio-based chemical building block, ECOMER is commercially available and can be used to replace petrochemical monomers to make traditional petrochemical polymers “greener” and give them new functionality. Different sugars and alcohols can be used to make a number of grades of ECOMER for specific industrial applications. As one example among numerous applications, we have been able to chemically link ECOMER within the polymer structure of acrylic copolymers to provide new recycling-friendly pressure sensitive adhesives (“**PSAs**”). See “Description of the Business — Products — ECOSTIX” below.

## *ECOSTIX*

ECOSTIX products are suitable for use in the development of waterborne PSAs. A commercially available product, ECOSTIX is derived by chemically reacting ECOMER with an acrylic monomer to make a sugar-based vinyl copolymer which functions as a PSA. These waterborne PSAs have unique properties that will allow them to address specific end-use needs such as wash-off labels for recyclable packaging and fruit labeling, repulpable tapes, paper labels and postage stamps which do not interfere in paper recycling, high temperature resistant labels for automotive (“under the hood”) applications and biodegradation for adhesion to materials that are compostable such as bio-based plastic films as well as paper.

To date, the Company generates substantially all of its revenue from its biopolymer nanosphere technology platform.

## *Future Products & Research and Development*

Over the past two years, the Company has invested \$3.1 million, including \$1.4 million in 2020 and \$1.7 million in 2019 on research and development and expects to continue similar investment levels for the foreseeable future. The Company employs approximately 10 employees dedicated to research and development at its Center of Innovation facility located in Burlington, Ontario. This facility includes state-of-the-art research equipment and a pilot production line and is used by the Company’s research and development team for developing products to enhance value for our existing product lines or to expand our addressable opportunities. The Company also engages and collaborates with third parties, such as Universities, as necessary to advance its research and development activities. Newly developed products are advanced, following a stage gate process, to commercial production if they meet rigorous internal testing requirements and if they meet customer evaluation stages which may include laboratory evaluation, pilot scale production, and industrial trials representing full scale production.

We are continuing to expand the functionality and application of our current product families of ECOSPHERE BIOLATEX polymers, DURABIND, ECOMER and ECOSTIX. Processes and formulations

will be refined further to tailor our products for specific customer performance requirements and additional grades will be developed to expand the applications.

## Technology

Our technology platforms are used to produce monomer and polymer products. A monomer is a small molecule that may bind chemically to other monomers through a process referred to as polymerization. A polymer is the resulting large molecule composed of repeating monomers that encompass a large class of natural and synthetic materials with a wide variety of properties. Our two existing technology platforms consist of: (i) our biopolymer technology that is currently the platform for the ECOSPHERE BIOLATEX polymers and DURABIND engineered biopolymers; and (ii) our bio-based sugar macromer technology that is currently the platform for the ECOMER and ECOSTIX products.

As illustrated below, biopolymer products are manufactured from naturally derived feedstocks, mixed with other ingredients and subjected to our continuous extrusion process that ultimately produces crosslinked biopolymer particles. The process results in a dry powder that is then shipped to customers. Dry shipment eliminates the need to ship the binder as an aqueous 50% solid latex dispersion typical of SB latex emulsions, thereby significantly reducing transportation costs and the associated carbon footprint.



The fundamental design of the biopolymer nanoparticle latex is similar to that of synthetic latexes, although the process for producing them is completely different. While synthetic latex is produced through a chemical process that takes petroleum-based monomers and links them together to form polymers (polymerization), the ECOSPHERE BIOLATEX cross-linked particles are produced with our patent protected process by converting sustainable feedstocks into a liquid paste that is then transformed into cross-linked biopolymer particles. The resulting dry ECOSPHERE BIOLATEX polymer is a powder in which each particle is a cluster of millions of individual cross-linked particles, which are released when dispersed into water.

### *Bio-based Sugar Macromer Technology*

The technology for producing the sugar-based polymer resins involves: (i) the synthesis of a sugar macromer, and (ii) an emulsion copolymerization process.

The bio-based sugar macromer technology platform uses glucose (dextrose) derived from cornstarch as the feedstock for the synthesis of a sugar-based building block, referred to as ‘sugar macromer’. The macromer resin contains two polymerizable groups that facilitate incorporation of the sugar units into the backbone of the copolymer. The sugar macromer is copolymerized with conventional vinyl monomers, such as vinyl acetate, acrylates or styrene in a water-based emulsion polymerization process to create new waterborne sugar-acrylic adhesives and resins.

The copolymer structure can be varied to provide a wide range of pressure sensitive and non-pressure-sensitive sugar-vinyl copolymers ranging in glass transition temperature and chemical functionality. As an example, ECOMER is formed by a chemical reaction of sugar, maleic anhydride and alcohol:



These sugar macromers, referred to as ECOMER, provide new performance attributes and provide a viable path to a new generation of renewable bio-synthetic hybrid polymer systems that would be suitable in a wide variety of industrial applications. The sugar macromer is a resinous solid in its pure form that flows at temperatures of 45 to 55 degrees Celsius. It can be dissolved in other vinyl comonomers such as butyl acrylate or methyl methacrylate to provide a low-viscosity fluid. Sugar macromers are considered “Generally Recognized as Safe” by the U.S. Food and Drug Administration and contain no volatile organic compounds (“VOCs”), which make them safer to use than petrochemical monomers.

## **Components**

Our products are derived from renewable crop sources and our processes provide flexibility in the feedstocks that we can potentially use. Natural feedstocks could be used in our technology platform interchangeably, without significant alteration to our equipment or processes. The natural feedstocks used in our products are readily available commodities and can be sourced from multiple suppliers globally.

## **Customers**

We have entered into relationships with global market leaders in multiple industries to accelerate the execution of our strategy. We have commercial relationships with many of the top manufacturers in the coated paper and paperboard and wood composite industries who are now using our products.

## **Product Distribution**

The Company’s products are sold through a combination of direct sales, distributors or sales agents located in Canada, the United States, Germany, Finland, Brazil, China, Japan, Thailand and Indonesia.

## **Commercial Operations**

Our lead products, ECOSPHERE BIOLATEX binders and DURABIND biopolymers, are used commercially by leading manufacturers within the coated paper & paperboard and wood composite industries, respectively.

Our customers typically go through three evaluation stages prior to commercial adoption of our products, including:

1. Laboratory evaluation;
2. Pilot scale production testing; and

### 3. Industrial trials representing full scale production.

Our performance is influenced by our ability to convert prospects from the industrial trial phase into full commercial clients. The industrial trial stage is an important part of the sales cycle; it requires potential customers to invest significant resources, including labour and operating expenditures, and the product must meet or surpass rigorous qualification procedures. Successfully reaching the mill trial stage with a potential customer reflects substantial interest and commitment with which the potential customer is evaluating the product.

## **Competition**

### *Petrochemical Manufacturers*

Petroleum-based chemical manufacturers are subject to the volatility of petroleum prices, and as a result, their margins fluctuate, and their customers experience price uncertainty. While we will be competing with suppliers of petroleum-based chemicals, such as BASF AG, Synthomer plc, and Trinseo S.A., our technology platform is largely independent from crude oil pricing pressures. Furthermore, with equal or superior product characteristics, as well as economic and environmental advantages, we believe that we will be able to capture and develop a diversified market position with a sustainable competitive advantage.

### *Bio-based Chemicals and Polymers*

The bio-based chemicals industry is continually growing with companies innovating to provide eco-friendly alternatives to petroleum-based chemicals. We face competition from companies such as Archer Daniels Midland Company, Cargill Incorporated, Ingredion Inc., Tate & Lyle PLC, Roquette and AVEBE U.A., all who provide bio-based products into our target markets.

### *Competitive Conditions and Strengths*

Our products provide an equal or lower-cost, direct alternative to petroleum-based inputs in a variety of industries, including paper, paperboard and wood composites. Our bio-based products compete with both the traditional, largely petroleum-based products that are currently being used in our target markets and with the alternatives to these existing products that new companies are seeking to produce.

We believe we are well-positioned against the competition given our unique technology platforms. In particular, our key competitive strengths are: (i) our disruptive technology with application to multiple large markets; (ii) we are commercially-proven with large, blue-chip customers; (iii) we are a low-cost provider with equal or superior quality; (iv) we have a low capex approach and a highly capital efficient business model; (v) feedstock flexibility and low volatility cost structure; (vi) we provide a sustainable and renewable alternative to petroleum-based product; (vii) our leading customer support network; and (viii) our highly experienced management team.

## **Intellectual Property**

Our success depends in part upon our ability to obtain and maintain intellectual property protection for our products and technologies, and to operate without infringing the proprietary rights of others. With respect to the former, our policy is to protect our proprietary position through filing for patent protection for key components of our technology. Further measures include the filing for trade-mark protection on product names in the United States and other countries as determined by our commercialization efforts. We also maintain confidential know-how/trade secrets through the use of confidentiality agreements. We seek

to avoid infringing the proprietary rights of others by searching patents and publications, as appropriate, in our product areas and technologies in order to be aware of any developments that may affect our business and, to the extent any such developments are identified, by evaluating and taking appropriate courses of action.

We pursue a conscientious intellectual property development, evaluation and registration program that is intended to advance, identify and protect our intellectual capital. Our technology platforms and our manufacturing processes are the result of more than 15 years of research and development activities and proven field experience. We have established an intellectual property estate that is supported by composition-of-matter, process and application-based patents. We have a broad patent portfolio, including patents and patent applications in the United States and other jurisdictions. Additionally, we have registered several trade-marks including, among others, ECOSPHERE, DURABIND, ECOMER, ECOSTIX and BIOLATEX polymers, which support brand awareness for our unique product offerings.

We protect our proprietary information by requiring consultants, contractors and other advisors to enter into non-disclosure and assignment of invention agreements upon commencement of their engagements. Furthermore, we protect our proprietary information by entering into written agreements of confidentiality with outside parties that are exposed to confidential information. Where appropriate, we also employ material transfer agreements that govern the use, intellectual property rights and transfer of materials when delivering them to third parties.

## **Facilities**

Our headquarters is located in the Center of Innovation in Burlington, Ontario. The Center of Innovation was established in 2011 and provides us with a state-of-the-art research and development facility for ongoing product and process development. The facility houses test equipment, labs and a pilot production line. The lease for the Center of Innovation expires in October 2025, with an up to 5-year renewal option.

In North America, we produce our product on a dedicated manufacturing line with GEON Performance Solutions, LLC, located in Dyersburg, Tennessee with an annualized capacity of up to 80 million pounds.

In Europe, we manufacture our product on a dedicated manufacturing line at Rodenburg Biopolymers BV, located in Oosterhout, The Netherlands, with an annualized capacity of up to 80 million pounds.

The Center of Innovation, GEON Performance Solutions, LLC and Rodenburg Biopolymers B.V. are ISO 9001 certified facilities. ISO 9001 is the international standard that specifies requirements for a quality management system. Organizations use the standard to demonstrate the ability to consistently provide products and services that meet customer and regulatory requirements. The Center of Innovation facility is also an ISO 14001 certified facility reflecting our commitment to environmental responsibility. ISO 14001 is the international standard that specifies requirements for an effective environmental management system.

## **Employees**

As of the date hereof, we have approximately 25 employees, primarily located in Canada and the United States.

### ***Specialized Skill***

Our key management personnel have an average of over 15 years' experience in our target industries. Our business is complex and requires a management team and employee workforce that is knowledgeable in how we operate. We require personnel with technical skills and understanding of our technology and anticipated products. We believe that the current management team offers an exceptional combination of technical, scientific, product development and managerial expertise and a very strong corporate track record in the areas of business and financial management, sales and marketing, manufacturing and technology, and that as a whole, the Company's personnel currently has the skills and knowledge required in order to successfully operate the business. The market for qualified personnel is competitive due to the limited number of people with the necessary skills. See "Risk Factors — Reliance on Key Personnel".

### **Cycles**

Our operations do not demonstrate substantial seasonality or cyclical changes.

### **Environmental and Regulatory Overview**

We apply "green chemistry" to transform renewable resources into high-performance bio-based products. Our products provide an improved environmental footprint when compared to the petroleum-based products they replace. Some of the green chemistry principles we follow include:

- Waste prevention leaving no waste to treat or clean up.
- Use of processes and substances with no toxicity to humans or the environment.
- Use of renewable feedstock resources rather than depleting non-renewable resources.
- Avoid creation of chemical derivatives.
- Use of safe solvents and reaction conditions in all processes.
- Degradation of products into innocuous materials after use.

ECOSPHERE BIOLATEX and DURABIND biopolymers contain no toxic monomers or volatile organic compounds (VOCs), and they are sustainable and biodegradable and much more readily recyclable than their petrochemical counterparts. These products are biopolymers, which are derived from the fundamental re-engineering of renewable resources such as starch (biogenic carbon) into biopolymer nanoparticles using a continuous manufacturing process.

Products derived from natural-based feedstocks produce significantly less carbon dioxide as a consequence of production as compared with products derived from petroleum-based chemicals. Total emissions associated with production of synthetic SB latex are estimated at 6.5 kilograms carbon dioxide per kilogram of SB latex, including both embedded carbon of fossil-fuel origin (released to the atmosphere when the product decomposes) and emissions associated with manufacturing and transporting the product. This can be compared to emissions of 2.1 kilograms carbon dioxide per kilogram of our ECOSPHERE BIOLATEX binder.

### ***Compliance and Regulatory***

Our operations are subject to a variety of federal, provincial, state, local and international laws and regulations in the countries in which we conduct business. Currently, we operate in the United States, Canada and The Netherlands. The legal and regulatory regimes of these countries govern the research, development, sale and marketing of emulsion polymers. Specifically, the bio-based chemical industry calls for compliance with laws that govern taxes, labour standards, occupational health and safety matters, the

use of toxic and chemical substances and waste management, among others. These laws and regulations can impose expensive fees and violation of these laws could result in significant fines, civil sanctions or costs from environmental remediation.

Permits, registrations or other authorizations may also be required to maintain operations and carry out our future research and development activities. These permits, registrations or other authorizations will be subject to revocation, modification and renewal. As a condition of granting the permits necessary for operating our facilities, regulators could make demands that increase our construction and operating costs. Permit conditions could also restrict or limit the extent of our operations. We cannot guarantee that we will be able to obtain or comply with the terms of all necessary permits required to conduct business.

## **GENERAL DEVELOPMENT OF THE BUSINESS**

### **Three Year History**

The following is a description of the general development of the business of EcoSynthetix over the last three fiscal years.

#### *Strategy*

During fiscal year 2020, impact from the COVID-19 pandemic has caused both the global demand for paper and the pricing of petroleum-related products which the Company's products compete with to decrease significantly. This has resulted in a 26% decrease in revenue during fiscal year 2020, primarily due to lower volumes of 19% which is consistent with declines highlighted by industry reports in coated paper demand as a result of the COVID-19 pandemic. As a result of this, the Company applied for and received \$0.5 million government assistance under the Canadian Emergency Wage Subsidy (CEWS) program and the Canadian Emergency Rent Subsidy (CERS) program in fiscal year 2020. Despite these challenges, strict financial discipline, government assistance and cost controls enabled the Company to achieve positive cash flow from operations for the second consecutive year.

Despite the ongoing challenges from COVID-19, significant progress has been made towards achieving sustainable growth and profitability over the past three years. EcoSynthetix has lowered its cost footprint, invested in leadership and talent, focused its research and development efforts and pursued a growth strategy which leverages its foundation in paper and paperboard and the commercialization of DURABIND within the building materials space and our all-natural ingredients within the personal care space. The progress achieved with its renewable, bio-based materials positions the Company strongly to help global leaders in these markets achieve their increasingly aggressive sustainability and ESG goals.

EcoSynthetix continues to execute on the following priorities to drive profitable growth:

- 1. Execute our “multiple shots on goal” commercial strategy** – The majority of the Company's sales will continue to be driven by the paper and paperboard market in 2021. However, with the Company's commercial progress within the wood composites and personal care markets it expects to transition over time to a more diversified approach with contributions growing from DURABIND and its biopolymer for personal care.
- 2. Support our paper and paperboard accounts** – The Company's relationships with key customers in the paper & paperboard packaging market continue to provide a strong foundation for its business and EcoSynthetix will continue to pursue growth opportunities in this market, specifically in the more

focused specialty paper and packaging categories.

- 3. Drive growth in wood composites markets** – On November 6, 2018 the Company announced that it had expanded its relationship with its first commercial account in the building materials market. The Swiss Krono Group launched BE.YOND, a no-added formaldehyde particleboard using EcoSynthetix' DURABIND binder. The Swiss Krono Group is one of the world's leading wood-based panel manufacturers. The Company continues its efforts in expanding its presence in the building materials space. Consumer and regulatory factors are creating demand for no-added formaldehyde ("NAF") products, and the Company believes it is well-positioned to capitalize on these trends to rapidly grow its share of the \$15 billion annual wood composite binder market. Manufacturers are actively pursuing new technologies as alternatives to conventional formaldehyde binders. EcoSynthetix has expanded its relationship with its first key customer, won new lines and expanded the number of SKUs that use DURABIND. The key targets within the wood composites market are highly engaged and the Company continues to make progress with its commercialization activities. The conversion of its robust pipeline of industrial trial opportunities into commercial accounts remains its highest priority.
- 4. Drive growth in personal care markets** – The Company introduced its third product category in 2019, personal care. The Company announced on July 31, 2019, it had signed an exclusive development, marketing and distribution agreement for its biopolymer with a leading global chemical company in the personal care space. Consumer demand for green ingredients is driving rapid change in the personal care market today and the Company's biopolymer plays directly into that shift. Its biopolymer is an all-natural film former and the first application in this new market is hair fixatives. Formulations using its biopolymer are designed to replace existing chemistries at a competitive price with the same or better performance.
- 5. Product Development** - The Company's product development efforts focus on applications for its existing ECOSPHERE and DURABIND biopolymer products in market segments where their value proposition is strong, and on further improvements to both product lines to further enhance value and expand addressable opportunities. The Company is also pursuing new product categories in specific markets where strong commercial interest from recognized leaders exists.

On April 26, 2019, the Company announced government funding of up to C\$2 million over five years from the Federal Government's Canadian Agricultural Partnership to develop new green resins for adhesive binders in wood products. This investment will be used to develop next generation DURABIND binder adhesives.

- 6. Top line growth with a sustainable bottom line** - The Company expects to continue making investments in areas of the business that allow it to accelerate growth while retaining a disciplined approach toward its cost structure. The Company remains confident in its ability to execute on the opportunities it has identified in the wood composites and the paper and paperboard packaging markets. The Company generated positive cash flow from operations in 2020 and 2019 and management believes it can leverage its next steps in growth and continued cost discipline to deliver long-term value to its shareholders.
- 7. Leadership** – In December 2018, Ralph De Jong was appointed Vice President Research and Development and Customer Solutions. Mr. De Jong joined the Company in January 2010 as Director, Customer Solutions and previously worked for BASF Chemicals for 22 years in various roles in Research and Development, Applications Development and Technical Service.

On May 24, 2018, the Company announced that Ms. Susan Allen was appointed as an independent director to the Company at the annual and special meeting of the Company held on May 23, 2018. The Company also announced that Mr. John Barker retired from his board director position.

## **RISK FACTORS**

Careful consideration should be paid to the risks described below, which are qualified in their entirety by reference to, and must be read in conjunction with, the detailed information appearing elsewhere in this annual information form, and all other information contained herein. The risks and uncertainties described below are those we currently believe to be material. However, they are not the only ones we face. If any of the following risks, or any other risks and uncertainties that we have not yet identified or that we currently consider not to be material, actually occur or become material risks, our business, prospects, financial condition, results of operations and cash flows and consequently the price of the Common Shares could be materially and adversely affected.

### ***COVID – 19***

COVID-19, which was declared by the World Health Organization to be a “pandemic”, has spread across the globe and is impacting worldwide economic activity. The governments of many countries, states, cities and other geographic regions have taken preventative or protective actions, such as imposing restrictions on travel and business operations and temporary closures of businesses. In addition, numerous other businesses have temporarily closed voluntarily. Such actions are creating disruption in global supply chains, increasing rates of unemployment and adversely impacting many industries.

During fiscal year 2020, COVID-19 has caused both the global demand for paper products to decrease significantly and the pricing of petroleum-related products which the Company’s products compete with to also decrease. This has resulted in reduced sales volume, lower pricing and reduced gross profit for the Company. COVID-19 has reduced the Company’s ability to effectively market and trial its products with customers where on-site collaboration is preferred. COVID-19 has also caused a decline in interest rates reducing interest income earned on cash deposits and short-term investments.

The global impact of COVID-19 continues to evolve rapidly, and in 2021, COVID-19 will likely continue to have negative material impacts on the global economy and our relevant markets. For us, COVID-19 may materially impact our ability to manufacture, source (including the delivery of raw materials to its facilities) or distribute our products both domestically and internationally; reduce our ability to effectively market and sell our products; reduce demand for our products; result in labour shortages or social unrest; cause a significant decrease in the market price for petroleum related feedstocks which our products compete with, and cause increased credit risk. Any of these additional risks factors could have a significant negative impact on the Company’s financial results. Given the dynamic nature of this outbreak, the extent to which the COVID-19 virus impacts the Company’s operational results and financial performance will depend on future developments, which remain highly uncertain and cannot be accurately predicted at this time, including the duration, scope and severity of the pandemic, the actions taken to contain or mitigate its impact, and the direct and indirect economic effects of the pandemic and related containment measures, among others.

Even after the COVID-19 pandemic subsides, our business could also be negatively impacted. Future events could cause global financial conditions to suddenly and rapidly destabilize, and governmental authorities may have limited resources to respond to such future crises. Future crises may be precipitated by any number of causes, including other emerging infectious diseases, natural disasters, geopolitical instability, changes to energy prices or sovereign defaults. Any sudden or rapid destabilization of global economic conditions could negatively impact our ability to obtain equity or debt financing and may negatively impact our business and results of operations. If increased levels of volatility continue, there is a rapid destabilization of global economic conditions or a prolonged recession resulting from a pandemic, it may result in a material adverse effect on raw material prices, petroleum pricing, availability of credit,

investor confidence, and general financial market liquidity, all of which would likely materially affect our business and the value of our Common Shares.

***Protection of Intellectual Property.***

Our commercial success will depend substantially on our ability to protect and defend our intellectual property. We are pursuing or possess patents and patent applications in North America, South America, Europe and Asia. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our intellectual property is covered by valid and enforceable patents or is effectively maintained as confidential know-how/trade secrets.

The industries in which we operate can be subject to expensive litigation regarding patents and other intellectual property rights. As a result, we may be required to defend against claims of intellectual property infringement which may adversely affect our financial condition and operating results.

Our existing and future patents may not be sufficiently broad to prevent others from developing competing products. We operate in domestic and foreign markets, and, as such, have intellectual property rights in, and are subject to the different intellectual property laws of, each jurisdiction. As a result, the validity and enforceability of our patents cannot be predicted with certainty and our patents may be found to be invalid or unenforceable or our patent applications may not be accepted. Moreover, we cannot be certain whether:

- we were the first to make the inventions covered by each of our issued patents and pending patent applications;
- we were the first to file patent applications for these inventions;
- others will independently develop similar or alternative products or duplicate any of our products;
- our patents are of the proper scope;
- we are aware of all of the prior art concerning our patents and patent applications;
- any patents issued to, or acquired by, us will provide us with competitive advantages, or will be challenged by third parties;
- we will develop additional proprietary products or technologies that are patentable; or
- the patents of others will have an adverse effect on our business.

We do not know whether any of our patent applications will result in the issuance of any patents. Even if patents are issued, they may not be sufficient to protect our intellectual property. The patents we own and those that may be issued in the future may be challenged, re-examined, opposed, invalidated, rendered unenforceable, or circumvented, or determined to be overbroad, and the rights granted under our issued patents may not provide us with adequate proprietary protection or competitive advantages. Many of our patents were acquired from third parties and we cannot be certain that these patents are valid, enforceable or of a proper scope or that there will be no issue with respect to the transfer of these patents and patent applications to us (including with respect to the right of a third party to obtain a license to some of the intellectual property that was acquired by us from third parties). Moreover, third parties could implement our inventions in jurisdictions where we do not have patent protection or in jurisdictions where

they could obtain a compulsory license to our technology where patented. Such third parties may then try to import products made using our intellectual property into our markets. Additional uncertainty may result from potential passage of patent reform legislation or from court decisions. Accordingly, we cannot ensure that any of our pending patent applications will result in issued patents, or even if issued, predict the breadth, validity and enforceability of the claims in our and other companies' patents.

Unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our intellectual property is difficult, and we cannot be certain that the steps we will have taken will prevent unauthorized use of our technology, particularly in certain foreign countries where the local laws may not protect our proprietary rights as fully as in Canada or the United States. If competitors are able to use our technology, our ability to compete effectively could be harmed. Moreover, others may independently develop and obtain patents for technologies that are similar to, or superior to, our technologies. If that happens, we may need to license these technologies, and we may not be able to obtain licenses on reasonable terms, if at all, which could have a material adverse effect on our business.

### ***Customer Dependence and Demand.***

We depend on a small number of customers for a substantial portion of our revenue. Three customers represented 25%, 18% and 12%, respectively of total revenue for the year ended December 31, 2020. The loss of, or a significant reduction in business by, any one of these customers could materially reduce our revenue.

Customer requirements often require tailored formulations and we may not be successful in the development of additional commercial formulations of ECOSPHERE BIOLATEX and DURABIND biopolymers. While both of these products can be produced in a large number of different formulations (varying performance attributes) such formulation development is a time-consuming and expensive activity. Constraints on resources may require us to focus on our specific formulations and to forgo other opportunities.

### ***Financial Results.***

Our revenues and results of operations could vary significantly from quarter to quarter due to a variety of factors, many of which are outside of our control. As a result, comparing our results of operations on a period-to-period basis may not be meaningful. Factors that could cause our quarterly results of operations to fluctuate include:

- achievement, or failure to achieve, technology or product development milestones needed to allow us to enter identified markets;
- delays or greater than anticipated expenses associated with the completion of new production facilities, and the time to complete scale-up of production following completion of a new production facility;
- disruptions in the production process at any facility where we produce our products;
- the timing, size and mix of sales to customers for our products;
- increases in price or decreases in availability of our bio-based material;
- the unavailability of contract manufacturing capacity altogether or at anticipated cost;

- fluctuations in foreign currency exchange rates;
- fluctuations in the price of and demand for bio-based materials as well as petroleum-based products for which certain of our primary products are alternatives;
- the effects of competitive pricing pressures, including decreases in average selling prices of our products;
- unanticipated expenses associated with changes in governmental regulations and environmental, health and safety requirements;
- reductions or changes to existing chemical regulations and policies;
- departure of executives or other key management employees;
- our ability to use our net operating loss carry forwards to offset future taxable income;
- business interruptions such as earthquakes and other natural disasters;
- our ability to integrate businesses that we may acquire;
- risks associated with the international aspects of our business; and
- changes in general economic, industry and market conditions, both domestically and in our foreign markets.

Due to these factors and others the results of any quarterly or annual period may not meet our expectations or the expectations of our investors and may not be meaningful indications of our future performance.

***Competition.***

The bio-based chemicals industry includes innovative companies providing eco-friendly alternatives to petroleum-based chemical production. Several companies are engaged in the manufacturing of bio-based chemicals and polymers for the purposes of producing industrial products. We face competition from numerous global petrochemical companies that manufacture SB/SA latex paper coatings and formaldehyde-based binders for wood composites. Our competitive position is influenced by a large number of factors including:

- the emergence of new bio-based binder companies;
- our ability to attract and maintain long-term customer relationships;
- the quality of our products and customer service;
- foreign currency fluctuations;
- our ability to reduce manufacturing costs by achieving high operating efficiencies and production rates;
- the availability, quality and cost of raw materials and labour; and

- the cost of energy.

There is no assurance that we will be able to compete effectively with our competitors in the long-term.

***Global Markets and Economic Conditions.***

If global economic and financial market conditions deteriorate for an extended period of time, the following factors could have a material adverse effect on our business, operating results, and financial condition:

- Slower consumer spending may result in reduced demand for our products, reduced orders from customers for our products, order cancellations, lower revenues, increased inventories, and lower gross profit margins.
- We may be unable to access financing in the credit and capital markets at reasonable rates in the event we find it desirable to do so.
- The failure of financial institution counterparties to honor their obligations to us under credit and derivative instruments could jeopardize our ability to rely on and benefit from those instruments. Our ability to replace those instruments on the same or similar terms may be limited under poor market conditions.
- We conduct transactions in various currencies, which increases our exposure to fluctuations in foreign currency exchange rates relative to the U.S. dollar. Continued volatility in the markets and exchange rates for foreign currencies and contracts in foreign currencies could have a significant impact on our reported financial results and condition.
- Continued volatility in the markets and prices for commodities and raw materials we use in our products and in our supply chain could have a material adverse effect on our costs, gross profit margins, and profitability.
- If our customers experience declining revenues, difficulty obtaining financing in the capital and credit markets to purchase our products, this could result in reduced orders for our products, order cancellations, inability of our customers to timely meet their payment obligations to us, extended payment terms, higher accounts receivable, reduced cash flows, greater expense associated with collection efforts, and increased bad debt expense.
- If our customers experience severe financial difficulty, some may become insolvent and cease business operations, which could result in reduced orders for our products, inability of our customers to meet their payment obligations to us, reduced cash flows, greater expense associated with collection efforts, and increased bad debt expense.
- If contract manufacturers of our products or other participants in our supply chain experience difficulty obtaining financing in the capital and credit markets to purchase raw materials or to finance general working capital needs, it may result in delays or non-delivery of shipments of our products.

### ***Availability and Price of Raw Materials.***

Substantially all of our products are manufactured from commodity based raw materials, primarily corn. The price and availability of corn and other bio-based materials may be influenced by general economic, market, environmental and regulatory factors. These factors include weather conditions, farming decisions, government policies and subsidies with respect to agriculture and international trade and global demand and supply. The significance and relative impact of these factors on the price of renewable crop sources are difficult to predict. At certain levels, prices may make these products uneconomical to use and produce, as we may be unable to pass the full amount of corn and other bio-based material cost increases on to our customers. A decrease in the availability of corn and other bio-based materials or an increase in their price may have a material adverse effect on our financial condition and operating results.

### ***Agriculture Risks Affecting Crop Yields and Bio-Based Materials.***

We rely on feedstocks (such as corn starch) and other bio-based materials as inputs for our products. Adverse weather conditions represent a very significant operating risk affecting the agricultural industry and those that rely on agricultural products as inputs. Weather conditions affect the types of crops grown, the quality and quantity of production which, in turn, affects the price and availability of agricultural products and other bio-based materials. Adverse weather conditions, such as drought or excessive rains, can result in reduced crop production and in turn, reduced crop yields. A reduction in crop yields because of adverse weather conditions and other factors, such as crop diseases, pests and wildlife, can have an adverse effect on our operations due to cost increases and the ability to obtain agricultural products.

### ***Production Facilities.***

We may not be able to develop sufficient manufacturing capacity to meet demand in an economical manner or at all. In addition, we rely on two toll production manufacturing partners, and the loss of one of these partners may result in a disruption to the business and have a material adverse effect on our financial condition and operating results.

### ***Markets and Marketing Risk.***

A key component of our business strategy is to market our products to manufacturers. We believe that consumer and customer demand for environmentally sensitive and cost-effective products will drive demand for our products. To gain additional market share and successfully market our products to additional manufacturers, we must effectively demonstrate the commercial advantages of using our products over traditional petroleum-based or formaldehyde-based products and our ability to produce our products reliably on a commercial scale at a sufficiently low cost. If the markets for bio-based materials, and our products in particular, do not develop as we currently anticipate, or if we are unable to penetrate these markets successfully, our financial condition and results of operations could be materially and adversely affected. If we fail to successfully market our products to manufacturers or consumer demand for environmentally sensitive products fails to develop, our business, financial condition and results of operations will be materially adversely affected.

Market acceptance of our current biopolymer offerings and our future products will depend on numerous factors, many of which are outside of our control, including among others: our ability to produce products that offer functionality comparable or superior to existing or new petroleum-based or formaldehyde-based products; pricing of our products compared to competitive products, including petroleum-based latex; the strategic reaction of companies that market competitive products; and general market conditions. Obtaining market acceptance in the chemicals industry is complicated by the fact that many potential chemicals industry customers have invested substantial resources in developing petroleum-

based production channels. These potential customers generally have well-developed manufacturing processes and arrangements with suppliers of chemical components, and may display substantial resistance to changing these processes. Pre-existing contractual commitments, unwillingness to invest in new infrastructure, distrust of new production methods and lengthy relationships with current suppliers may all slow market acceptance of our products.

In addition, our growth strategy is dependent in part on our ability to successfully develop and obtain new customers for our products.

***Reliance on Development of new Technology and Products.***

Development of new technologies and products of a specialized nature by the Company entails inherit risks, namely that either the technology or product does not perform as desired or unacceptable reliability issues making such technology or product not merchantable; or the risk that required components procured from third party suppliers do not perform in an acceptable manner, thereby having an adverse impact on marketability of such technologies and products and on the Company's revenue or product liability.

Our operations will depend on continuous improvements in technology to meet customer demands in respect of performance and cost, and to explore additional business opportunities. There can be no assurance that we will be successful in our efforts in this regard or that we will have the resources available to meet this demand. While we expect that our research and development experience will allow us to explore additional business opportunities, there is no guarantee that such business opportunities will be presented or realized.

***Confidential Know-how/Trade Secret Protection.***

We rely, in part, on confidential know-how/trade secret protection to protect our confidential and proprietary information and processes. However, confidential know-how/trade secrets are difficult to protect and non-disclosure agreements with consultants and others may not adequately prevent disclosure of trade secrets and other proprietary information. We have taken measures to protect our trade secrets and proprietary information, but these measures may not be effective. We require employees and consultants to execute non-disclosure agreements. We believe that all of our employees and consultants having had access to material, technological and confidential information have executed such agreements. These agreements generally require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Nevertheless, these agreements may not be enforceable or may be breached, our proprietary information may be disclosed, third parties could reverse engineer our products and others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our confidential know-how/trade secrets.

***Company Growth.***

We have experienced, and may continue to experience, expansion of our business as we continue to develop and bring our products to our target markets. Our growth has placed, and may continue to place, significant demands on our management and our operational and financial infrastructure. In particular, continued growth could strain our ability to:

- develop and improve our operational, financial and management controls;
- enhance our reporting systems and procedures;

- recruit, train and retain highly skilled personnel;
- develop and maintain our relationships with existing and potential business partners;
- maintain our quality standards; and
- maintain customer satisfaction.

Managing our growth will require significant expenditures and allocation of valuable management resources. If we fail to achieve the necessary level of efficiency in our organization as we grow, it could have a material adverse effect on our business, results of operations and financial condition.

***Increases in our Energy Costs.***

Our production costs will be dependent on the costs of the energy sources used to run our production facilities. These costs are subject to fluctuations and variations in different locations where we intend to operate, and we may not be able to predict or control these costs. If these costs exceed our expectations, this may adversely affect our financial condition and results of operations.

***Foreign Operations.***

We believe that the current political and regulatory environments in which we operate, currently being Canada, the United States and The Netherlands, are sufficiently supportive of our business. However, there are risks that conditions will change in an adverse manner. These risks include, but are not limited to, laws or policies affecting mandates or incentives to promote the use of biomaterials, environmental issues, land use, air emissions, water use, zoning, workplace safety, restrictions imposed on the chemical industry such as restrictions on production, substantial changes in product quality standards, restrictions on feedstock supply, price controls and export controls. Any changes in biomaterials used in the production of our products, financial incentives, investment regulations, policies or a shift in political attitudes are beyond our control and may adversely affect our business, financial condition and results of operations.

As we expand globally, our operations are exposed to various levels of political, economic and other risks and uncertainties associated with operating in a foreign jurisdiction. These risks and uncertainties vary from country to country and include, but are not limited to, currency exchange rates, labour unrest, renegotiation or nullification of existing agreements, licenses, permits and contracts, changes in taxation policies, restrictions on foreign exchange, changing political conditions, currency controls and governmental regulations that favour or require the awarding of contracts to local contractors or require foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction. Changes, if any, in operational or investment policies or shifts in political attitude may adversely affect our operations or profitability. Operations may be affected in varying degrees by government regulations with respect to, but not limited to, restrictions on production, price controls, export controls, currency remittance, income taxes, foreign investment, environmental legislation, land and water use. The occurrence of these various factors and uncertainties cannot be accurately predicted and could have an adverse effect on our results of operations or prospects.

***Reliance on Key Personnel.***

Our business is complex, involves global operations and requires a management team and employee workforce that is knowledgeable in how we operate. The loss of any key member of our management or key technical and operational employees, or the failure to attract or retain such employees could prevent us from developing and commercializing our products for our target markets and executing

our business strategy. We may not be able to attract or retain qualified employees in the future due to the intense competition for qualified personnel, or due to the availability of personnel with the qualifications or experience necessary for our business. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that will adversely affect our ability to meet the demands of our customers in a timely fashion or to support our internal research and development programs. Competition for such personnel from numerous companies and academic and other research institutions may limit our ability to do so on acceptable terms.

As we expand our operations, we will need to hire additional qualified research and development and management personnel to succeed. The process of attracting, hiring, training and successfully integrating qualified personnel into our operations is a lengthy and expensive one. Our product and process development programs are dependent on our ability to attract and retain highly skilled technical and operational personnel. The market for qualified personnel is very competitive because of the limited number of people available with the necessary technical skills and understanding of our technology and anticipated products. Our failure to hire and retain qualified personnel could impair our ability to meet our research and development and business objectives and adversely affect our results of operations and financial condition.

#### ***Environmental Legal and Regulatory Compliance.***

Our current and planned activities involve the use of a broad range of materials that are, or may be, considered hazardous under applicable laws and regulations. Accordingly, we are subject to a number of foreign, federal, state, provincial and local laws and regulations relating to protection of the environment, the storage, use, disposal of, and exposure to, hazardous materials and wastes, and health and safety, including U.S. Food and Drug Administration regulations related to food contact materials. Compliance with these laws and regulations could be costly and could delay or even preclude commercialization of our products for certain applications. There can be no assurance that we will be able to meet the necessary regulatory requirements for commercialization of our products for any or all food contact applications in a timely manner or at an acceptable cost.

If we were to violate or become liable under environmental, health and safety laws, we could incur costs, fines and civil and criminal penalties, personal injury and third-party property damage claims, or could be required to incur substantial investigation or remediation costs. Moreover, a failure to comply with environmental laws could result in fines and the revocation of environmental permits, which could prevent us, or our strategic partners, from conducting business. Liability under environmental laws can be joint and several and without regard to fault. There can be no assurance that violations of environmental health and safety laws will not occur in the future as a result of the inability to obtain permits, human error, equipment failure or other causes. Environmental laws could become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could harm our business. Accordingly, violations of present and future environmental laws could restrict our ability to expand facilities, pursue certain technologies, and could require us to acquire costly equipment, or to incur potentially significant costs to comply with environmental regulations.

Our failure to comply with government regulations could subject us to civil and criminal penalties, require us to forfeit property rights and may affect the value of our assets or our ability to conduct business. Any such penalty may adversely affect our business activities, financial condition or results of operations. We cannot predict the extent to which future legislation and regulation could cause us to incur additional operating expenses, capital expenditures, or restrictions and delays in the development of our products and properties.

### ***Enforcement of Intellectual Property Rights.***

Enforcement of claims that a third party is using our proprietary rights without permission is expensive, time consuming and uncertain. Litigation would result in substantial costs, even if the eventual outcome is favourable to us, and would divert management's attention from our business objectives. In addition, an adverse outcome in litigation could result in a substantial loss of our proprietary rights and we could lose our ability to exclude others from practicing our technology or producing our products or using our intellectual property.

The laws of some foreign countries do not protect intellectual property rights to the same extent as do the laws of Canada and the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favour the enforcement of patents and other intellectual property protection, particularly those relating to bio-industrial technologies. This could make it difficult for us to stop the infringement of our patents or misappropriation of our other intellectual property rights. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. Moreover, our efforts to protect our intellectual property rights in such countries may be inadequate.

### ***Price of Petroleum.***

We anticipate that certain of our bio-based products will be marketed as economical alternatives to corresponding petroleum-based products and financial results will be influenced by the cost of our products relative to the incumbent petroleum-based products. The cost of petroleum-based products is in part based on the price of petroleum. Our binders are primarily manufactured using cornstarch, an agricultural feedstock. If the price of these feedstocks were to dramatically increase or if the price of petroleum decreases, we may be unable to manufacture products that are cost-effective alternatives to petroleum-based products. Declining oil prices, or the perception of a future decline in oil prices, may adversely affect the prices we can obtain from our potential customers or prevent potential customers from entering into agreements with us to buy our products. The significant decline in benchmark oil prices around the globe since 2014 and increased volatility in oil prices has created significant uncertainty with respect to the forecast of oil prices into 2021. During sustained periods of lower oil prices, we may be unable to sell some of our products, which could materially and adversely affect our financial condition and operating results.

### ***Equipment and Supplies.***

We are dependent on various supplies and equipment to carry out our operations. The shortage of supplies, equipment and parts could have a material adverse effect on our ability to carry out our operations and therefore limit or increase the cost of our operations.

An increase in demand for services and equipment could cause operational costs to increase materially, could result in delays if services or equipment cannot be obtained in a timely manner due to inadequate availability, and could increase potential scheduling difficulties and costs due to the need to coordinate the availability of services or equipment. Any such material increase in costs could adversely affect our financial condition. The Company's manufacturing facilities are subject to the risk of equipment failure due to, among other things, deterioration of the assets from use or age, latent defect, and design or operation error. To the extent that a facility's equipment requires longer than forecasted down times for maintenance and repair, the Company's business, operating results, financial condition or prospects could be adversely affected.

### ***Government Grants.***

We have received various government grants, and we may seek to obtain government grants and subsidies in the future. We cannot be certain that we will be able to secure any such government grants or subsidies. Any of our existing grants or new grants that we may obtain may be terminated, modified or recovered by the granting governmental body under certain conditions.

We may also be subject to audits by government agencies as part of routine audits of our activities funded by our government grants. As part of an audit, these agencies may review our performance, cost structures and compliance with applicable laws, regulations and standards. Funds available under grants must be applied by us toward the research and development programs specified by the granting agencies, rather than for all of our programs generally. If any of our costs are found to be allocated improperly, the costs may not be reimbursed and any costs already reimbursed may have to be refunded. Accordingly, an audit could result in an adjustment to our results of operations.

### ***Liquidity Risk.***

Although we currently have no debt outstanding, we might incur debt in order to fund our business activities, which would reduce our financial flexibility and could have a material adverse effect on our business, financial condition or results of operation. Our ability to meet any debt obligations depends on future performance. General economic conditions, feedstock pricing and financial, business and other factors may affect our operations and future performance. Many of these factors are beyond our control. We cannot assure investors that we will be able to generate sufficient cash flow to pay the interest on any debt, or that future working capital, borrowings or equity financing will be available to pay or refinance such debt. Factors that will affect our ability to raise cash through an offering of securities include financial market conditions, the value of our assets and performance at the time we need capital.

### ***Availability of Additional Financing.***

If our revenues decline and resources are insufficient to meet our capital requirements, we will be required to raise additional funds. There can be no assurance that debt or equity financing will be available or sufficient to meet these requirements or that such financing will be on terms that are favourable to us, if at all. If future rounds of financing involve the issuance of equity securities, our existing shareholders' ownership will be diluted. If we are able to raise debt financing, we may be subject to restrictive covenants that limit our ability to conduct our business. If we fail to raise sufficient funds or incur losses, our ability to fund our operations, take advantage of strategic opportunities, develop and commercialize products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate research and development programs, the expansion of the production lines or the commercialization of products resulting from our technologies, curtail or cease operations or obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. The inability to access sufficient capital could have a material adverse effect on our financial condition and results of operations. If adequate funds are not available, we will not be able to successfully execute our business plan or continue our business.

### ***Acquisition of Intellectual Property.***

Commercial success will depend in part on obtaining and maintaining patent, confidential know-how/trade secret and trade-mark protection of our technologies in the United States and other jurisdictions, as well as successfully enforcing this intellectual property and defending this intellectual property against third-party challenges. We may not be able to acquire additional intellectual property rights or, if acquired,

we may not achieve material revenue from such intellectual property. We will be able to protect our acquired proprietary rights from unauthorized use by third parties only to the extent that our intellectual property is covered by valid and enforceable patents or is effectively maintained as confidential know-how/trade secrets. Furthermore, we may not be able to enter into strategic relationships with third parties to license or otherwise monetize our intellectual property and, even if we consummate such strategic relationships, we may not achieve material revenue or profit from such relationships. We face considerable competition from other companies in acquiring intellectual property.

### ***Intellectual Property Litigation.***

Our commercial success depends on our ability to operate without infringing on the patents and proprietary rights of other parties and without breaching agreements we have entered with regard to our technologies and products. We cannot determine with certainty whether patents or patent applications of other parties may materially affect our ability to conduct our business. Further, because patent searching is not always precise, we cannot determine with certainty that any patent search performed by or for us is complete. Because patents can take several years to issue, there may currently be pending applications, unknown to us, that may result in issued patents that cover our technologies or product candidates. The existence of third-party patent applications and patents could significantly reduce the coverage of patents owned by us and limit our ability to obtain meaningful patent protection. If patents containing competitive or conflicting claims are issued to third parties and these claims are ultimately determined to be valid, we may be enjoined from pursuing research, development, or commercialization of products, or be required to obtain licenses to these patents, or to develop or obtain alternative technology.

If a third-party asserts that we infringed upon its patents or other proprietary rights, we could face a number of issues that could seriously harm our competitive position, including:

- infringement and other intellectual property claims, which could be costly and time consuming to litigate, whether or not the claims have merit, and which could delay getting our products to market and divert management attention from our business;
- substantial damages for past infringement, which we may have to pay if a court determines that our products or technologies infringe a competitor's patent or other proprietary rights; and
- a court prohibiting us from selling or licensing our technologies or future products unless the holder licenses the patent or other proprietary rights to us, which it is not required to do.

The industries in which we operate are characterized by frequent and extensive litigation regarding patents and other intellectual property rights. Certain companies have employed intellectual property litigation as a way to gain a competitive advantage. If any of our competitors have filed patent applications or obtained patents that claim inventions also claimed by us, we may have to participate in interference proceedings declared by the relevant patent regulatory agency to determine priority of invention and, thus, the right to the patents for these inventions. These proceedings could result in substantial cost to us even if the outcome is favourable. Even if successful, an interference may result in loss of certain claims. Our involvement in litigation, interferences, opposition proceedings or other intellectual property proceedings inside and outside of Canada and the United States, to defend our intellectual property rights or as a result of alleged infringement of the rights of others, may divert management time from focusing on business operations and could cause us to spend significant resources, all of which could harm our business and results of operations.

### ***Litigation Risk.***

From time to time, we may, in the ordinary course of business, be named as a defendant in lawsuits, claims and other legal proceedings. These actions may seek, among other things, compensation for alleged personal injury, worker's compensation, employment discrimination, breach of contract, property damages, civil penalties and other losses of injunctive or declaratory relief. In the event that such actions or indemnities are ultimately resolved unfavourably at amounts exceeding our accrued liability, or at material amounts, the outcome could materially and adversely affect our reputation, business and results of operations. In addition, payments of significant amounts, even if reserved, could adversely affect our liquidity position.

### ***Changes in Government Policy.***

Concerns associated with land and food crop usage are receiving legislative, industry and public attention. This could result in future legislation, regulation and/or administrative action that could adversely affect our business. Any inability to address these requirements and any regulatory or policy changes could have a material adverse effect on our business, financial condition and results of operations. Furthermore, the production of our products will depend on the availability of feedstocks. Agricultural production and trade flows are subject to government policies and regulations. Governmental policies affecting the agricultural industry, such as taxes, tariffs, duties, subsidies, incentives and import and export restrictions on agricultural commodities and commodity products, can influence the planting of certain crops, the location and size of crop production, whether unprocessed or processed commodity products are traded, the volume and types of imports and exports, and the availability and competitiveness of feedstocks as raw materials. Future government policies may adversely affect the supply of specific feedstocks, restrict our ability to use corn from these feedstocks to produce our products, and negatively impact our future revenues and results of operations.

### ***Hedging Transactions.***

We may in the future engage in hedging transactions to offset the effects of volatility in the price of our raw materials. Hedging activities may cause us to suffer losses, such as if we purchase a position in a declining market or sell a position in a rising market. Furthermore, hedging may expose us to the risk that the other party to a hedging contract defaults on its obligation. We may vary the hedging strategies we undertake, which could leave us more vulnerable to increases or decreases in the prices of raw materials, and may require us to take delivery of raw materials at unfavourable prices. Losses from hedging activities and changes in hedging strategy could have a material adverse effect on our operations and financial position.

In the future, we may engage in currency hedging to reduce the risk associated with currency fluctuations. Currency hedging involves risks and may require margin activities. Sudden fluctuations in currencies could result in margin calls that could have a material adverse effect on our operations and financial position.

### ***Insurance.***

The testing, manufacture, marketing, and sale of our products may involve product liability risks. Although we currently have product liability insurance covering claims up to US\$10 million per occurrence and in the aggregate, we may not be able to maintain this product liability insurance at an acceptable cost, if at all. In addition, this insurance may not provide adequate coverage against potential losses. If claims or losses exceed our liability insurance coverage it could have a material adverse effect on our operations and financial position.

### ***Cyber-Security Incidents.***

We rely extensively on information technology systems to operate our business. We receive, process, store and transmit, often electronically, confidential data of our Company and our customers, suppliers, employees and others. Despite implemented security measures, our facilities, systems and procedures, and those of our third-party service providers, may be vulnerable to security breaches, acts of vandalism, software viruses, misplaced or lost data, programming and/or human errors or other similar events. In particular, unauthorized access to our computer systems or stored data could result in the theft or improper disclosure of confidential or sensitive information, the deletion or modification of records or interruptions in our operations. Any such events, including those involving the misappropriation, loss or other unauthorized disclosure or use of confidential or sensitive information of our Company or our customers, suppliers, employees or others, whether by us or a third party, could subject us to civil and criminal penalties; expose us to liabilities from our customers, employees, suppliers, third parties or governmental authorities; disrupt our delivery of products; and have a negative impact on our reputation. Any of these events could have a material adverse effect on our business, financial condition or operations.

### ***Issuance of Additional Equity Securities.***

We may issue equity securities in the future. In addition, outstanding options or warrants to purchase Common Shares may be exercised, resulting in the issuance of additional Common Shares. The issuance of additional equity securities, or a perception that such an issuance may occur, could have a negative impact on the trading price of the Common Shares.

### ***Ethical, Legal and Social Concerns.***

Some of our processes involve the use of genetically engineered feedstocks or genetic engineering technologies. Additionally, our feedstocks may be grown on land that could be used for food production, which subjects our feedstock sources to “food versus fuel” concerns. If we are not able to overcome ethical, legal and social concerns relating to genetic engineering or land usage concerns, our products and processes may not be accepted. Any of the risks discussed below could result in increased expenses, delays or other impediments to our programs or the public acceptance and commercialization of products and processes dependent on our technologies or inventions. Our ability to develop and commercialize one or more of our technologies, products, or processes could be limited by the following factors:

- public attitudes about the safety and environmental hazards of, and ethical concerns over, genetic research and genetically engineered products and processes, which could influence public acceptance of our technologies, products and processes;
- public attitudes regarding, and potential changes to laws governing ownership of genetic material, which could harm our intellectual property rights with respect to our genetic material and discourage others from supporting, developing or commercializing our products, processes and technologies;
- public attitudes and ethical concerns surrounding production of feedstocks on land which could be used to grow food, which could influence public acceptance of our technologies, products and processes;
- governmental reaction to negative publicity concerning genetically engineered organisms, which could result in greater government regulation of genetic research and derivative products; and

- governmental reaction to negative publicity concerning feedstocks produced on land which could be used to grow food, which could result in greater government regulation of feedstock sources.

The subjects of genetically engineered organisms and food versus fuel have received negative publicity, which has aroused public debate. This adverse publicity could lead to greater regulation and trade restrictions on imports of genetically engineered products or feedstocks grown on land suitable for food production.

***Business Interruptions.***

We are vulnerable to natural disasters and other events that could disrupt our operations, such as riot, civil disturbances, war, terrorist acts, flood, adverse weather conditions affecting crops that we use, infections in our laboratory or production facilities or those of our contract manufacturers and other events beyond our control. We do not have a detailed disaster recovery plan. In addition, we may not carry sufficient business interruption insurance to compensate us for losses that may occur. Any losses or damages we incur could have a material adverse effect on our cash flows and success as an overall business.

***Volatile Market Price for Common Shares.***

The market price for the Common Shares may be volatile and subject to wide fluctuations in response to numerous factors, many of which are beyond our control, including the following:

- actual or anticipated fluctuations in our quarterly results of operations;
- changes in estimates of our future results of operations by us or securities research analysts;
- changes in the economic performance or market valuations of other companies that investors deem comparable to us;
- addition or departure of our executive officers and other key personnel;
- release or other transfer restrictions on outstanding Common Shares;
- sales or perceived sales of additional Common Shares;
- significant acquisitions or business combinations, strategic partnerships, joint ventures or capital commitments by or involving us or our competitors; and
- news reports relating to trends, concerns or competitive developments, regulatory changes and other related issues in our industry or target markets.

Financial markets can experience significant price and volume fluctuations that have affected the market prices of equity securities of companies and that may be unrelated to the operating performance, underlying asset values or prospects of such companies. Accordingly, the market price of the Common Shares may decline even if our operating results, underlying asset values or prospects have not changed.

Additionally, these factors, as well as other related factors, may cause decreases in asset values that are deemed to be other than temporary, which may result in impairment losses. As well, certain institutional investors may base their investment decisions on consideration of our environmental, governance and social practices and performance against such institutions' respective investment guidelines and criteria, and

failure to meet such criteria may result in a limited or no investment in the Common Shares by those institutions, which could adversely affect the trading price of the Common Shares. There can be no assurance that continuing fluctuations in price and volume will not occur. If such increased levels of volatility and market turmoil continue, our business and financial condition could be adversely impacted and the trading price of the Common Shares may be adversely affected.

***Retention of Earnings.***

We currently intend to retain future earnings, if any, for future operations and expansion. Any decision to declare and pay dividends on our Common Shares in the future will be made at the discretion of our Board of Directors and will depend on, among other things, our financial results, cash requirements, contractual restrictions and other factors that our Board of Directors may deem relevant. In addition, our ability to pay dividends may be limited by covenants of any future indebtedness we incur. As a result, shareholders may not receive any return on an investment in the Common Shares in the foreseeable future unless they sell Common Shares for a price greater than that which was paid for it.

***The Company is a Holding Company.***

We are a holding company and a substantial portion of our assets are the capital stock of our subsidiaries. As a result, our investors are subject to the risks attributable to our subsidiaries. As a holding company, we conduct substantially all of our business through our subsidiaries, which generate substantially all of our revenues. Consequently, our cash flow and ability to complete current or desirable future enhancement opportunities are dependent on the earnings of our subsidiaries and the distribution of those earnings to us. The ability of these entities to pay dividends and other distributions will depend on their operating results and will be subject to applicable laws and regulations which require that solvency and capital standards be maintained by such companies and contractual restrictions contained in the instruments governing their debt. In the event of a bankruptcy, liquidation or reorganization of any of our subsidiaries, holders of indebtedness and trade creditors will generally be entitled to payment of their claims from the assets of those subsidiaries before any assets are made available for distribution to us. The common shares we own of our subsidiaries are junior to indebtedness and other liabilities (including trade payables) of our subsidiaries.

***Interest Rate Risk.***

The Company is subject to interest rate risk on its cash. The Company's objective in managing interest rate risk is to maximize the return on its cash. We do not use derivative instruments to reduce our exposure to interest rate risk.

***Foreign Currency Exchange Risk.***

The Company conducts a portion of its business activities in currencies other than the functional currency of U.S. dollars. This primarily includes Canadian dollar and Euro denominated transactions. The Company's objective in managing its foreign currency risk is to minimize its net exposure to foreign currency cash flows by converting foreign denominated financial assets into U.S. dollars to match the financial liabilities denominated in those respective currencies. We do not use derivative instruments to manage exposure to foreign currency exchange fluctuations.

***Credit Risk.***

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash and cash equivalents and accounts receivables. We place our temporary cash and cash equivalents

with high credit quality financial institutions. Although cash balances may exceed the federally insured limits, they are subject to minimal risk.

The Company is exposed to credit risk from customers. As at December 31, 2020, the Company's three largest customers accounted for 64% of trade accounts receivable. In order to minimize the risk of loss of accounts receivable, the Company's extension of credit to customers involves a review and approval by senior management in addition to performing regular monitoring of overdue balances. The majority of the Company's sales are invoices with payment terms up to 60 days.

## **DIVIDENDS**

Cash dividends on Common Shares have not been declared by the Company since incorporation. There are no restrictions that could prevent the Company from paying dividends, however, we currently intend to use earnings to finance the expansion of our business. Any future determination to pay dividends on Common Shares will be at the discretion of the Board of Directors and will depend on, among other things, our results of operations, current and anticipated cash requirements and surplus, financial condition, contractual restrictions, solvency tests imposed by corporate law and other factors that the Board of Directors may deem relevant.

## **DESCRIPTION OF CAPITAL STRUCTURE**

### **Common Shares**

The authorized share capital of the Company consists of an unlimited number of Common Shares. An aggregate of 57,140,413 Common Shares were issued and outstanding on December 31, 2020 and an aggregate of 57,247,040 Common Shares were issued and outstanding as of March 2, 2021.

Holders of the Common Shares are entitled to receive notice of and attend all meetings of shareholders of the Company, except meetings at which only holders of another class or series of shares are entitled to attend, and shall be entitled to cast one vote per Common Share on all matters to be voted on at all such meetings. Holders of the Common Shares are entitled to receive on a pro rata basis such dividends if, as and when declared by the Board of Directors at its discretion and, unless otherwise provided by legislation, subject to the rights of the holders of any other class or series of shares ranking senior to the Common Shares.

In the event of any liquidation, dissolution or winding-up of the Company or other distribution of assets of the Company among holders of the Common Shares for the purpose of winding-up its affairs, the holders of Common Shares shall be entitled, subject to the rights of the holders of any other class or series of shares ranking senior to the Common Shares, to receive on a pro rata basis the remaining property or assets of the Company available for distribution, after the payment of debts and other liabilities. The Common Shares do not carry any pre-emptive, subscription, conversion or redemption rights, nor do they contain any sinking or purchase fund provisions.

On April 10, 2018, the Company announced that it had commenced a normal course issuer bid ("NCIB") to repurchase up to an aggregate of 4,461,696 Common Shares through the facilities of the Toronto Stock Exchange for a period from April 12, 2018 to April 11, 2019 (the "2018 NCIB"). Pursuant to the 2018 NCIB, a total of 2,087,500 Shares were purchased and cancelled for the period from April 12, 2018 to April 11, 2019. The weighted average price paid for such Shares was C\$1.88 per Common Share.

On May 8, 2019, the Company announced that it had renewed its NCIB to repurchase up to 4,714,286 Common Shares through the facilities of the Toronto Stock Exchange for a period from May 13,

2019 to May 12, 2020 (the “**2019 NCIB**”). On March 31, 2020, the Company entered into an automatic securities repurchase plan with a broker in order to facilitate the purchases of its Common Shares under the 2019 NCIB. Purchases made pursuant to the automatic securities repurchase plan were made by the Company’s broker based upon the parameters prescribed by the TSX, applicable Canadian securities laws and the terms of the written agreement between the Company and the broker. Under the automatic securities repurchase plan, the broker was permitted to purchase Common Shares under the 2019 NCIB when the Company would ordinarily not be permitted. Pursuant to the 2019 NCIB, a total of 1,626,068 Common Shares were purchased and cancelled for the period from May 13, 2019 to May 12, 2020. The weighted average price paid for such Shares was C\$2.22 per Common Share.

On May 8, 2020, the Company announced that it had renewed its NCIB to repurchase up to 4,593,420 Common Shares through the facilities of the Toronto Stock Exchange for a period from May 13, 2020 to May 12, 2021 (the “**2020 NCIB**”). On May 13, 2020, the Company entered into an automatic securities repurchase plan with a broker in order to facilitate the purchases of its Common Shares under the 2020 NCIB. Purchases made pursuant to the automatic securities repurchase plan were made by the Company’s broker based upon the parameters prescribed by the TSX, applicable Canadian securities laws and the terms of the written agreement between the Company and the broker. Under the automatic securities repurchase plan, the broker was permitted to purchase Common Shares under the 2020 NCIB when the Company would ordinarily not be permitted. Pursuant to the 2020 NCIB, a total of 434,300 Common Shares were purchased and cancelled for the period from May 13, 2020 to December 31, 2020. The weighted average price paid for such Shares was C\$2.12 per Common Share.

During the year ended December 31, 2020, the Company repurchased and cancelled an aggregate of 1,392,000 Common Shares under the 2019 NCIB and the 2020 NCIB. The weighted average price paid for such Shares was C\$1.92 per Common Share.

## **Options**

As at December 31, 2020, options to acquire an aggregate 4,202,439 Common Shares were outstanding. During the period from January 1, 2020 to December 31, 2020, an aggregate of 563,306 Common Shares were issued pursuant to the exercise of options.

For an explanation of the Company’s stock option plan, please see the Company’s most recent Management Information Circular filed under the Company’s SEDAR profile on [www.sedar.com](http://www.sedar.com).

## **Restricted Share Units (RSUs) and Deferred Share Units (DSUs)**

As at December 31, 2020, restricted share units to acquire an aggregate 583,019 Common Shares were outstanding.

As at December 31, 2020, deferred share units to acquire an aggregate 724,127 Common Shares were outstanding.

During the period from January 1, 2020 to December 31, 2020, an aggregate of 66,666 Common Shares were issued pursuant to the vesting of restricted share units and no Common Shares were issued pursuant to the settlement of deferred share units.

For an explanation of the Company’s deferred share unit plan and restricted share unit plan please see the Company’s most recent Management Information Circular filed under the Company’s SEDAR profile on [www.sedar.com](http://www.sedar.com).

## TRADING PRICE AND VOLUME

### Common Shares

The Common Shares are listed and posted for trading on the Toronto Stock Exchange under the symbol “ECO”. The following table sets forth information relating to the trading of the Common Shares on the Toronto Stock Exchange for the months indicated.

Month	High (C\$)	Low (C\$)	Volume
January 2020	2.81	2.41	961,125
February 2020	2.77	2.35	500,103
March 2020	2.55	1.46	2,075,654
April 2020	2.03	1.53	1,570,085
May 2020	2.20	1.74	745,553
June 2020	2.23	1.99	743,480
July 2020	2.46	2.14	1,375,501
August 2020	2.55	2.25	1,032,420
September 2020	2.36	2.19	1,578,526
October 2020	3.10	2.24	3,709,487
November 2020	3.48	2.73	1,641,327
December 2020	3.91	2.75	4,679,949

The price of the Common Shares as quoted by the TSX at the close of business on December 31, 2020 was C\$3.69 and on March 2, 2021 was C\$4.91.

## DIRECTORS AND OFFICERS

The following table sets out, as at the date hereof, for each of our directors and officers, the person’s name, province or state, and country of residence, position(s) with the Company, the date on which he or she became a director or officer and his or her principal occupation.

The Company’s directors are expected to hold office until the Company’s next annual meeting of shareholders. The Company’s directors are elected annually and, unless re-elected, retire from office at the end of the next annual general meeting of shareholders.

<u>Name, Province/State and Country of Residence</u>	<u>Position(s) with the Company</u>	<u>Since</u>
Jeff MacDonald Ontario, Canada	Chief Executive Officer and Director	2015
Robert Haire Ontario, Canada	Chief Financial Officer and Corporate Secretary	2008
Edward van Egdom Ontario, Canada	Senior Vice President, Operations	2001
Ralph De Jong Ontario, Canada	Vice President, Research & Development & Customer Solutions	2018

<u>Name,</u> <u>Province/State and Country of Residence</u>	<u>Position(s) with the Company</u>	<u>Since</u>
Paul Lucas Ontario, Canada	Director, Chair of the Board, and member of Audit Committee, Compensation Committee and Corporate Governance and Nominating Committee	2015
Susan Allen Ontario, Canada	Director, Chair of Audit Committee, and member of Compensation Committee and Corporate Governance and Nominating Committee	2018
Jeffrey Nodland Texas, USA	Director, Chair of Compensation Committee, and member of Audit Committee and Corporate Governance and Nominating Committee	2016
Martin Hubbes Ontario, Canada	Director, Chair of Corporate Governance and Nominating Committee and member of Audit Committee and Compensation Committee	2017

The principal occupations of each of the Company’s directors and executive officers within the past five years are disclosed in the brief biographies set forth below.

***Jeff MacDonald, Chief Executive Officer and Director***

Mr. MacDonald was appointed the Chief Executive Officer effective May 1, 2015. Mr. MacDonald was appointed to serve on the Board of Directors on May 11, 2015. Mr. MacDonald joined the company in April 2014 as Chief Operating Officer and was appointed interim Chief Executive Officer in February 2015. Mr. MacDonald came to EcoSynthetix with more than 15 years of executive leadership experience in a variety of roles, including operations, business development, and marketing. He spent the majority of his career at Husky Injection Molding Systems Ltd. (“**Husky**”), a leading manufacturer of equipment and services for the plastics industry, with more than \$1 billion in annual sales. At Husky, Mr. MacDonald led the establishment of new businesses, introduced a number of new products to market and led key initiatives that had a transformational impact on overall business performance. Mr. MacDonald holds a Master of Business Administration degree from McMaster University and a Bachelor of Science degree from the University of Western Ontario and previously served on the Board of Intrinsic Technologies Corporation.

***Robert Haire, Chief Financial Officer and Corporate Secretary***

Mr. Haire has served as the Chief Financial Officer of EcoSynthetix since April 2008. Prior to this role, Mr. Haire was Director of Tax with Husky, a TSX listed company acquired by Onex Corporation in December 2007. Prior to this role, Mr. Haire was Treasurer and Director of Tax at GE Zenon ULC, formally Zenon Environmental Inc., a S&P TSX 300 company acquired by General Electric Company, where he worked for over five years. Mr. Haire holds a B.Comm from Ryerson University and is a member of the Chartered Professional Accountants of Canada, the Chartered Professional Accountants of Ontario (Chartered Accountant) and Certified Public Accountants of Illinois.

***Edward van Egdom, Senior Vice President, Operations***

Mr. van Egdom has served as the Senior Vice President of Operations for EcoSynthetix since January 2001. He is responsible for the scale-up, commercialization and manufacturing efforts of the EcoSynthetix family of products, including the launch of the Centre of Innovation facility in Burlington, ON. Mr. van Egdom held the position of Vice President with Tech Inspirations Inc., a venture capital company with a focus on investments in new technology. Previously he has also held various senior

management level engineering and manufacturing roles with Dana Corporation in both Canada and the United States. Mr. van Egdom holds a B.Eng in Mechanical Engineering from Ryerson University.

***Ralph De Jong, Vice President, Research & Development and Customer Solutions***

Mr. De Jong serves as the Vice President of Research & Development and Customer Solutions for EcoSynthetix. Mr. De Jong joined the Company in January 2010 as Director, Customer Solutions and was promoted to his current role in December 2018. Previously Mr. De Jong worked for BASF Chemicals for 22 years in various roles in Research and Development, Applications Development and Technical Services, based both in Canada and the United States. Mr. De Jong holds a B.Sc. in Chemistry from Western University.

***Paul Lucas, Director and Chair of the Board of Directors***

Mr. Lucas was elected to the Board of Directors of EcoSynthetix on May 8, 2015 and subsequently appointed Chair of the Board on June 16, 2016. Mr. Lucas served as President and CEO of GlaxoSmithKline Canada from 1994 until he retired in 2012. Mr. Lucas previously served as Chair of the Board of Directors for Vivo Cannabis Inc., TM Bioscience, Life Science Ontario and Canada's Research-Based Pharmaceutical Companies (Rx&D). Mr. Lucas also previously served as a member of the Boards of Biochem Pharma, the Toronto Regional Research Alliance, Montreal inVivo, AllerGen and the Ontario Genomics Institute. In addition, he was a member of the Principal's Advisory Council of the University of Toronto at Mississauga, and a member of the Board of Trustees of Queen's University. Currently, Mr. Lucas is a member of the Board of Directors of Rna Diagnostics Inc. and is Chair of Induran Ventures Inc. Mr. Lucas received his BSc (Honours) in Biology and Chemistry from Queen's University, and obtained his Chartered Directors designation (CDir) from the Directors College in 2009.

***Susan Allen, Director and Chair of the Audit Committee***

Ms. Allen was elected to the Board of Directors of EcoSynthetix and appointed as the Chair of the Audit Committee on May 23, 2018. Ms. Allen is a retired PricewaterhouseCoopers LLP (PwC) audit partner with extensive international business, audit, board and governance experience. Ms. Allen previously served on the global and Canadian boards of PwC until her retirement in 2016 and currently serves as a Trustee and Audit Committee Chair on the board of Richards Packaging Income Fund, a TSX listed company, and as a member of the Board of Directors and Audit Committee Chair of Triple Flag Precious Metals Corporation. Ms. Allen is also a Director on a private Canadian medical device company and was a Director of a private North American promotional marketing company. Ms. Allen is a recipient of Catalyst Canada's prestigious "Business Champion" award and was named one of the "Top 100 Most Powerful Women in Canada" by the Women's Executive Network for her leadership role and impact on diversity initiatives at PwC. Ms. Allen has also been named to Canada Board Diversity Council's "Diversity 50" list recognizing highly qualified, eligible and diverse board candidates ready to influence Canada's boardrooms. Ms. Allen holds a BA from the University of Toronto, Institute of Corporate Directors ICD.D designation from the Rotman School of Management, is a U.S. CPA and is a Fellow of the Chartered Professional Accountants of Canada (Fellow of the Chartered Accountants).

***Jeffrey Nodland, Director and Chair of the Compensation Committee***

Mr. Nodland was appointed to the Board of Directors of EcoSynthetix on January 1, 2016. Mr. Nodland has an extensive track record of executive leadership within the specialty chemicals, industrial manufacturing and consumer products sectors. Mr. Nodland served as President and Chief Executive Officer of KIK Custom Products from February 2008 to January 2019, a manufacturer of national and retailer brand consumer products throughout North America, and a leader in manufacturing of both

chemicals for the pool and spa markets and antifreeze to the North American automotive industry. Mr. Nodland previously served as President of Hexion Specialty Chemicals Inc.'s Coatings & Inks Division from 2005 to May 2006, and President and Chief Operating Officer of Resolution Specialty Materials from 2004 to 2005. In addition, Mr. Nodland served as President and Chief Operating Officer of Resolution Performance Products from 2001 to 2004, CEO and President of McWhorter Technologies from 1999 to 2001 and held several management roles for The Valspar Corporation from 1977 to 1994. Mr. Nodland currently serves as the Chair of the Board of Directors for McBride Plc., a leading European supplier of private label household products and is a Board member of Augsburg University, a non-profit University located in Minneapolis, Minnesota. Mr. Nodland previously served as a member of the Board of Directors of California Products Corporation, TPC Group, and MPM Holdings Inc.

***Martin Hubbes, Director and Chair of the Corporate Governance and Nominating Committee***

Mr. Hubbes was appointed to the Board of Directors of EcoSynthetix on January 9, 2017. Mr. Hubbes brings decades of investment industry and capital markets experience to the Board. Mr. Hubbes previously served as Executive Vice President and Chief Investment Officer (CIO) at AGF Investments, where he led a team of investment professionals managing more than \$35 billion in assets until his retirement in 2013. Prior to his appointment as CIO of AGF Investments in 2005, Mr. Hubbes was a Portfolio Manager at AGF Investments where he oversaw an investment portfolio of more than \$5 billion. Mr. Hubbes is currently a senior advisor to Fort Capital, a boutique investment banking advisory firm and sits on the Board of Directors of H-Source Holdings Ltd., a TSX Venture Exchange listed company.

As at December 31, 2020, the directors and executive officers, as a group, beneficially owned, directly or indirectly, or exercised control or direction over 688,132 Common Shares, representing approximately 1.2% percent of the total number of issued and outstanding Common Shares, prior to giving effect to the exercise of options to purchase Common Shares and settlement of DSUs and RSUs through Common Shares held by such directors and executive officers. Assuming the exercise of all options to purchase Common Shares and the settlement of DSUs and RSUs held by directors and executive officers of the Company, as a group they would beneficially own, directly or indirectly or exercise control or direction over 5,592,327 Common Shares, representing approximately 9.0% of the total number of issued and outstanding Common Shares. The statement as to the number of Common Shares beneficially owned, directly or indirectly, or over which control or direction is exercised by the directors and executive officers as a group is based upon information furnished by the directors and executive officers.

**Cease Trade Orders, Bankruptcies, Penalties and Sanctions**

Other than as set out below, no director or executive officer of the Company is, or within ten years prior to the date hereof has been, a director, chief executive officer or chief financial officer of any company (including the Company) that, (i) was subject to a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days, that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer; or (ii) was subject to a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days, that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer. Mr. Martin Hubbes is a director of H-Source Holdings Ltd. which became subject to a management cease trade order (“MCTO”) issued by the British Columbia Securities Commission (“BCSC”) on June 17, 2020 and cease trade orders (“CTOs”) issued by the BCSC and the Ontario Securities Commission on July 21, 2020 for failure to file certain financial statements and management’s discussion and analysis. The MCTO and CTOs

were revoked on August 19, 2020. Trading of the common shares of H-Source Holdings Ltd. on the TSX Venture Exchange, which was halted on July 22, 2020, resumed on December 18, 2020.

Other than as set out below, no director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially control of the Company, (i) is, or within ten years prior to the date hereof has been, a director or executive officer of any company (including the Company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or (ii) has, within ten years prior to the date hereof, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder.

Ms. Susan Allen served as a director of A Brand Company, Inc. (“**BrandAlliance**”), a privately-held U.S. promotions and marketing firm, from March 2016 to June 2020, at which time it completed a sale of its U.S. assets. She also served as a director of BrandAlliance, Inc., a Canadian subsidiary of BrandAlliance, whose assets were not included in the sale, from February 2018 until June 1, 2020. On June 1, 2020, BrandAlliance, Inc. filed an assignment in bankruptcy under the *Bankruptcy and Insolvency Act* (Canada) and a receiver was appointed.

No director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, has been subject to (i) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or (ii) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

### **Conflicts of Interest**

To the best of our knowledge there are no known existing or potential conflicts of interest among the Company and its directors, officers or other members of management as a result of their outside business interests except that certain of our directors and officers serve as directors and officers of other companies, and therefore it is possible that a conflict may arise between their duties to the Company and their duties as a director or officer of such other companies.

### **LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

We are from time to time involved in legal proceedings of a nature considered normal to our business. We believe that none of the litigation in which we are currently involved, or have been involved since the beginning of the most recently completed financial year, individually or in the aggregate, is material to the Company’s consolidated financial condition or results of operations.

### **INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

None of (i) the directors or executive officers of the Company, (ii) any shareholder who beneficially owns or controls or directs, directly or indirectly, more than 10% of the Common Shares of the Company, or (iii) any associate or affiliate of the persons referred to in (i) and (ii), has or has had any material interest, direct or indirect, in any transaction within the three most recently completed financial years or during the

current financial year, that has materially affected or is reasonably expected to materially affect the Company or any of its subsidiaries.

### **TRANSFER AGENT AND REGISTRAR**

The transfer agent and registrar for the Common Shares in Canada is AST Trust Company at its principal offices in Toronto, Ontario.

### **MATERIAL CONTRACTS**

There are no material contracts which the Company has entered into since the beginning of the last financial year or entered into prior to such date but which contract is still in effect.

### **INTERESTS OF EXPERTS**

PricewaterhouseCoopers LLP are the auditors to the Company at its principal office in Toronto, Ontario. PricewaterhouseCoopers LLP has advised the Company that they are independent in accordance with all relevant professional and regulatory standards.

### **AUDIT COMMITTEE**

#### **Charter of the Audit Committee**

The Board of Directors has adopted a written charter (the “**Charter of the Audit Committee**”) for the audit committee of the Company (the “**Audit Committee**”), which sets out the Audit Committee’s responsibility in reviewing the financial statements of the Company and public disclosure documents containing financial information and reporting on such review to the Board of Directors, ensuring that adequate procedures are in place for the review of the Company’s public disclosure documents that contain financial information, overseeing the work and review the independence of the external auditors and reviewing, evaluating and approving the internal control procedures that are implemented and maintained by management. A copy of the Charter of the Audit Committee is attached to this annual information form as Schedule “A”.

#### **Composition of the Audit Committee**

The members of the Company’s Audit Committee during the year ended December 31, 2020 were Mr. Nodland, Mr. Hubbes, Mr. Lucas and Ms. Allen. All members of the audit committee were independent and financially literate within the meaning of National Instrument 52-110 *Audit Committees* (“**NI 52-110**”). The Audit Committee met five times during the year ended December 31, 2020. All members were present at all five meetings.

#### **Relevant Education and Experience**

Each of the Audit Committee members has an understanding of the accounting principles used to prepare financial statements and varied experience as to the general application of such accounting principles, as well as an understanding of the internal controls and procedures necessary for financial reporting. All members of the Audit Committee also have experience preparing, auditing, analyzing or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Company’s financial statements, or have experience actively supervising one or more individuals engaged in such activities, See “Directors and Officers — Biographies”.

## Pre-Approval Policies and Procedures

The Charter of the Audit Committee sets out procedures regarding the provision of non-audit services by the Company's external auditor. This policy encourages consideration of whether the provision of services other than audit services is compatible with maintaining the auditor's independence and requires Audit Committee pre-approval of permitted non-audit and non-audit-related services.

## External Auditor Service Fees

PricewaterhouseCoopers LLP, Chartered Accountants, were first appointed as auditors of the Company on May 20, 2011. During the years ended December 31, 2020 and 2019, we paid the following fees to PricewaterhouseCoopers LLP:

Type of Work	2020 Fees (\$) <sup>(1)</sup>	2019 Fees (\$) <sup>(1)</sup>
Audit fees	\$103,916	\$83,321
Audit-related fees	\$11,951	\$13,855
Tax fees	-	-
All other fees	-	-
<b>Summary</b>	<b>\$115,867</b>	<b>\$97,176</b>

**Notes:**

(1) Fees were paid in Canadian dollars and have been converted to U.S. dollars at the Annual Average Exchange Rate of \$1.00 = C\$1.34 and \$1.00 = C\$1.33 for 2020 and 2019, respectively.

### *Audit Fees*

"Audit Fees" include fees necessary to perform the annual audit of the consolidated financial statements.

### *Audit-Related Fees*

"Audit-Related Fees" include fees for assurance and related services by the external auditor that are reasonably related to the performance of the audit or review of the Company's financial statements other than those included in Audit Fees.

### *Tax Fees*

"Tax Fees" include fees for all tax services other than those included in "Audit Fees" and "Audit-Related Fees". This category includes fees for tax compliance, tax advice and tax planning.

### *All Other Fees*

"All Other Fees" include fees for products and services provided by the auditor other than those included above.

## ADDITIONAL INFORMATION

Additional information relating to the Company can be found on SEDAR at [www.sedar.com](http://www.sedar.com) or on the Company's website at [www.ecosynthetix.com](http://www.ecosynthetix.com). Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans is contained in the most recent management information circular of the Company which will be available on SEDAR at [www.sedar.com](http://www.sedar.com). Additional financial information is

provided in the Company's audited consolidated financial statements and management's discussion and analysis for the financial year ended December 31, 2020.

**SCHEDULE “A”  
AUDIT COMMITTEE CHARTER**

**ECOSYNTHETIX INC.**

**CHARTER OF THE AUDIT COMMITTEE  
OF THE BOARD OF DIRECTORS**

**1. PURPOSE**

The audit committee (the “**Committee**”) is a committee of the board of directors (the “**Board**”) of EcoSynthetix Inc. (the “**Corporation**”). The primary purpose of the Committee is to assist the Board in fulfilling its oversight responsibilities relating to financial accounting and reporting processes and internal controls for the Corporation.

**2. COMPOSITION AND MEETINGS**

The Committee shall be composed of three or more directors, as determined by the Board, each of whom shall be “independent” and “financially literate”, as further discussed below, within the meaning of National Instrument 52-110 - *Audit Committees*, as may be amended from time to time.

The members of the Committee shall be appointed by the Board at the annual organizational meeting of the Board, and serve at the pleasure of the Board for one year or until their successors are duly appointed. Unless a chair of the Committee (the “**Chair**”) is appointed by the Board, the members of the Committee may designate a Chair by a majority vote of the full membership of the Committee. The position description and responsibilities of the Chair are set out in Schedule “A” attached hereto.

The Committee shall meet at least quarterly, or more frequently as circumstances dictate or as may be required by applicable legal or stock exchange requirements. The Committee shall meet within 45 days following the end of each of the first three financial quarters to review and discuss the unaudited financial results for the preceding quarter and the related management’s discussion and analysis (“**MD&A**”) and shall meet within 90 days following the end of the fiscal year end to review and discuss the audited financial results for the year and related MD&A prior to their publishing.

The Committee may ask members of management of the Corporation or others to attend meetings or to provide information as necessary.

Quorum for the transaction of business at any meeting of the Committee shall be a majority of the number of members of the Committee or such greater number as the Committee shall by resolution determine.

Meetings of the Committee shall be held from time to time as the Committee or the Chair shall determine upon 48 hour notice to each of its members. The notice period may be waived by unanimous resolution of the Committee. Each of the Chair of the Committee, members of the Committee, Chair of the Board, independent auditors, Chief Executive Officer, Chief Financial Officer or Secretary shall be entitled to request that the Chair of the Audit Committee call a meeting which shall be held within 48 hours of receipt of such request.

The Committee shall keep minutes of its meetings which shall be submitted to the Board. The Committee may, from time to time, appoint any person who need not be a member, to act as a secretary at any meeting.

Any matters to be determined by the Committee shall be decided by a majority of votes cast at a meeting of the Committee called for such purpose. Actions of the Committee may be taken by an instrument or instruments in writing signed by all of the members of the Committee, and such actions shall be effective as though they had been decided by a majority of votes cast at a meeting of the Committee called for such purpose. The Committee shall report its determinations to the Board at the next scheduled meeting of the Board, or earlier as the Committee deems necessary. All decisions or recommendations of the Committee shall require the approval of the Board prior to implementation.

Each member of the Committee shall be “independent” and “financially literate”. An “independent” director is a director who has no direct or indirect material relationship with the Corporation. A “material relationship” is a relationship which, in the view of the Board, could be reasonably expected to interfere with the exercise of the director’s independent judgement or a relationship deemed to be a material relationship pursuant to Sections 1.4 and 1.5 of National Instrument 52-110 – *Audit Committees*, as set out in Schedule “B” attached hereto. A “financially literate” director is a director who has the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the accounting issues that can be reasonably expected to be raised in the Corporation’s financial statements.

The Committee and its membership shall meet all applicable legal, regulatory and listing requirements, including, without limitation, those of the Ontario Securities Commission (“OSC”), the Toronto Stock Exchange, the *Business Corporations Act* (Ontario) and all other applicable securities regulatory authorities.

### **3. RESPONSIBILITIES AND DUTIES**

The responsibilities and duties of the Committee shall be the following:

#### **Financial Accounting and Reporting Process and Internal Controls**

- a. the Committee shall review the annual audited and interim financial statements and related management’s discussion and analysis and annual and interim earnings press releases before the Corporation publicly discloses this information to satisfy itself that the financial statements are presented in accordance with applicable accounting principles and report thereon and recommend to the Board whether or not same should be approved and filed with the appropriate regulatory authorities. With respect to the annual audited financial statements, the Committee shall discuss significant issues regarding accounting principles, practices, and judgments of management with management and the external auditors as and when the Committee deems it appropriate to do so. The Committee shall satisfy itself that the information contained in the annual audited financial statements is not erroneous, misleading or incomplete and that the audit function has been effectively carried out.
  - (1) The Committee shall review significant and material financial documents and support related thereto to be released by the Corporation and other documents as outlined herein:
    - (a) Review analyses prepared by management and/or the independent auditor setting forth significant financial reporting issues and judgments made in connection with the preparation of the financial statements, including analyses of the effects of alternative GAAP and IFRS methods on the financial statements.

- (b) Review the effect of regulatory and accounting initiatives, as well as off balance sheet structures, on the financial statements of the Corporation.
  - (c) Ensure that adequate procedures are in place for the review of the Corporation's public disclosure of financial information extracted or derived from the issuer's financial statements, as well as review any financial information, non-GAAP metrics contained in the management's discussion and analysis and basis of presentation and earnings guidance provided to analysts and rating agencies, and periodically assess the adequacy of those procedures.
  - (d) Review policies and procedures with respect to directors' and officers' expense accounts and management perquisites and benefits, including their use of corporate assets and expenditures related to executive travel and entertainment, and review the results of the procedures performed in these areas by the independent auditor, based on terms of reference agreed upon by the independent auditor and the Committee.
  - (e) Review expenses of the chair of the Board and of the Chief Executive Officer annually.
- b. the Committee shall review any internal control reports prepared by management and the evaluation of such report by the external auditors, together with management's response.
  - c. the Committee shall be satisfied that adequate procedures are in place for the review of the Corporation's public disclosure of financial information extracted or derived from the Corporation's financial statements, MD&A and annual and interim earnings press releases, and periodically assess the adequacy of these procedures.
  - d. the Committee shall review any press releases containing disclosure regarding financial information that are required to be reviewed by the Committee under any applicable laws or by this Charter before the Corporation publicly discloses this information.
  - e. the Committee shall meet no less than annually with the external auditors and the Chief Financial Officer or, in the absence of a Chief Financial Officer, with the officer of the Corporation in charge of financial matters, to review accounting practices, internal controls and such other matters as the Committee, Chief Financial Officer or, in the absence of a Chief Financial Officer, the officer of the Corporation in charge of financial matters, deem appropriate.
  - f. the Committee shall inquire of management and the external auditors about significant risks or exposures, both internal and external, to which the Corporation may be subject, and assess the steps management has taken to minimize such risks. At least annually, the Committee shall consult with the external auditor, out of the presence of management, about significant risks or exposures, internal controls and other steps that management has taken to control such risks, and the fullness and accuracy of the organization's financial statements. Particular emphasis should be given to the adequacy of internal controls to expose any payments, transactions, or procedures that might be deemed illegal or otherwise improper.
  - g. the Committee shall review the post-audit or management letters containing the recommendations of the external auditors and management's response and subsequent follow-up to any identified weaknesses.

- h. the Committee shall ensure that there is an appropriate standard of corporate conduct including, if necessary, adopting and monitoring a corporate code of ethics for senior financial personnel and all employees.
- i. the Committee shall follow procedures established as set out in Schedule “C” attached hereto, for:
  - i. the receipt and treatment of complaints received by the Corporation regarding accounting, internal accounting controls or auditing matters; and
  - ii. the confidential, anonymous submission by employees of the Corporation of concerns regarding questionable accounting or auditing matters.
- j. the Committee shall provide oversight to related party transactions entered into by the Corporation.
- k. the Committee shall establish the budget process, which shall include the setting of spending limits and authorizations, as well as periodic reports from the Chief Financial Officer comparing actual spending to the budget.
- l. the Committee shall have the authority to adopt such policies and procedures as it deems appropriate to operate effectively.

#### **External Auditors**

- a. the Committee shall recommend to the Board the external auditors to be nominated for the purpose of preparing or issuing an auditors’ report or performing other audit, review or attestation services for the Corporation, shall review and consider their independence and effectiveness and shall set the compensation for the external auditors, provide oversight of the external auditors and ensure that the external auditors report directly to the Committee;
- b. the Committee shall be directly responsible for overseeing the work of the external auditors, including the resolution of disagreements between management and the external auditors regarding financial reporting;
- c. Review and approve requests for any non-audit services to be performed by the external auditor and be advised of any other study undertaken at the request of management that is beyond the scope of the audit engagement letter and related fees. The pre-approval of the Committee shall be required as further set out in Schedule “D” prior to the undertaking of any non-audit services not prohibited by law to be provided by the external auditors in accordance with this Charter;
- d. the Committee shall monitor and assess the relationship between management and the external auditors and monitor, support and assure the independence and objectivity of the external auditors, including reviewing any management letters or other reports issued and discussing material differences of opinion. The Committee shall review and discuss, on an annual basis, with the external auditor all significant relationships they have with the Corporation to determine their independence and report to the Board of Directors.
- e. the Committee shall review the external auditors’ audit plan, including the scope, procedures and timing of the audit.

- f. the Committee shall review the results of the annual audit with the external auditors, including matters related to the conduct of the audit.
- g. In consultation with the external auditor, review the integrity of the organization's financial and accounting controls and reporting processes, both internal and external. The Committee shall obtain timely reports from the external auditors describing critical accounting policies and practices, alternative treatments of information within selected accounting principles that were discussed with management, their ramifications, and the external auditors' preferred treatment and material written communications between the Corporation and the external auditors review. The Committee shall consider the external auditor's judgments about the quality and appropriateness, not just the acceptability, of the Corporation's accounting principles and financial disclosure practices, as applied in its financial reporting, particularly about the degree of aggressiveness or conservatism of its accounting principles and underlying estimates and whether those principles are common practices or are minority practices. Consider and approve, if appropriate, major changes to the Corporation's accounting principles and practices as suggested by management with the concurrence of the external auditor and ensure that the accountants' reasoning is described in determining the appropriateness of changes in accounting principles and disclosure.
- h. the Committee shall review fees paid by the Corporation to the external auditors and other professionals in respect of audit and non-audit services on an annual basis. The Committee shall ensure that both the audit and non-audit fees are disclosed to shareholders by category and in compliance with applicable laws.
- i. the Committee shall review and approve the Corporation's hiring policies regarding partners, employees and former partners and employees of the present and former external auditors of the Corporation.
- j. review the performance of the external auditor and approve any proposed discharge and replacement when circumstances warrant. Consider with management and the external auditor the rationale for employing accounting/auditing firms other than the principal independent auditor. Present the results to the Board.

#### **Other Responsibilities**

- a. prepare or approve the disclosure regarding the Audit Committee for inclusion in the Corporation's Management Information Circular and Annual Information Form, including information on the Committee's composition and responsibilities and how they were discharged.
- b. the Committee shall perform any other activities consistent with this Charter and governing law, as the Committee or the Board deems necessary or appropriate.
- c. the Committee shall review and assess the adequacy of this Charter annually and submit any proposed revisions to the Board for approval.

#### **4. REPORTING**

The Committee is responsible for reviewing and submitting to the Board, as a whole, recommendations concerning the Corporation's financial affairs, code of ethics, whistleblower and corporate disclosure, confidentiality and insider trading policies.

## **5. AUTHORITY**

The Committee shall have the authority to:

- a. engage independent counsel and other advisors including accounting or other consultants or experts as it determines necessary to carry out its duties;
- b. set and pay the compensation for advisors employed by the Committee;
- c. communicate directly with the internal and external auditors;
- d. access, on an unrestricted basis, the books and records of the Corporation; and
- e. conduct any investigation appropriate to its responsibilities, and it may request the external auditors, as well as any officer of the Corporation, or outside counsel for the Corporation, to attend a meeting of the Committee or to meet with any members of, or advisors to, the Committee.
- f. the Committee shall have the authority to engage the external auditors to perform a review of the interim financial statements.

Dated: August 10, 2011, as amended March 19, 2015 and March 4, 2019.

## Schedule "A"

### ECOSYNTHETIX INC.

#### Position Description for the Chair of the Audit Committee

##### **I. Purpose**

The Chair of the Audit Committee of the Board shall be an independent director who is elected by the Board to act as the leader of the Committee in assisting the Board in fulfilling its financial reporting and control responsibilities to the shareholders of the Corporation.

##### **II. Who may be Chair**

The Chair will be selected from amongst the independent directors of the Corporation who have a sufficient level of financial sophistication and experience in dealing with financial issues to ensure the leadership and effectiveness of the Committee.

The Chair will be selected annually at the first meeting of the Board following the annual general meeting of shareholders.

##### **III. Responsibilities**

The following are the primary responsibilities of the Chair:

- chairing all meetings of the Committee in a manner that promotes meaningful discussion;
- ensuring adherence to the Committee's Charter and that the adequacy of the Committee's Charter is reviewed annually;
- providing leadership to the Committee to enhance the Committee's effectiveness, including:
  - providing the information to the Board relative to the Committee's issues and initiatives and reviewing and submitting to the Board an appraisal of the Corporation's independent auditors and internal auditing functions;
  - ensuring that the Committee works as a cohesive team with open communication, as well as ensuring open lines of communication among the independent auditors, financial and senior management and the Board of Directors for financial and control matters;
  - ensuring that the resources available to the Committee are adequate to support its work and to resolve issues in a timely manner;
  - ensuring that the Committee serves as an independent and objective party to monitor the Corporation's financial reporting process and internal control systems, as well as to monitor the relationship between the Corporation and the independent auditors to ensure independence;
  - ensuring that procedures are in place to assess the audit activities of the independent auditors and the internal audit functions;

- ensuring that procedures are in place to review the Corporation's public disclosure of financial information and assess the adequacy of such procedures periodically, in consultation with the Disclosure Committee;
  - ensuring that clear hiring policies are put in place for partners and employees of the auditors; and
  - ensuring that procedures are in place for dealing with complaints received by the Corporation regarding accounting, internal controls and auditing matters, and for employees to submit confidential anonymous concerns regarding questionable accounting or auditing matters.
- managing the Committee, including:
  - adopting procedures to ensure that the Committee can conduct its work effectively and efficiently, including committee structure and composition, scheduling, and management of meetings;
  - preparing the agenda of the Committee meetings and ensuring pre-meeting material is distributed in a timely manner and is appropriate in terms of relevance, efficient format and detail;
  - ensuring meetings are appropriate in terms of frequency, length and content;
  - obtaining and reviewing with the Committee an annual report from the independent auditors, and arranging meetings with the auditors and financial management to review the scope of the proposed audit for the current year, its staffing and the audit procedures to be used;
  - overseeing the Committee's participation in the Corporation's accounting and financial reporting process and the audits of its financial statements;
  - ensuring that the auditor's report directly to the Committee, as representatives of the Corporation's shareholders; and
  - annually reviewing with the Committee its own performance.
- Ensuring the establishment of a budget process, which shall include the setting of spending limits and authorizations and periodical reports from the Chief Financial Officer of actual spending as compared to the budget.

## Schedule “B”

### ECOSYNTHETIX INC.

#### National Instrument 52-110 *Audit Committees* (“NI 52-110”)

##### Section 1.4 - Meaning of Independence

- (1) An audit committee member is independent if he or she has no direct or indirect material relationship with the issuer.
- (2) For the purposes of subsection (1), a “material relationship” is a relationship which could, in the view of the issuer’s board of directors, be reasonably expected to interfere with the exercise of a member’s independent judgment.
- (3) Despite subsection (2), the following individuals are considered to have a material relationship with an issuer:
  - (a) an individual who is, or has been within the last three years, an employee or executive officer of the issuer;
  - (b) an individual whose immediate family member is, or has been within the last three years, an executive officer of the issuer;
  - (c) an individual who:
    - (i) is a partner of a firm that is the issuer’s internal or external auditor,
    - (ii) is an employee of that firm, or
    - (iii) was within the last three years a partner or employee of that firm and personally worked on the issuer's audit within that time;
  - (d) an individual whose spouse, minor child or stepchild, or child or stepchild who shares a home with the individual:
    - (i) is a partner of a firm that is the issuer’s internal or external auditor,
    - (ii) is an employee of that firm and participates in its audit, assurance or tax compliance (but not tax planning) practice, or
    - (iii) was within the last three years a partner or employee of that firm and personally worked on the issuer’s audit within that time;
  - (e) an individual who, or whose immediate family member, is or has been within the last three years, an executive officer of an entity if any of the issuer’s current executive officers serves or served at that same time on the entity’s compensation committee; and
  - (f) an individual who received, or whose immediate family member who is employed as an executive officer of the issuer received, more than \$75,000 in direct compensation from the issuer during any 12 month period within the last three years.

- (4) Despite subsection (3), an individual will not be considered to have a material relationship with the issuer solely because
  - (a) he or she had a relationship identified in subsection (3) if that relationship ended before March 30, 2004; or
  - (b) he or she had a relationship identified in subsection (3) by virtue of subsection (8) if that relationship ended before June 30, 2005.
- (5) For the purposes of clauses (3)(c) and (3)(d), a partner does not include a fixed income partner whose interest in the firm that is the internal or external auditor is limited to the receipt of fixed amounts of compensation (including deferred compensation) for prior service with that firm if the compensation is not contingent in any way on continued service.
- (6) For the purposes of clause (3)(f), direct compensation does not include:
  - (a) remuneration for acting as a member of the board of directors or of any board committee of the issuer, and
  - (b) the receipt of fixed amounts of compensation under a retirement plan (including deferred compensation) for prior service with the issuer if the compensation is not contingent in any way on continued service.
- (7) Despite subsection (3), an individual will not be considered to have a material relationship with the issuer solely because the individual or his or her immediate family member
  - (a) has previously acted as an interim chief executive officer of the issuer, or
  - (b) acts, or has previously acted, as a chair or vice-chair of the board of directors or of any board committee of the issuer on a part-time basis.
- (8) For the purpose of section 1.4, an issuer includes a subsidiary entity of the issuer and a parent of the issuer.

### **Section 1.5 - Additional Independence Requirements for Audit Committee Members**

- (1) Despite any determination made under section 1.4 of NI 52-110, an individual who
  - (a) accepts, directly or indirectly, any consulting, advisory or other compensatory fee from the issuer or any subsidiary entity of the issuer, other than as remuneration for acting in his or her capacity as a member of the board of directors or any board committee, or as a part-time chair or vice-chair of the board or any board committee; or
  - (b) is an affiliated entity of the issuer or any of its subsidiary entities,is considered to have a material relationship with the issuer.
- (2) For the purposes of subsection (1), the indirect acceptance by an individual of any consulting, advisory or other compensatory fee includes acceptance of a fee by

- (a) an individual's spouse, minor child or stepchild, or a child or stepchild who shares the individual's home; or
  - (b) an entity in which such individual is a partner, member, an officer such as a managing director occupying a comparable position or executive officer, or occupies a similar position (except limited partners, non-managing members and those occupying similar positions who, in each case, have no active role in providing services to the entity) and which provides accounting, consulting, legal, investment banking or financial advisory services to the issuer or any subsidiary entity of the issuer.
- (3) For the purposes of subsection (1), compensatory fees do not include the receipt of fixed amounts of compensation under a retirement plan (including deferred compensation) for prior service with the issuer if the compensation is not contingent in any way on continued service.

## **Schedule “C”**

### **ECOSYNTHETIX INC.**

#### **Procedures for Receipt of Complaints and Submissions Relating to Accounting Matters**

The Audit Committee has adopted the following procedures:

- a) Management of the Corporation shall promptly forward to the Audit Committee any complaints that it has received regarding financial statement disclosures, accounting, internal accounting controls or auditing matters.
- b) Any employee of the Corporation may submit, on a confidential or anonymous basis if the employee so desires, any concerns regarding financial statement disclosures, accounting, internal accounting controls, auditing matters or violations of the Corporation’s Code of Business Conduct and Ethics. All such concerns shall be set forth in writing and forwarded in a sealed envelope to the Chair of the Audit Committee labeled with a legend such as “To be opened by the Audit Committee only, being submitted pursuant to the Whistleblower Policy adopted by the Corporation.” If an employee would like to discuss any matter with the Audit Committee, the employee should indicate this in the submission and include a telephone number at which he or she might be contacted if the Audit Committee deems it appropriate. If management receives any such envelope, it shall be forwarded promptly and unopened to the Chair of the Audit Committee. The Chair of the Audit Committee can be reached as follows:

PRIVATE AND CONFIDENTIAL  
Attn: Chair of the Audit Committee  
EcoSynthetix Inc.  
3365 Mainway  
Burlington, Ontario L7M 1A6

Alternatively, the Audit Committee Chair can be directly contacted at [sallen@ecosynthetix.com](mailto:sallen@ecosynthetix.com).

- c) Following the receipt of any complaints submitted hereunder, the Audit Committee will investigate each matter so reported and take corrective and disciplinary actions where appropriate, which may include, alone or in combination, a warning or letter of reprimand, demotion, loss of merit increase, bonus or stock options, suspension without pay or termination of employment. The Audit Committee shall notify the Board and, if appropriate, the Chief Executive Officer of such investigations.
- d) During investigations, the Audit Committee shall endeavour to act in a prudent and reasonable manner, with minimal disruption to the business and affairs of the Corporation and with sensitivity to the personal circumstances of the individual being investigated.
- e) In circumstances of impropriety alleged against the Board, as a whole or any member thereof, the Chief Executive Officer shall be responsible to investigate such allegations and the Chief Executive Officer shall report his or her findings to the Board.

- f) The Audit Committee may enlist employees of the Corporation and/or outside legal, accounting or other advisors, as appropriate, to conduct any investigation of complaints regarding financial statement disclosures, accounting, internal accounting controls, auditing matters or violations of the Corporation's Code of Business Conduct and Ethics. In conducting any investigation, the Audit Committee shall use reasonable efforts to protect the confidentiality and anonymity of the complainant.
- g) The Audit Committee shall retain as a part of the records of the Audit Committee any such complaints or concerns for a period of no less than seven (7) years.

## **Schedule “D”**

### **ECOSYNTHETIX INC.**

#### **Procedures for Approval of Non-Audit Services**

1. The Corporation’s external auditors shall be prohibited from performing for the Corporation the following categories of non-audit services:
  - (1) bookkeeping or other services related to the Corporation’s accounting records or financial statements;
  - (2) appraisal or valuation services, fairness opinion or contributions-in-kind reports;
  - (3) actuarial services;
  - (4) internal audit outsourcing services;
  - (5) management functions;
  - (6) human resources;
  - (7) broker or dealer, investment adviser or investment banking services;
  - (8) legal services; and
  - (9) any other service that the Canadian Public Accountability Board or International Accounting Standards Board or other analogous board which may govern the Corporation’s accounting standards, from time to time determines is impermissible.
2. In the event that the Corporation wishes to retain the services of the Corporation’s external auditors for tax compliance, tax advice or tax planning, the Chief Financial Officer of the Corporation shall consult with the Chair of the Committee, who shall have the authority to approve or disapprove on behalf of the Committee, such non-audit services. All other non-audit services shall be approved or disapproved by the Committee as a whole.
3. The Chief Financial Officer of the Corporation shall maintain a record of non-audit services approved by the Chair of the Committee or the Committee for each fiscal year and provide a report to the Committee no less frequently than on a quarterly basis.