US ECOLOGY, INC. Form 424B5 December 06, 2013

Use these links to rapidly review the document TABLE OF CONTENTS

Table of Contents

Filed pursuant to Rule 424(b)(5) Registration No.: 333-187001

PROSPECTUS SUPPLEMENT (To Prospectus dated April 30, 2013)

2,600,000 Shares

Common Stock

US Ecology, Inc.

We are offering 2,600,000 shares of our common stock, par value \$0.01 per share, at a public offering price of \$34.00 per share.

Our common stock is listed on the NASDAQ Global Select Market under the symbol "ECOL." On December 4, 2013, the reported last sale price of our common stock on the NASDAQ Global Select Market was \$34.67 per share.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-11 of this prospectus supplement.

	Per Share	Total		
Price to the public	\$34.000	\$88,400,000		
Underwriting discounts and commissions(1)	\$1.615	\$4,199,000		
Proceeds, before expenses, to US Ecology, Inc.	\$32.385	\$84,201,000		

⁽¹⁾ We have agreed to reimburse the underwriters for certain expenses. See "Underwriting; Conflicts of Interest."

We have granted the underwriters an option for a period of 30 days from the date of this prospectus supplement to purchase up to an additional 390,000 shares of our common stock from us. If the underwriters exercise this option in full, the total underwriting discounts will be \$4,828,850, and our total proceeds, before expenses, will be \$96,831,150.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of our common stock to purchasers on or about December 10, 2013.

Joint Book-Running Managers

Wells Fargo	Securities ————	Credit	Suisse
Raymond James	Co-Mana KeyBanc Capital Markets		Houlihan Lokey
	The date of this prospectus suppl	lement is December 4, 2013.	

TABLE OF CONTENTS

Prospectus Supplement

About This Prospectus Supplement	<u>ii</u>
Forward-Looking Statements	<u>iii</u>
Prospectus Supplement Summary	<u>S-1</u>
The Offering	S-7
Risk Factors	<u>S-11</u>
<u>Use of Proceeds</u>	<u>S-14</u>
Capitalization	<u>S-15</u>
<u>Description of Our Common Stock</u>	<u>S-16</u>
<u>Underwriting</u> ; <u>Conflicts of Interest</u>	<u>S-17</u>
Material U.S. Federal Income Tax Considerations for Non-U.S. Holders	<u>S-23</u>
<u>Validity of Securities</u>	<u>S-26</u>
Experts	<u>S-26</u>
Where You Can Find More Information	<u>S-27</u>
Prospectus	

Prospectus

About This Prospectus	<u>1</u>
US Ecology, Inc.	<u>1</u>
Forward-Looking Statements	<u>2</u>
Risk Factors	<u>3</u>
Ratio of Earnings to Fixed Charges	3
Use of Proceeds	<u>3</u>
Plan of Distribution	$\frac{\overline{4}}{4}$
Description of Capital Stock	<u>6</u>
Description of Warrants	<u>10</u>
Description of Debt Securities	12
Description of Rights	<u>20</u>
Description of Units	<u>22</u>
Legal Matters	<u>22</u>
Experts	<u>22</u>
Where You Can Find More Information	23
Information Incorporated By Reference	23

We and the underwriters have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus or in any "free writing prospectus" prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

i

ABOUT THIS PROSPECTUS SUPPLEMENT

This document contains two parts. The first part is this prospectus supplement, which describes the terms of the offering of shares of our common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus, provides more general information about us and the common stock offered hereby. Generally, when we refer to this prospectus, we are referring to both parts of this document combined together with all documents incorporated by reference. To the extent there is a conflict between the information contained in this prospectus supplement or any "free writing prospectus" we may authorize to be delivered to you, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference therein, on the other hand, you should rely on the information in this prospectus supplement or such "free writing prospectus", as the case may be, provided that, if any statement in one of these documents is inconsistent with a statement in another document having a later date for example, a document incorporated by reference in the accompanying prospectus the statement in the document having the later date modifies or supersedes the earlier statement.

We and the underwriters have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus or in any "free writing prospectus" prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

We and the underwriters are offering to sell, and seeking offers to buy, our common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement, the accompanying prospectus and the offering of our common stock in certain jurisdictions may be restricted by law. Neither we nor the underwriters have done anything that would permit this offering, or possession or distribution of this prospectus, in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus supplement and accompanying prospectus must inform themselves about, and observe any restrictions relating to, the offering of our common stock and the distribution of this prospectus supplement and accompanying prospectus outside the United States. This prospectus supplement and accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any common stock offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. The information contained, or incorporated by reference, in this prospectus supplement and contained, or incorporated herein by reference, in the accompanying prospectus is accurate only as of the respective dates thereof, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or of any sale of our common stock.

It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the documents we have referred you to in the section entitled "Where You Can Find More Information" in this prospectus supplement and the accompanying prospectus and any "free writing prospectus" we may authorize to be delivered to you.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus supplement and the accompanying prospectus were made solely for the benefit of the parties to such agreement and the third-party beneficiaries named therein, if any, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Unless the context otherwise requires, in this prospectus supplement, "US Ecology," the "Company," "we," "us," "our" and similar names refer to US Ecology, Inc. and its subsidiaries.

FORWARD-LOOKING STATEMENTS

This prospectus supplement contains forward-looking statements within the meaning of the federal securities laws. Statements that are not historical facts, including statements about the Company's beliefs and expectations, are forward-looking statements. Forward-looking statements include statements preceded by, followed by or that include the words "may," "could," "would," "should," "believe," "expect," "anticipate," "plan," "estimate," "target," "project," "intend" and similar expressions. These statements include, among others, statements regarding our financial and operating results, strategic objectives and means to achieve those objectives, the amount and timing of capital expenditures, dividends, the likelihood of our success in expanding our business, financing plans, budgets, working capital needs and sources of liquidity.

Forward-looking statements are only predictions and are not guarantees of performance. These statements are based on management's beliefs and assumptions, which in turn are based on currently available information. Important assumptions include, among others, those regarding demand for Company services, expansion of service offerings geographically or through new or expanded service lines, the timing and cost of planned capital expenditures, competitive conditions and general economic conditions. These assumptions could prove inaccurate. Forward-looking statements also involve known and unknown risks and uncertainties, which could cause actual results to differ materially from those contained in any forward-looking statement. Many of these factors are beyond our ability to control or predict. Such factors include the replacement of non-recurring event clean-up projects, a loss of a major customer, our ability to permit and contract for timely construction of new or expanded disposal cells, our ability to renew our operating permits or lease agreements with regulatory bodies, loss of key personnel, compliance with and changes to applicable laws, rules, or regulations, fluctuations in foreign currency markets, access to insurance, surety bonds and other financial assurance, a deterioration in our labor relations or labor disputes, our ability to perform under required contracts, failure to realize anticipated benefits and operational performance from acquired operations, adverse economic conditions, government funding or competitive pressures, incidents or adverse weather conditions that could limit or suspend specific operations, access to cost effective transportation services, lawsuits, market conditions, our willingness or ability to pay dividends, implementation of new technologies and our ability to effectively close and integrate future acquisitions.

Except as required by applicable law, including the securities laws of the United States and the rules and regulations of the Securities and Exchange Commission, or SEC, we are under no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You should not place undue reliance on our forward-looking statements. Although we believe that the expectations reflected in forward-looking statements are reasonable, we cannot guarantee future results or performance. Before you invest in our common stock, you should be aware that the occurrence of the events described in "Risk Factors" in this prospectus supplement and "Risk Factors" included in our Annual Report on Form 10-K for the year ended December 31, 2012, and in subsequent filings, which are incorporated by reference into this prospectus supplement and the accompanying prospectus, could harm our business, prospects, operating results, and financial condition.

Investors should also be aware that while we do, from time to time, communicate with securities analysts, it is against our policy to disclose to them any material non-public information or other confidential commercial information. Accordingly, stockholders should not assume that we agree with any statement or report issued by any analyst irrespective of the content of the statement or report. Furthermore, we have a policy against issuing or confirming financial forecasts or projections issued by others. Thus, to the extent that reports issued by securities analysts contain any projections, forecasts or opinions, such reports are not the responsibility of US Ecology, Inc.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information about us, this offering and information appearing elsewhere in this prospectus supplement and in the accompanying prospectus and in the documents we incorporate by reference herein and therein. This summary does not contain all the information you should consider before investing in shares of our common stock in this offering. You should carefully read this entire prospectus supplement and the entire accompanying prospectus, including the "Risk Factors" section beginning on page S-11 of this prospectus supplement and in our Annual Report on Form 10-K, and the consolidated financial statements and the other information incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision. If you invest in our common stock, you are assuming a high degree of risk.

Our Company

We are a leading North American provider of environmental services, and have been managing, transporting, treating, recycling and disposing of regulated waste streams for over 60 years. In 2012 we processed over one million tons of regulated waste, including hazardous, non-hazardous, polychlorinated biphenyls, or PCBs, and radioactive waste generated by our commercial and government customers.

Our customers require specialized treatment, disposal and recycling of waste they generate that are regulated under applicable federal, state, provincial and local environmental regulations. We operate one of the largest networks of treatment and disposal assets for hazardous and non-hazardous waste in North America. For many of our larger customers, we offer cradle-to-grave transportation and logistics services by managing their waste streams from origination to disposal. Our six disposal facilities are strategically located across North America and are permitted to manage a wide range of regulated waste streams. As of September 30, 2013, we operated treatment and disposal facilities in the locations highlighted below:

We serve large and diverse end markets including commercial industry and federal, state and local governments. Commercial industry end markets include oil field development, oil refineries, petrochemical, steel, electric utilities, automobile, aerospace, large and small manufacturers and academic institutions. Governmental end markets include a variety of state and local governments, as well as federal government agencies, including the Environmental Protection Agency, or U.S. EPA, the Department of Defense, or DOD, and the U.S. Army Corps of Engineers, among others. We employ a highly experienced sales force to serve our largest customers directly and who also manage an extensive indirect sales channel consisting of brokers, aggregators, treatment, storage and disposal facilities, known as TSDFs, and other national service providers. This combination of our direct and indirect sales channels has allowed us to generate recurring revenue and efficiently access highly fragmented

Table of Contents

end markets. Our largest customer in 2012 represented only 6% of our revenue and our top ten customers accounted for less than 35% of our revenue. During the nine months ended September 30, 2013, our largest customer represented only 8% of revenue and our top ten customers accounted for less than 40% of our revenue.

During fiscal year 2012, we generated total revenues and Adjusted EBITDA of \$169 million and \$58 million, respectively. During the nine months ended September 30, 2013, we generated total revenues and Adjusted EBITDA of \$142 million and \$51 million, respectively, an increase of 19.4% and 19.3%, respectively, over the same period in the prior year. Our net income for fiscal year 2012 and the nine months ended September 30, 2013 was \$26 million and \$23 million, respectively. See "Summary Financial Data Other Financial Metrics" for a calculation and reconciliation of net income to Adjusted EBITDA for the periods presented.

Our Services

We generate revenue primarily from managing, treating, recycling and disposing of hazardous, non-hazardous, PCB and radioactive waste in government permitted facilities. We also derive revenue from transportation and logistics services, generally for transferring material from the customer location to one of our facilities. We provide services to our customers within two categories, consisting of:

Treatment and Disposal, or T&D, Services (83% of total revenue for the nine months ended September 30, 2013) we provide a broad range of waste treatment services including stabilization, solidification, encapsulation, thermal recycling and hazardous liquid processing co-located at our six Company-operated treatment and disposal facilities. T&D revenue can be broken down into two categories: "Base Business" and "Event Business."

Base Business (64% of T&D revenue for the nine months ended September 30, 2013) consists of waste streams generated through ongoing industrial processes that are generally recurring. The types and amounts of waste received from recurring customers vary quarter-to-quarter, sometimes significantly, but are generally more predictable than project-based work, or "Event Business." Significant drivers in the Base Business segment are overall industrial production and changes to the regulatory environment for hazardous and radioactive waste.

Event Business (36% of T&D revenue for the nine months ended September 30, 2013) generally consists of waste generated from discrete one-time waste clean-up projects. The duration of Event Business projects can last from a one-week clean-up of a small contaminated site to a multiple year clean-up project. Several of our Event Business customers utilize our services for multiple or frequent projects, resulting in recurring revenue. While general economic conditions often drive the aggregate demand for clean-up projects, other drivers such as government funding, regulatory developments, environmental enforcement actions, and large project management can materially impact the variability of Event Business revenue.

Transportation Services (17% of total revenue for the nine months ended September 30, 2013) we provide a wide variety of transportation logistics support on customer sites and other locations. We utilize our network of contracted and owned truck and rail assets, three rail transfer facilities and specialized handling equipment to safely manage and transport waste from customers nationwide to our facilities. Typically our transportation services are provided as a value-added service, priced at or near cost and bundled with our T&D services along with other value-added logistics and field services support work to help win new business.

The Environmental Services Industry

In 2012, the industry grew 3.2% compared to 2011, resulting in \$10.1 billion of sales according to the Environmental Business Journal, which includes commercial industrial waste management, commercial radioactive waste management, hazardous and radioactive waste management contracts at federal facilities and medical waste management totaling \$3.0 billion, \$1.1 billion, \$3.6 billion, and \$2.4 billion, respectively. The largest commercial producers of hazardous waste materials are companies in the chemical, petrochemical, primary metals, paper, furniture, aerospace and pharmaceutical industries. The federal government is also one of the largest generators of hazardous and radioactive waste. Radioactive waste includes Low-Level Radioactive Waste, or LLRW, Low-Activity Radioactive Material, or LARM, and Naturally Occurring and Accelerator Produced Radioactive Materials, or NORM/NARM. All areas of the hazardous and radioactive waste market face significant government regulation at the federal, state, provincial and local level, driving demand for our services.

In the U.S., the hazardous waste sector is regulated under the Resource Conservation and Recovery Act, or RCRA, which created a cradle-to-grave system governing hazardous waste from the point of generation to ultimate disposal. RCRA requires waste generators to distinguish between "hazardous" and "non-hazardous" wastes, and to treat, store and dispose of hazardous waste in accordance with specific regulations. Generally, facilities that treat, store, or dispose of hazardous waste must obtain a permit, either from the U.S. EPA or from a state agency to which the U.S. EPA has delegated oversight authority.

Disposal facilities are typically designed to permanently contain the waste and prevent the release of harmful pollutants into the environment. The most common hazardous waste disposal practice is placement in a land disposal unit such as a landfill, surface impoundment, waste pile, land treatment unit, or injection well. RCRA's hazardous waste permitting program establishes specific requirements that must be followed when managing those wastes.

We operate four of the twenty landfills in the U.S. and Canada that are permitted to accept RCRA wastes, in Beatty, Nevada; Robstown, Texas; Grand View, Idaho; and Blainville, Quebec, Canada. Our Beatty, Nevada and Grand View, Idaho facilities are also authorized to dispose of PCB waste regulated under the Toxic Substances Control Act of 1976, or TSCA, which is administered by the U.S. EPA. To service radioactive waste producers, we also operate one of the four licensed radioactive disposal facilities in the United States in Richland, Washington. In addition, we have expanded our permits at our Grand View, Idaho facility to accept LARM and other LLRW waste that has been exempt from regulation under the Atomic Energy Act of 1954.

We face a wide range of competitors of various sizes that provide a number of services, including transportation, treatment, storage, disposal, recycling and field services. We believe we have a significant competitive advantage over many players in the sector due to our difficult-to-replicate disposal assets and geographical reach in North America. We expect that these assets, coupled with significant regulatory requirements and know-how, will help drive our long-term success.

Competitive Strengths

Difficult-to-Replicate Infrastructure

We operate six disposal facilities located across North America, which are permitted to accept a wide range of waste, including hazardous, PCB, non-hazardous, low-activity radioactive and low-level radioactive waste. We consider our disposal facilities to be difficult to replicate due to the current regulatory environment for hazardous waste processing facilities, which includes the generally high cost of obtaining permits, multi-year permitting time frames, uncertainty of outcome, high initial capital expenditures and the potential for community-based opposition to the development of new facilities. As a result, it has been at least 15 years since a new hazardous waste landfill or incinerator has been built

Table of Contents

in the United States. We operate four of twenty landfills in the U.S. and Canada that are permitted to accept RCRA wastes. Our Richland, Washington LLRW facility is one of only three full-service Class A, B, and C disposal facilities in the U.S. and the facility's personnel have extensive experience safely managing radioactive waste through the use of shielding and remote handling devices. We also own and manage a fleet of 234 gondola railcars and three rail transfer stations. Together, these assets allow us to service a wide range of geographies, customers and industries.

Significant Regulatory and Operating Expertise

We operate in a highly regulated marketplace. The permitting process for operating disposal assets in our industry is lengthy and complex, requiring a deep understanding of hazardous and radioactive waste regulation. As a result of our regulatory and permitting expertise, we maintain a regulatory compliance and permitting program at our disposal facilities that has allowed us to obtain additional approvals to expand our service offering in terms of the types, amounts and concentrations of wastes that we accept. Our track record of successfully navigating government regulatory and permitting processes serves as a consistent competitive advantage.

A Market Leader in Hazardous & Non-Hazardous Waste Treatment and Disposal

We are a leader in the North American hazardous waste services sector with over six decades of experience. In 2012, we disposed over one million tons of regulated waste, including hazardous, non-hazardous, PCBs and radioactive material. Our collection of disposal assets combined with our transportation network provides us with coast-to-coast treatment and disposal capabilities, allowing us to serve a wide mix of customers and industries across the United States and Canada. We operate four of 20 RCRA landfills in North America, demonstrating our leadership position.

Diverse Markets and Customer Base

In 2012, we serviced approximately 1,000 commercial and governmental entities, such as refineries, chemical production facilities, electric utilities, heavy manufacturers, steel mills, waste brokers and medical and academic institutions. Our broad range of end-markets gives us exposure to a variety of industrial cycles, creating stability for our overall business. Additionally, we have low customer concentration, with our largest account representing 6% of sales and our top ten customers representing less than 35% of sales in fiscal year 2012.

Steady, Recurring Revenue and Industry-Leading Margins

Since 2009, we have generated solid revenue growth, cash flow generation and robust margins. We have historically focused on operating leverage and operational efficiency and adjusted our service mix to benefit from higher margin, recurring business offerings. Starting in 2008, we have shifted our strategy to focus on expanding our recurring Base Business revenue. As a result, Base Business revenue represented 64% of T&D revenue for the nine months ended September 30, 2013, up from 50% in 2008. As we continue to expand our Base Business, we have become more diversified and less dependent on large Event Business work to drive revenue growth. For the nine months ended September 30, 2013, we generated Adjusted EBITDA of \$51 million, representing a 36% margin, and net income of \$23 million. See "Summary Financial Data Other Financial Metrics" for a calculation and reconciliation of net income to Adjusted EBITDA for the periods presented. We believe we are well positioned to further extend this strong financial performance by successfully executing on our organic growth strategies, capitalizing on positive market dynamics and supplementing our business with targeted, complementary acquisitions.

Table of Contents

Solid Safety and Compliance Record

Safety and environmental compliance is a cornerstone of US Ecology's business. The Company has dedicated environmental professionals who oversee and manage safety and environmental programs including, but not limited to, employee training, internal and external audits, safety incentive programs, Voluntary Protection Programs, or VPP, the Safety & Health Achievement Recognition Program, and ISO 9001 and ISO 14001 programs. Dedicated senior managers regularly review and discuss environmental and safety results with management to ensure regulatory compliance. In addition, we have received multiple site safety awards including the VPP Star Worksite Award, Thoroughbred Safety Award and the CSX Chemical Safety Award.

Experienced Management Team with Proven Track Record

We are led by an experienced management team with an average of over 14 years of industry and technical experience and a proven track record of successfully operating through multiple economic cycles. Our President and CEO, Jeff Feeler, joined our Company in 2006 and served as our CFO from 2007 to 2012. Our management team has extensive and demonstrated experience pursuing new market opportunities, expanding through acquisitions and maintaining a strong culture of safety and compliance. Since 2008, the management team has effectively executed on its strategy by growing its North American footprint coast-to-coast, expanding its service offering through permit and service expansion, increasing its Base Business and other recurring revenue streams and acquiring and integrating the businesses of Stablex Canada Inc. and US Ecology Michigan, Inc.

Our Strategy

Our strategy is to capitalize on our unique and difficult-to-replicate disposal assets so that we continue serving the needs of our diverse client base by maintaining our commitment to customer service. We aim to execute on internal marketing initiatives to drive organic growth and intend to pursue acquisition opportunities that will enhance our capabilities and expand our customer reach.

The principal elements of our business strategy are to:

Leverage Regulatory Expertise to Expand Permit Capabilities and Broaden Service Offerings

We have a proven track record of leveraging our regulatory expertise to broaden our service offerings. As part of this strategy, our sales teams engage customers to identify new service opportunities and work with our regulatory affairs personnel to jointly assess market opportunities through permit expansion. For example, in 2007 our sales team identified an opportunity to address a growing need to handle special nuclear material, or SNM, and byproduct radioactive material. They worked with our regulatory affairs team to advocate for a change in Idaho law and obtained a permit to handle such material at our Grand View, Idaho facility, directly leading to new sales opportunities. As part of our business strategy, we expect to pursue new service expansion permits and increase the disposal capacity at our landfills, as frequently required by the evolving needs of our customers.

Continue to Build on Our Robust Waste Handling Infrastructure to Increase Revenue from Our Existing Assets

We have a unique set of treatment, recycling and disposal assets in the highly regulated hazardous and radioactive waste markets. We aim to enhance our treatment capabilities at our existing facilities in order to handle additional waste streams and maximize throughput. We also seek to maximize the utilization of our Company-owned rail assets in order to provide our customers with flexible and cost-effective disposal solutions. We also continue to invest in our infrastructure to ensure we have ample surge capacity for increases in our Event Business while continuing to support our Base Business customers. We also expect to continue to expand our thermal recycling of oil bearing hazardous waste,

Table of Contents

which is co-located at our Robstown, Texas site and yields a profitable secondary revenue stream for recovered oil and metals.

Execute on Marketing Initiatives to Grow Organically

Our sales team is focused on expanding treatment and disposal capabilities into new high margin, niche waste streams that our competitors may not be able to obtain the necessary regulatory authorizations for or handle cost-effectively. We expect to expand into new markets and to offer new services so that we continue harvesting our inherent operating leverage by driving incremental volume into our existing disposal facilities. Our strategy is to have our Base Business cover our fixed overhead costs along with a reasonable profit, therefore allowing the majority of T&D revenue generated from our Event Business to be realized as operating profit. We aim to continue to build our Base Business while remaining flexible enough to serve our customers' event-driven needs.

Pursue a Disciplined Acquisition Strategy to Add Complementary Capabilities

We plan to pursue selective acquisitions that expand our disposal network and geographic footprint. We have had success historically with our targeted acquisition strategy, acquiring Stablex Canada Inc. in 2010 and Dynecol, Inc. (now US Ecology Michigan, Inc.) in 2012. Both acquisitions expanded our physical presence and customer base as well as enhanced our service offerings. We also expect to seek acquisition opportunities that enable us to fill gaps in capabilities across the hazardous waste value chain while maintaining our commitment to customer service.

Corporate Information

Headquartered in Boise, Idaho, we are a leading North American provider of environmental services. The Company and its predecessor companies have been in business for over 60 years. We employed 455 people as of November 22, 2013.

The Company was most recently incorporated as a Delaware corporation in May 1987 as American Ecology Corporation. Our principal executive offices are located at 251 E. Front Street, Suite 400, Boise, ID 83706 and our telephone number is (208) 331-8400. Our website is www.usecology.com. The information on our website is not incorporated by reference into this prospectus supplement or any accompanying prospectus. On February 22, 2010, the Company changed its name from American Ecology Corporation to US Ecology, Inc.

THE OFFERING

Issuer:

Common stock offered by us pursuant to this

prospectus supplement

Option to purchase additional shares

Common stock estimated to be outstanding immediately after this offering*

Use of proceeds

Market for the common stock

Conflict of interest

Risk factors

US Ecology, Inc.

2,600,000 shares

We have granted the underwriters an option for a period of 30 days from the date of this prospectus supplement to purchase up to 390,000 additional shares of common stock. 21,134,210 shares (21,524,210 shares if the underwriters exercise in full their option to purchase 390,000 additional shares of common stock)

We currently intend to use the net proceeds of this offering for general corporate purposes, which will include the repayment of debt under our Existing Credit Facility (as defined in "Use of Proceeds"), and to fund potential future acquisitions. See "Use of Proceeds" on page S-14 of this prospectus supplement.

Our common stock is quoted and traded on the NASDAQ Global Select Market under the

symbol "ECOL."

Because an affiliate of Wells Fargo Securities, LLC is the lender under our Existing Credit Facility and will be receiving more than 5% of the net offering proceeds in connection with the

repayment of outstanding loans under our Existing Credit Facility, Wells Fargo

Securities, LLC, an underwriter in this offering, is deemed to have a "conflict of interest" with us under Rule 5121 of the Financial Industry Regulatory Authority, Inc. Wells Fargo Securities, LLC will not confirm sales of the shares of common stock to any account over which it exercises discretionary authority without the prior written approval of the customer. See "Underwriting; Conflicts of Interest" beginning on page 17 of this prospectus supplement. See "Risk Factors" beginning on page S-11 of this prospectus supplement and in our Annual Report on Form 10-K for the year ended December 31, 2012 for a discussion of risk factors you

should consider carefully before deciding to invest in shares of our common stock.

The number of shares of our common stock to be outstanding after this offering is based on 18,534,210 shares of common stock outstanding as of September 30, 2013. Unless specifically stated otherwise, the information in this prospectus supplement excludes:

408,142 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2013, at a weighted average exercise price of \$22.45 per share, of which options to purchase 137,216 shares of our common stock were then exercisable;

S-7

Table of Contents

up to 51,800 shares reserved as of September 30, 2013 for future issuance upon settlement of restricted stock awards granted under our 2005 Director Stock Plan and 2006 Employee Stock Plan; and

an aggregate of 1,017,062 shares of our common stock reserved for future grants of stock options (or other similar equity instruments) under our 2008 Stock Option Incentive Plan and 2005 Director Stock Plan, as of September 30, 2013.

S-8

SUMMARY FINANCIAL DATA

The following tables set forth summary financial data at December 31, 2012, December 31, 2011 and December 31, 2010 and for the years ended December 31, 2012, December 31, 2011 and December 31, 2010, as well as summary financial data at September 30, 2013 and September 30, 2012 and for the nine-month periods ended September 30, 2013 and September 30, 2012. The summary financial data at December 31, 2012 and December 31, 2011 and for the years ended December 31, 2012, December 31, 2011, and December 31, 2010 are derived from our audited consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2012, which is filed with the SEC and incorporated by reference into this prospectus supplement and the accompanying prospectus. The summary financial data at September 30, 2013 and for the nine-month periods ended September 30, 2013 and September 30, 2012 are derived from our unaudited consolidated financial statements included in our Quarterly Report on Form 10-O for the nine-month period ended September 30, 2013, which is filed with the SEC and incorporated by reference into this prospectus supplement and the accompanying prospectus. The summary financial data at December 31, 2010 is derived from our audited consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2010. You should read such selected financial data in conjunction with the audited and unaudited consolidated financial statements and the related notes thereto and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2012 and such Quarterly Report on Form 10-Q for the nine-month period ended September 30, 2013 incorporated by reference into this prospectus supplement and accompanying prospectus. The interim results set forth below are not necessarily indicative of results for the year ended December 31, 2013 or for any other period.

		Nine M Ended Sep				Year Ended December 31,					
\$s in thousands, except per share amounts	2013			2012		2012	2011			2010	
Income Statement Data:											
Revenue	\$	141,766	\$	118,732	\$	169,138	\$	154,917	\$	104,836	
Operating income		37,577		29,824		40,638		32,365		20,377	
Foreign currency gain (loss)		(1,448)		1,775		1,213		(1,321)		1,819	
Income tax expense		12,813		12,078		16,059		11,437		9,602	
Net income		22,944		19,547		25,659		18,370		12,584	
Earnings per share basic:	\$	1.25	\$	1.07	\$	1.41	\$	1.01	\$	0.69	
Earnings per share diluted:	\$	1.24	\$	1.07	\$	1.40	\$	1.01	\$	0.69	
Shares used in earnings per share calculation:											
Basic		18,395		18,228		18,238		18,198		18,170	
Diluted		18,475		18,262		18,281		18,223		18,189	
Dividends paid per share	\$	0.36	\$	0.54	\$	0.90	\$	0.72	\$	0.72	
Balance Sheet Data:											
Total assets	\$	230,731	\$	223,720	\$	218,694	\$	202,588	\$	217,349	
Working capital(1)		17,349		12,760		13,021		8,772		18,693	
Long-term debt		35,500		47,200		45,000		40,500		63,003	
Stockholders' equity		129,908		111,552 112,0		112,022		100,163		94,712	
Return on invested capital(2)		16.6%		14.7%		14.6%	o o	12.0%)	12.7%	

⁽¹⁾ Calculated as current assets minus current liabilities.

(2) Calculated as operating income less applicable taxes divided by the sum of stockholders' equity, long-term debt, closure and post-closure obligations and monetized operating leases, less cash and short-term investments.

Other Financial Metrics

Adjusted EBITDA is defined as net income before net interest expense, income tax expense, depreciation, amortization, stock based compensation, accretion of closure and post-closure liabilities, foreign currency gain/loss and other income/expense, which are not considered part of usual business operations. Adjusted EBITDA is a complement to results provided in accordance with accounting principles generally accepted in the United States ("GAAP") and we believe that such information provides additional useful information to analysts, stockholders and other users to understand the Company's operating performance. Since Adjusted EBITDA is not a measurement determined in accordance with GAAP and is thus susceptible to varying calculations, Adjusted EBITDA as presented may not be comparable to other similarly titled measures of other companies. Items excluded from Adjusted EBITDA are significant components in understanding and assessing our financial performance. Adjusted EBITDA should not be considered in isolation or as an alternative to, or substitute for, net income, cash flows generated by operations, investing or financing activities, or other financial statement data presented in the consolidated financial statements as indicators of financial performance or liquidity. Adjusted EBITDA has limitations as an analytical tool and should not be considered in isolation or a substitute for analyzing our results as reported under GAAP. Some of the limitations are:

Adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;

Adjusted EBITDA does not reflect our interest expense, or the requirements necessary to service interest or principal payments on our debt;

Adjusted EBITDA does not reflect our income tax expenses or the cash requirements to pay our taxes;

Adjusted EBITDA does not reflect our cash expenditures or future requirements for capital expenditures or contractual commitments; and

Although depreciation and amortization charges are non-cash charges, the assets being depreciated and amortized will often have to be replaced in the future, and Adjusted EBITDA does not reflect any cash requirements for such replacements.

The following reconciliation itemizes the differences between reported net income and Adjusted EBITDA for the years ended December 31, 2012, 2011, and 2010 and for the nine months ended September 30, 2013 and 2012:

	For the Nine Months Ended September 30,					For the Year Ended December 31,							
(\$ thousands)		2013		2012		2012		2011		2010			
Net Income	\$	22,944	\$	19,547	\$	25,659	\$	18,370	\$	12,584			
Income tax expense		12,813		12,078		16,059		11,437		9,602			
Interest expense, net		640		646		861		1,578		269			