# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following management's discussion and analysis ("MD&A") dated November 4, 2013 is intended to assist the readers in understanding EcoSynthetix Inc. ("EcoSynthetix" or the "Company"), its business environment, strategies and performance and risk factors. It should be read in conjunction with the audited annual consolidated financial statements and MD&A for the fiscal year ended December 31, 2012. Financial data has been prepared in conformity with International Financial Reporting Standards ("IFRS").

The Company directly or indirectly owns a majority of the equity interest in each of EcoSynthetix Ltd. ("EcoSynthetix U.S."), EcoSynthetix B.V., EcoSynthetix Technologies Inc. and EcoSynthetix Corporation. The Company, together with its consolidated subsidiaries, is referred to as the "Company", "we", "us", or "our". Our functional currency and reporting currency is the U.S. dollar. Unless otherwise indicated, all references to "\$" and "dollars" in this discussion and analysis mean U.S. dollars.

Certain measures used in this MD&A do not have any standardized meaning under IFRS. When used, these measures are defined in such terms as to allow the reconciliation to the closest IFRS measure. It is unlikely that these measures could be compared to similar measures presented by other companies. See "IFRS and non-IFRS Measures".

Forward-looking statements are included in this MD&A. See "Forward-Looking Statements" below for a discussion of risks, uncertainties and assumptions relating to these statements. For a description of the risks relating to the Company, refer to the "Risk Factors" section of this MD&A and the "Risk Factors" section of the Company's Annual Information Form for the fiscal year ended December 31, 2012.

# **Forward-looking Statements**

Certain statements contained in this MD&A 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, requirements for additional capital, production costs, future demand for latex-based products, business prospects and opportunities. 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 market products successfully to our customers; 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; and that we do not and will not infringe third party intellectual property rights. Some of our assumptions are based upon internal estimates and analyses 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 information include, among other things: 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; 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 inability to expand technology; the impact of issuance of additional equity securities on the trading price of the Common Shares; 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 the Company's Annual Information Form for the fiscal year ended December 31, 2012. Such factors are not intended to represent a complete list of the factors that could affect us. These factors should be considered carefully and prospective investors 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 in this MD&A 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 in this MD&A is made as of November 4, 2013 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, potential investors should not place undue reliance on forward-looking information.

## **IFRS and Non-IFRS Measures**

This MD&A makes reference to certain non-IFRS measures. These non-IFRS measures are not recognized measures under IFRS, do not have a standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other companies. Rather, these measures are provided as additional information to complement those IFRS measures by providing a further understanding of results of operations of the Company from management's perspective. Accordingly, they should not be considered in isolation or as a substitute for analysis of the financial information of the Company reported under IFRS. We use non-IFRS measures such as Adjusted EBITDA to provide investors with a supplemental measure of operating performance and thus highlight trends in our core business that may not otherwise be apparent when relying solely on IFRS financial measures. We also believe that securities analysts, investors and other interested parties frequently use non-IFRS measures in the evaluation of issuers. Our management also use non-IFRS measures in order to facilitate operating performance comparisons from period to period, prepare annual operating budgets and assess its ability to meet its capital expenditure and working capital requirements. Adjusted EBITDA is defined as consolidated net income (loss) before interest, income taxes, depreciation, amortization, accretion, other non-cash charges deducted in determining consolidated net income (loss), including the movement of unrealized gains and losses on the Company's redeemable preferred shares and warrants that were designated as financial liabilities prior to the initial public offering and share based compensation expense.

# Overview

We are a renewable chemicals company specializing in biomaterials. Biomaterials are commonly used as inputs in industrial manufacturing for a wide range of end products. We have commercial bio-based products that have equal or superior performance and significant cost advantages compared to currently available petroleum-based products. Our strategy is to commercialize a broad range of bio-based polymer and monomer products across a wide range of industries. We have developed processes that leverage "green" technology to produce bio-based materials from natural feedstock, such as corn, tapioca and potato starch 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 that has been fully scaled and validated;

and (ii) a bio-based sugar macromer technology that has been validated on a pilot scale and is being developed for the pre-commercialization plant stage. Our two bio-based technology platforms have generated three product families to date, namely ECOSPHERE BIOLATEX polymers, ECOMER and ECOSTIX. Our lead product, ECOSPHERE BIOLATEX binders, has achieved commercialization in the coated paper, paperboard and personal care industries. While our technology platform offers a significantly reduced carbon footprint, we market our products to customers on the basis of reduced cost, stable pricing and superior product performance.

# **Factors Affecting the Results of Operation**

#### Commercialization

A major source of our revenue has resulted from the conversion of customer evaluations of our products into commercial sales. Generally, the adoption of our products by customers is evaluated in three stages prior to acceptance of the product on a commercial basis: (i) laboratory evaluation; (ii) pilot scale production testing; and (iii) mill trials representing full scale production.

We are currently operating on a commercial scale in the coated paper and paperboard industry. Manufacturers generating greater than 60% in SB latex demand in the global paper and paperboard market are either evaluating or commercial with our ECOSPHERE BIOLATEX binders. Due to the low capital expenditure required to switch to our products, reduced cost, improved performance and a significantly reduced carbon footprint, our experience suggests volume demand can be relatively steady post-conversion, which creates the potential for continuous recurring revenue. Despite certain customer mills having unique material handling requirements, we have the capability of rapidly designing and delivering state-of-the art dry material handling solutions for our customers resulting in a seamless integration of our ECOSPHERE BIOLATEX binders.

Our performance will be influenced by our success in converting prospects from the mill trial phase into full commercial clients. The mill 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.

Since entering commercial production, we have achieved significant sales growth. Our lead product, ECOSPHERE BIOLATEX binders, is used commercially by 6 of the global top 20 manufacturers in the coated paper and paperboard industry and an additional 9 of the global top 20 manufacturers are currently in the process of evaluating the Company's products. Given our past record of successfully converting a high number of evaluations into commercial clients, we expect that the conversion of current and future product evaluations into recurring commercial sales will be a continuous source of growth for us.

Our objective is to achieve significant growth across multiple industries through continuous innovation of new biobased polymer and monomer products using widely available raw materials and our scalable production techniques. In addition, we will continue to expand the functionalities and applications of our existing products, which are readily applicable across numerous markets where petroleum-based polymers and monomers currently dominate.

#### **Net Sales**

Our sales are primarily derived from the sale of our products to our customers. Net sales are measured based on the price specified in the sales contract net of any discounts and estimated returns at the time of sale. Sales are recorded when significant risks and rewards of ownership have passed on to the buyer, which generally occurs at the time of shipment.

# Cost of sales and gross profit

Our gross profit is derived from our net sales less our cost of sales. Cost of sales includes raw material costs, contract manufacturing costs, freight costs and depreciation related to manufacturing equipment. Direct materials consist of the costs of cornstarch feedstock and process chemicals. Cost of sales is mainly affected by the cost of cornstarch and contract manufacturing costs. Cornstarch is the most significant raw material cost.

# Selling, general and administrative

Selling, general and administrative expense primarily relates to personnel costs, including salaries & benefits, share-based compensation, recruitment and training costs, professional fees, marketing costs, corporate insurance costs, occupancy-related costs, depreciation on property, plant and equipment not utilized in our production process, amortization of intangible assets, and travel expenses.

# Research and development

Expenditures during the research phase are expensed as incurred. Expenditures during the development phase are expensed as incurred, unless they meet certain capitalization criteria. No development costs have been capitalized to date.

Our research and development expenses consist of expenses incurred to develop and test our products, and include personnel and related costs, share-based compensation, consultants, facility costs, supplies and other associated product development expenses. These costs are partially offset by government grants recorded related to such expenditures. R&D is a key focus in order to enhance our bio-based material product portfolio and expand into new applications and markets. We expect our research and development expense to grow as we invest in product development and innovation of our EcoSphere® biolatex® binders, as well as EcoMer and EcoStix.

# Other Factors Affecting the Results of Operations and Financial Conditions

Our financial condition and results of operations are influenced by a variety of factors, including:

- Optimizing the formulation of existing products to allow higher substitution rates by current and new
  customers and the ability to effectively develop products for new markets which could be a significant
  source of revenue growth in the future.
- Pricing of petroleum substitutes for our products.
- Feedstock, other input and production costs. Cost of sales is mainly affected by the cost of cornstarch
  and contract manufacturing costs. Cornstarch is generally the most significant raw material cost. For
  the nine months ended September 30, 2013 we experienced an increase in corn starch costs which
  were partly offset by lower contract manufacturing costs compared to the same period in fiscal 2012.

# **Results of operations**

The following is a summary of our results of operations for the three and nine months ended September 30, 2013 and 2012:

	Three mon	Chang	je	
	September 30, 2013	September 30, 2012	\$	%
Net sales	5,416,621	5,915,571	(498,950)	-8%
Gross profit	836,873	1,280,527	(443,654)	-35%
Loss from operations	(4,051,221)	(2,410,005)	(1,641,216)	68%
Net loss	(3,960,546)	(2,324,278)	(1,636,268)	70%
Weighted average number of shares outstanding	55,764,273	55,324,997	439,276	1%
Basic and diluted loss per share	(0.07)	(0.04)	(0.03)	86%
Adjusted EBITDA	(3,186,884)	(1,804,122)	(1,382,762)	77%

	Nine mont	Chang	je	
	September 30, 2013	September 30, 2012	\$	%
Net sales	17,070,777	13,628,684	3,442,093	25%
Gross profit	2,713,481	2,665,105	48,376	2%
Loss from operations	(11,398,627)	(8,311,381)	(3,087,246)	37%
Net loss	(11,128,724)	(8,036,378)	(3,092,346)	38%
Weighted average number of shares outstanding	56,026,829	55,273,916	752,913	1%
Basic and diluted loss per share	(0.20)	(0.15)	(0.05)	32%
Adjusted EBITDA	(9,169,707)	(6,786,462)	(2,383,245)	35%

Net Sales – Net sales for the three months ended September 30, 2013 were \$5.4 million compared to \$5.9 million in the same period of fiscal 2012, a decrease of \$0.5 million or 8%. The decrease was due to lower sales volume in Asia Pacific of \$2.0 million and EMEA of \$0.1 million, partly offset by higher sales volume in North America and Latin America of \$1.4 million and \$0.2 million, respectively.

Net sales for the nine months ended September 30, 2013 were \$17.1 million compared to \$13.6 million in the same period of fiscal 2012, an increase of \$3.4 million or 25%. Sales increased principally due to a \$3.4 million sales increase in North America, a \$0.9 million sales increase in EMEA and a \$0.5 million sales increase in Latin America. These increases were partly offset by a \$1.4M decrease in sales in Asia Pacific.

Five new customers were commercialized on a YTD basis with three customers commercialized in the first quarter and two customers commercialized in the second quarter of fiscal 2013. Eight new customers have been commercialized since September 30, 2012 which represents 16% of net sales during the three and nine months ended September 30, 2013. These eight customers accounted for a 14% and 20% increase in sales during the three and nine months ended September 30, 2013 compared to the same periods last year, respectively. Sales to existing customers accounted for 84% of net sales during the three and nine months ended September 30, 2013.

Sales to existing customers represented a 22% decrease and a 5% increase during the three and nine months ended September 30, 2013 compared to the same periods last year, respectively. The decrease in sales to existing customers during the third quarter of fiscal 2013 was a result of lower sales in Asia Pacific. Sales decreased in Asia Pacific due to the timing of inventory purchases by a distributor in this region in addition to unfavorable market dynamics caused by the global over-supply of butadiene and the related drop in butadiene and SB latex prices.

Gross profit – Gross profit for the three months ended September 30, 2013 was \$0.8 million compared to \$1.3 million in the same period of fiscal 2012, a decrease of \$0.4 million or 35%. Gross margin as a percentage of sales decreased from 21.6% to 15.5% during the same period. The decrease in gross profit was principally due to higher manufacturing production costs, lower sales volume, increased corn starch costs and lower selling prices. Gross profit adjusted for manufacturing depreciation as a percentage of sales decreased from 26.2% for the three months ended September 30, 2012 to 20.4% for the three months ended September 30, 2013. The decrease was principally due to higher manufacturing production costs, increased corn starch costs and lower selling prices.

Gross profit for the nine months ended September 30, 2013 remained at \$2.7 million compared to the same period of fiscal 2012. Increases in sales volume were offset by increased corn starch costs, lower selling prices, higher manufacturing production costs and increased manufacturing depreciation. Gross profit as a % of sales decreased from 19.6% to 15.9% during this same period. The decrease in gross profit as a % of sales was principally due to lower selling prices and higher manufacturing production costs. Gross profit adjusted for manufacturing depreciation as a % of sales decreased from 24.7% for the nine months ended September 30, 2012 to 20.8% for the nine months ended September 30, 2013. The decrease was principally due to increased corn starch costs, lower selling prices and higher manufacturing production costs.

# Operating Expenses

The following table sets forth the breakdown of our operating expenses by category during the three and nine months ended September 30, 2013:

	Three months ended	Change	9	
	2013	2012	\$	%
Selling, general and administrative <sup>1</sup>	2,805,081	2,551,083	253,998	10%
Research and development	1,438,023	832,441	605,582	73%
Share-based compensation	477,000	285,000	192,000	67%
Depreciation and amortization	122,686	42,255	80,431	190%
Foreign exchange loss (gain)	45,304	(20,247)	65,551	-324%
Total operating expenses	4,888,094	3,690,532	1,197,562	32%

	Nine months ended	Change	<del></del>	
	2013	2012	\$	%
Selling, general and administrative <sup>1</sup>	8,734,557	7,283,670	1,450,887	20%
Research and development	3,936,976	2,863,938	1,073,038	37%
Share-based compensation	1,093,979	702,104	391,875	56%
Depreciation and amortization	293,511	105,307	188,204	179%
Foreign exchange loss	53,085	21,467	31,618	147%
Total operating expenses	14,112,108	10,976,486	3,135,622	29%

<sup>&</sup>lt;sup>1</sup> For the purposes of this MD&A, selling, general and administrative expenses excludes share-based compensation, depreciation and amortization and foreign exchange loss (gain)

Total operating expenses for the three months ended September 30, 2013 were \$4.9 million compared to \$3.7 million in the same period of fiscal 2012, an increase of \$1.2 million or 32%. Total operating expenses for the nine months ended September 30, 2013 were \$14.1 million compared to \$11.0 million for the same period in fiscal 2012, an increase of \$3.1 million or 29%. The increase in total operating expenses for the three and nine months ended was principally due to higher selling, general and administrative costs and increased research and development costs and share-based compensation costs. The increase in total operating expenses is consistent with our strategy of building a foundation for growth through development of our sales, marketing and R&D capabilities.

Selling, general and administrative<sup>1</sup> – Selling, general and administrative costs for the three months ended September 30, 2013 were \$2.8 million compared to \$2.6 million in the same period last year, an increase of \$0.3 million or 10%. Selling, general and administrative costs for the nine months ended September 30, 2013 were \$8.7 million compared to \$7.3 million in the same period last year, an increase of \$1.4 million or 20%. The increase during the three and nine months ended September 30, 2013 was principally due to increased headcount resulting in higher salaries and benefits and general administration costs.

Research and development – Research and development costs for the three months ended September 30, 2013 were \$1.4 million compared to \$0.8 million in the same period last year, an increase of \$0.6 million or 73%. Research and development costs for the nine months ended September 30, 2013 were \$3.9 million compared to \$2.9 million during the same period last year, an increase of \$1.1 million or 37%. These increases represent continued investment in research and development in order to increase the speed of new product innovation to displace petrochemical polymers with our low cost, bio-based alternative in the paper and paperboard market as well as new markets such as building products.

Share-based compensation – Share-based compensation expense for the three months ended September 30, 2013 was \$0.5 million compared to \$0.3 million in the same period last year, an increase of \$0.2 million or 67%. Share-based compensation for the nine months ended September 30, 2013 was \$1.1 million compared to \$0.7 million in the same period last year, an increase of \$0.4 million or 56%. The increase during these periods was principally due to stock options and performance stock options (PSOs) issued in the current fiscal year.

Depreciation and amortization – Depreciation and amortization for the three months ended September 30, 2013 was \$0.1 million compared to \$0.04 million in the same period last year, an increase of \$0.08 million or 190%. Depreciation and amortization for the nine months ended September 30, 2013 was \$0.3 million compared to \$0.1 million in the same period last year. These increases were principally due to higher amortization related to intangible assets and increased depreciation related to equipment located at the Company's Center of Innovation (COI).

Foreign currency exchange loss (gain) – Foreign exchange represents the revaluation of monetary assets and liabilities denominated in foreign currencies. The change in foreign exchange revaluation gains and losses are primarily due to foreign exchange rate fluctuations between the U.S. dollar (our functional currency) and the Canadian dollar on our net monetary position in Canadian dollars in addition to exchange rate fluctuations between the U.S. dollar and the Euro on our net monetary position in Euros.

Loss from operations – Our loss from operations for the three months ended September 30, 2013 was \$4.1 million compared to \$2.4 million in the same period last year, an increase of \$1.6 million or 68%. Our loss from operations for the nine months ended September 30, 2013 was \$11.4 million compared to \$8.3 million in the same period last year, an increase of \$3.1 million or 37%. The increase during the three and nine months ended September 30, 2013 was primarily due to higher operating expenses.

Interest income – Interest income for the three and nine months ended September 30, 2013 remained comparable to the same periods in fiscal 2012.

Net Loss - We incurred a net loss of \$4.0 million or \$0.07 per common share during the three months ended September 30, 2013 compared to a net loss of \$2.3 million or \$0.04 per common share in the same period last year. For the nine months ended September 30, 2013, we incurred a net loss of \$11.1 million or \$0.20 per common share compared to a net loss of \$8.0 million or \$0.15 per common share. The increase in net loss is principally due to an increase in loss from operations.

# **Financial Condition**

	September 30,	December 31,	Chang	je
	2013	2012	\$	%
Total current assets	95,555,363	104,730,880	(9,175,517)	-9%
Total assets	108,909,867	118,068,797	(9,158,930)	-8%
Total current liabilities	5,013,775	4,509,216	504,559	11%

Total current assets – Total current assets at September 30, 2013 were \$95.6 million compared to \$104.7 million at December 31, 2012, a decrease of \$9.2 million or 9%. The decrease was principally due to lower cash of \$9.4 million.

*Total assets* – Total assets at September 30, 2013 were \$108.9 million compared to \$118.1 million at December 31, 2012, a decrease of \$9.2 million or 8%. The decrease was principally due to lower current assets.

Total current liabilities – Total current liabilities at September 30, 2013 were \$5.0 million compared to \$4.5 million at December 31, 2012, an increase of \$0.5 million or 11%. The increase was principally related to higher accounts payable and accrued liabilities of \$0.7 million related to the timing of settlement of trade payables offset with the extinguishment of the deferred government grant.

# **Liquidity and Capital Resources**

Our growth is financed through a combination of the cash flows from operations and the issuance of equity. We believe that ongoing operations, working capital and associated cash flow in addition to our cash resources provide sufficient liquidity to support our ongoing business operations for at least the next 12 months.

Below is a summary of our cash flows used in operating activities, financing activities and investing activities for the three and nine months ended September 30, 2013 and 2012:

	Three months ended	Change		
	2013	2012	\$	%
Cash used in operating activities	(712,520)	(1,659,981)	947,461	-57%
Cash used in investing activities	(485,137)	(626,805)	141,668	-23%
Cash provided by (used in) financing activities	128,559	(398,266)	526,825	-132%
Net decrease in cash	(1,069,098)	(2,685,052)	1,615,954	-60%
Beginning cash	84,977,872	97,299,476	(12,321,604)	-13%
Ending cash	83,908,774	94,614,424	(10,705,650)	-11%

	Nine months ended	Change		
	2013	2012	\$	%
Cash used in operating activities	(7,994,706)	(5,374,537)	(2,620,169)	49%
Cash used in investing activities	(1,728,072)	(5,344,799)	3,616,727	-68%
Cash provided by (used in) financing activities	371,256	(379,945)	751,201	-198%
Net decrease in cash	(9,351,522)	(11,099,281)	1,747,759	-16%
Beginning cash	93,260,296	105,713,705	(12,453,409)	-12%
Ending cash	83,908,774	94,614,424	(10,705,650)	-11%

Cash used in operating activities – Cash used in operating activities for the three months ended September 30, 2013 was \$0.7 million compared to \$1.7 million for the same period in the prior year, a decrease of \$0.9 million or 57%. The decrease was primarily due to lower investments in non-cash working capital partly offset by increased losses from operations. For the three months ended September 30, 2013, non-cash working capital decreased \$2.4 million principally due to higher accounts payable and accrued liabilities, lower accounts receivable and inventory. For the three months ended September 30, 2012, non-cash working capital decreased \$0.1 million.

Cash used in operating activities for the nine months ended September 30, 2013 was \$8.0 million compared to \$5.4 million for the same period in prior year, an increase of \$2.6M or 49%. The increase was primarily due to increased losses from operations. For the nine months ended September 30, 2013, working capital decreased \$0.9 million primarily due to higher accounts payable and accrued liabilities and lower accounts receivable partly offset by higher inventory. For the nine months ended September 30, 2012, working capital decreased \$1.1 million primarily due to lower inventories offset by higher accounts receivable and lower accounts payable and accrued liabilities.

Cash used in investing activities – Cash used in investing activities for the three months ended September 30, 2013 was \$0.5 million compared to \$0.6 million for the same period in prior year, a decrease of \$0.1 million or 23%. Cash used in investing activities for the nine months ended September 30, 2013 was \$1.7 million compared to \$5.3 million in the same period in last year, a decrease of \$3.6 million or 68%. The decrease was primarily due to purchases of capital equipment in fiscal 2012 related to the expansion of our production capacity which was completed in the previous year.

Cash provided by (used in) financing activities – Cash provided by financing activities for the three months ended September 30, 2013 was \$0.1 million compared to cash utilized in financing activities of \$0.4 million during the same period in fiscal 2012. Cash provided by financing activities during the nine months ended September 30, 2013 was \$0.4 million compared to cash utilized in financing activities of \$0.4 million used during the same period in fiscal 2012. The increase in cash provided by financing activities during the three and nine months ended relates to an increase in the number of stock options exercised in fiscal 2013 and the repurchase of common shares which occurred in fiscal 2012.

## **Capital Management**

Our objective in managing capital is to ensure sufficient liquidity to pursue our growth strategy and fund research and product development, while at the same time taking a conservative approach towards managing financial risk. Our capital is composed of common shares and the net proceeds from the issuance of common shares redeemable preferred shares. Our primary uses of capital are financing operations, increasing non-cash working capital and capital expenditures. We currently fund these requirements from existing cash resources and cash raised through share issuances. Our objectives when managing capital are to ensure that we will continue to have enough liquidity so that we can provide our products and services to our customers and a return to our shareholders. We monitor our capital on the basis of the adequacy of our cash resources to fund our business plan. In order to maximize the capacity to finance our ongoing growth, we do not currently pay a dividend to holders of our common shares.

## **Contractual Obligations**

Our contractual obligations include operating leases for premises. The following table summarizes our cash commitments as of September 30, 2013 for operating leases.

2013\$	308,475
2014\$	434,799
2015\$	435,699
2016\$	376.082
Thereafter\$1	1.322.685

In addition, as at September 30, 2013, we were committed to equipment purchases of approximately \$0.1 million over the next twelve months. This commitment primarily relates to additional investments in our production facilities and our research & development capabilities.

During the normal course of operations, the Company may enter into feedstock contracts to secure raw material availability over a twelve month period based on market pricing at the time of purchase. As at September 30, 2013, the Company was committed to purchases of feedstock in the approximate amount of \$5.9 million.

# **Summary of Quarterly Results**

The following table sets out selected financial information for each of the eight most recent quarters, the latest of which ended September 30, 2013. This information has been prepared on the same basis as the annual financial statements and all necessary adjustments have been included in the amounts stated below to present fairly the unaudited quarterly results when read in conjunction with the quarterly financial statements of the Company and the related notes to those statements.

Historically, our quarterly operating results have fluctuated significantly and may continue to fluctuate significantly in the future. Therefore, we believe that past operating results and period-to-period comparisons should not be relied upon as an indication of our future performance. See "Risk Factors" outlined elsewhere in this document.

	Three months ended (unaudited)							
	September 30,	June 30,	March 31,	December 31,	September 30,	June 30,	March 31,	December 31,
	2013	2013	2013	2012	2012	2012	2012	2011
Net sales	5,416,621	5,533,678	6,120,478	5,923,661	5,915,571	3,734,766	3,978,347	3,719,129
Gross profit	836,873	820,482	1,056,126	1,192,753	1,280,527	624,764	759,814	796,474
Loss from operations	(4,051,221)	(3,728,548)	(3,618,858)	(3,480,133)	(2,410,005)	(2,868,263)	(3,033,113)	(2,421,212)
Net loss	(3,960,546)	(3,634,692)	(3,533,486)	(3,394,357)	(2,324,278)	(2,772,608)	(2,939,492)	(2,345,937)
Weighted average number of shares outstanding	55,764,273	55,709,678	55,689,778	55,297,736	55,324,997	55,248,933	55,248,203	55,239,412
Basic and diluted loss per share	(0.07)	(0.07)	(0.06)	(0.06)	(0.04)	(0.05)	(0.05)	(0.04)
Adjusted EBITDA (1)	(3,186,884)	(3,076,975)	(2,905,848)	(2,950,364)	(1,804,122)	(2,428,644)	(2,553,696)	(1,886,654)

The following table reconciles net income (loss) to Adjusted EBITDA for the three months ended:

	Three months ended (unaudited)							
	September 30,	June 30,	March 31,	December 31,	September 30,	June 30,	March 31,	December 31,
	2013	2013	2013	2012	2012	2012	2012	2011
Net loss	(3,960,546)	(3,634,692)	(3,533,486)	(3,394,357)	(2,324,278)	(2,772,608)	(2,939,492)	(2,345,937)
Depreciation and amortization	387,337	365,697	381,907	384,769	320,883	262,515	239,417	258,341
Share-based compensation	477,000	285,876	331,103	145,000	285,000	177,104	240,000	276,217
Interest income	(90,675)	(93,856)	(85,372)	(85,776)	(85,727)	(95,655)	(93,621)	(75,275)
Adjusted EBITDA <sup>(1)</sup>	(3,186,884)	(3,076,975)	(2,905,848)	(2,950,364)	(1,804,122)	(2,428,644)	(2,553,696)	(1,886,654)

#### Notes:

Adjusted EBITDA is not a measure recognized under IFRS and does not have a standardized meaning prescribed by IFRS. See "IFRS and Non-IFRS Measures." The Company presents Adjusted EBITDA because the Company believes it facilitates investors' use of operating performance comparisons from period to period and company to company by backing out potential differences caused by variations in capital structures (affecting relative interest expense), the book amortization of intangibles (affecting relative amortization expense) and the age and book value of property and equipment (affecting relative depreciation expense). The Company also presents Adjusted EBITDA because it believes it is frequently used by securities analysts, investors and other interested parties as a measure of financial performance. Adjusted EBITDA as presented herein are not recognized measures under IFRS and should not be considered as an alternative to operating income or net income as measures of operating results or an alternative to cash flows as measures of liquidity. Adjusted EBITDA is defined as consolidated net income (loss) before net interest expense, income taxes, depreciation, amortization, other non-cash expenses and charges deducted in determining consolidated net income (loss), including both the movement in the unrealized gains and losses on the Company's redeemable preferred shares and warrants and share-based compensation.

Key factors that account for the fluctuations in quarterly results include the growth in the Company's revenue and the pace at which the Company's operating costs are expanding.

## **Adjusted EBITDA**

Adjusted EBITDA for the three months ended September 30, 2013 was a loss of \$3.2 million compared to a loss of \$1.8 million for the same period last year. Adjusted EBITDA for the nine months ended September 30, 2013 was a loss of \$9.2 million compared to \$6.8 million for the same period last year. The increase in adjusted EBITDA loss was primarily due to higher operating expenses.

# **Critical Accounting Policies and Estimates**

The preparation of the financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. These estimates and assumptions are affected by management's application of accounting policies and historical experience, and are believed by management to be reasonable under the circumstances. Such estimates and assumptions are evaluated on an ongoing basis and form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ significantly from these estimates.

Management believes the following critical accounting policies reflect the more significant estimates and assumptions used in the preparation of our financial statements. We believe that there have been no significant changes in our critical accounting estimates for the time periods presented in our interim financial statements.

# Inventory

Inventory valuation assessments are performed periodically or when indicators of impairment are present. These assessments may involve significant uncertainty and are subject to change in that they could require the use of forward looking assumptions such as estimating the amount and timing of revenues as well as projecting the likelihood of an item becoming obsolete or unusable in the future. Recognition of inventory valuation provisions may have a material impact on our net income and the value of our inventory.

# Impairment of long-lived assets

Long-lived assets (including property, plant and equipment and intangible assets with definite lives) are reviewed for impairment at each reporting date to determine whether there is an indication that an asset may be impaired. If any indication exists we estimate the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating units (CGU) fair value less costs to sell and its value in use and is determined for individual assets unless the asset does not generate cash inflows that are largely independent of those from other assets or group of assets. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and it is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate the reflects current market assessments of the time value of money and this risks specific to the asset. Asset impairment assessments involve significant uncertainty and are susceptible to change they require the use of forward looking assumptions such as sales, costs, foreign exchange rates and market growth rats. Recognition of impairment may have a material impact on our net income and the value of our long-lived assets. Whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, a long-lived asset or asset group is required to be tested for possible impairment.

## Share-based compensation

We have a share-based compensation plan which is described in note 13 to the consolidated financial statements for the fiscal year ended December 31, 2012. We account for all share-based payments using the fair value-based method.

We use a Black-Scholes option pricing model to determine fair value of share options at the grant date, electing to use the minimum value valuation model. This pricing model requires management to make highly subjective assumptions with respect to volatility, dividend yield, expected life and risk free interest rate. Changes in the input assumptions can materially affect the fair value estimate and, therefore, the existing models do not necessarily provide a reliable measure of the fair value of our share options. Share-based compensation is charged to operations over the vesting period and the offset is credited to contributed surplus. On exercise of share options, the related amount in contributed surplus is transferred to common shares.

# I. Performance Stock Options (PSOs)

Under the Company's Long-Term Incentive Plan (LTIP), which was adopted in 2013, the Company may issue performance-based share options (PSOs) to employees, directors and officers in accordance with the Company's 2011 stock option plan (2011 Plan). The purpose of the PSO Plan is to attract, retain and motivate employees of the Company. A PSO provides a right, but not an obligation, to purchase common shares of the Company at a stated price for a given period of time. PSOs vest at a rate of 33.33% per year following the grant date subject to the achievement of performance hurdles and can only be settled in common shares issued from treasury. In the event that performance exceeds targeted performance hurdles, vesting can accelerate for PSOs granted; however, in no event can the cumulative vesting exceed 100%. All PSOs expire at the end of 10 years. The fair value of a PSO is recognized as compensation expense and pro-rated over the expected vesting period with a corresponding increase to contributed surplus. Fair value is determined based on the average closing price of common shares on the Toronto Stock Exchange (TSX) five trading days immediately prior to the date as of which market value is determined.

The Company has estimated the length of the expected vesting period at grant date based on the most likely outcome of the performance conditions. The Company will revise its estimate of the length of the vesting period, if necessary, if subsequent information indicates that the length of the vesting period differs from previous estimates and any change to compensation cost will be recognized in the period in which the revised estimate is made. Forfeitures are estimated at the grant date and are revised to reflect a change in expected or actual forfeitures.

On June 12, 2013, the Company issued 745,340 PSOs in accordance with the provisions of the LTIP. During the third quarter of 2013, the company issued an additional 22,500 PSOs. Accordingly, during the three and nine months ended September 30, 2013, the Company recognized share-based compensation expense of \$0.3 million with a corresponding increase in contributed surplus.

## II. Restricted share unit plan

On March 5, 2013, the Board approved the adoption of a restricted share unit plan (the RSU Plan) as part of the Company's LTIP. The purpose of the RSU Plan is to attract, retain and motivate employees of the Company. The RSU Plan provides that restricted share unit awards (the RSUAs) may be granted by a committee that administers the RSU Plan to full-time employees, officers and eligible contractors of the Company or an affiliate in a calendar year as a bonus for services rendered to the Company as determined at the sole discretion of the Board. The number of restricted share units (RSUs) awarded will be credited to the participants' accounts effective on the grant date of the RSUs. Each RSUA entitles the holder to receive common shares issued from treasury of the Company. 1,000,000 common shares are reserved for issuance under the RSU Plan.

RSUs fully vest at the end of a three-year period subject to continued employment with the Company and the achievement of performance hurdles. The Company has estimated the length of the expected vesting period at grant date based on the most likely outcome of the performance conditions. The corporation will revise its estimate of the length of the vesting period, if necessary, if subsequent information indicates that the length of the vesting period differs from previous estimates and any change to compensation cost will be recognized in the period in which the revised estimate is made.

Forfeitures are estimated at the grant date and are revised to reflect a change in expected or actual forfeitures.

On June 12, 2013, the Company issued 62,399 RSUs in accordance with the provisions of the RSU Plan. Accordingly, during the three months ended September 30, 2013, the Company recognized a share-based compensation expense of \$0.02 million with a corresponding increase in contributed surplus. During the nine months ended September 30, 2013, the Company recognized a share-based compensation expense of \$0.03 million with a corresponding increase in contributed surplus.

#### III. Deferred share unit plan

On March 5, 2013, the Board approved the adoption of a deferred share unit plan (DSU Plan), which provides for awards of deferred share units (DSUs) to non-employee directors of the Company. The purpose of the DSU plan is to strengthen the alignment of interests between non-executive directors and the shareholders of the Company. Under the DSU Plan, non-executive directors may receive a grant of DSUs in satisfaction of their annual retainer.

Each DSU is equivalent to one common share and vest on a quarterly basis. DSUs must be retained until the director leaves the Board, at which time the DSUs will be settled through common shares. In the event dividends are declared and paid, additional DSUs would be credited to reflect dividends paid on common shares. Subject to certain adjustments, the maximum aggregate number of common shares that may be issued under the DSU plan is 500,000 authorized but previously unissued common shares. The number of DSUs to be awarded are determined based on the average closing price of the common shares on the TSX on five trading days immediately prior to the date as of which market value is determined. Compensation cost for DSUs granted under the DSU Plan is recorded as an expense with a corresponding increase in contributed surplus.

On May 9, 2013, 30,275 DSUs were issued to non-employee directors of the Company. Accordingly, during the three months ended September 30, 2013, the Company recognized a share-based compensation expense of \$0.02 million related to DSUs with a corresponding increase in contributed surplus. During the nine months ended September 30, 2013, the Company recognized a share-based compensation expense of \$0.1 million related to DSUs with a corresponding increase in contributed surplus.

# Valuation of Future Income Tax Assets

Significant management judgment is required in determining the valuation allowance recorded against our net income tax assets. We record a valuation allowance to reduce our future income tax assets recorded on our consolidated balance sheet to the amount of future income tax benefit that is more likely than not to be realized. We have recorded a full valuation allowance to reflect the uncertainties associated with the realization of our future income tax assets based on management's best estimates as to the certainty of realization.

# Internal control over financial reporting

There were no changes in the Company's internal control over financial reporting during the three months ended September 30, 2013 that have materially affected, or are reasonable likely to materially affect, the Company's internal control over financial reporting.

#### **Risk Factors**

For a detailed description of the risk factors associated with the Company, refer to the "Risk Factors" section of the Company's Annual Information Form for the fiscal year ended December 31, 2012. The Company is not aware of any significant changes to the Company's risk factors from those disclosed at that time.

# **Additional Information**

Additional information relating to EcoSynthetix Inc., including continuous disclosure documents, is available on SEDAR at www.sedar.com.

# **Common Share Trading Information**

The Company's common shares trade on the Toronto Stock Exchange under the symbol "ECO" As at November 4, 2013, the Company had the equivalent of 56,393,383 common shares issued and outstanding assuming conversion of all rights pursuant to the put/call agreement. In addition, if all outstanding warrants and share options were exercised, there would be the equivalent of 62,723,041 common shares issued and outstanding on a fully diluted basis as at November 4, 2013.

#### Outlook

The opportunity for our EcoSphere biolatex binders and EcoStix platform remains as strong as ever . The investments we have made in product innovation have allowed us to expand our product line in the paper and paperboard market. We are in the midst of rolling out new products for key applications within the \$6 billion paper and paperboard market. These new products include formulations with higher solids content which broaden our addressable market by opening new mill opportunities for us. Paper and paperboard mills continue to endure volatile price fluctuations with petroleum-based binders. While petroleum prices continue to trade around \$100 per barrel the price of butadiene, one of the two primary components of the petroleum-based binders we replace, currently trade at a significant discount to its historical range. We believe the cost of petroleum will drive

butadiene prices back to normalized levels. The stable pricing and performance characteristics of our renewable biolatex binders, together with our high level of service, places us in a strong position us to grow within the paper and paperboard market.

The investments in product innovation have also resulted in new products which are in late-stage industrial trials within the building products market. There is a growing movement among building products manufacturers to replace binders containing formaldehyde which are commonly used in insulation and wood composite products. Formaldehyde-derived binders are receiving increased scrutiny from regulators due to the potential risk they pose to consumer health. The stringent requirement of LEED certification in new buildings and a change in government regulation in many countries is already underway. Within these favourable market dynamics, we believe a large and growing market exists for our renewable biolatex® binders in the building products industry.

We possess a unique and differentiated value proposition, a solid corporate and go-to market strategy, innovative product development, outstanding talent and the financial resources to become one of the world's leading developers of bio-based materials in multiple markets. We believe the change to a bio-based economy is inevitable and we are optimistic about our prospects for significant growth.