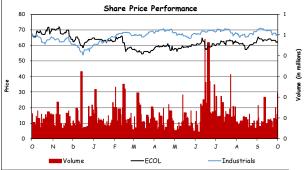
| CENTER FOR GLOBAL FINANCIAL STUDIES | 5 |
|-------------------------------------|---------------|
| US Ecology, Inc. | Symbol: ECOL |
| Analyst | Bradley Smith |
| Buy below | \$62.54 |
| Sell above | \$88.27 |
| Probability of Price Increase | 89% |
| Last Price | \$61.92 |
| Intrinsic Value | \$71.40 |
| Target Dividends | \$0.78 |
| Target Price | \$77.39 |



US Ecology, Inc., through its subsidiaries, provides environmental services to commercial and government entities in the United States, Canada, and Mexico. It operates through two segments, Environmental Services, and Field & Industrial Services,

Sector Industrials

Industry Commercial Services and Supplies

Last Guidance December 11, 2018 Next earnings date October 29, 2019

Feeler, Jeffrey, Chairman of the Board, CEO & President

Gerratt Fric Executive VP CFO & Treasurer

Bell, Simon, Executive VP & COO

Adjusted EBITDA Margin

Operating Assets/Capital

Total Debt/(Market Cap.+ Other Claims on Capital)

Likely Current Cost of Equity (Cost of Debt + MRP)

Minority Interest/(Market Cap.+ Other Claims on Capital)

Preferred Equity/(Market Cap.+ Other Claims on Capital)

Return on Equity

Invested Funds

Goodwill/Capital

Capital Structure

CGFS Credit Rating

Credit Rating Model

Likely Current WACC

Probability of Default Model

Likely Current Cost of Debt

Cash/Capital

NWC/Capital

Adjusted Net margin

Welling, Steven, Executive Vice President of Sales & Marketing

Marshall, Andrew, Executive Vice President of Regulatory Complian

Ipsen, Wayne, VP, Compliance Officer, Corporate Counsel & Sec

| Top Competitors | |
|------------------------------|---------------------------------|
| Casella Waste Systems, Inc. | The Wendy's Company |
| Covanta Holding Corporation | Stericycle, Inc. |
| Clean Harbors, Inc. | Advanced Disposal Services, Inc |
| Heritage-Crystal Clean, Inc | Bilfinger SE |
| Stericycle, Inc. | Republic Services, Inc. |
| Market Statistics | |
| Market Capitalization (mil) | \$1,372.63 |
| Last Price per share | \$61.92 |
| 52 week high | \$75.62 |
| 52-week low | \$54.24 |
| Volatility | 29.91% |
| Daily volume (mil) | 0.22 |
| Short interest | 6.28% |
| Days to cover short interest | 13.57 |
| Beta | 0.56 |
| Financials | |
| Profitability | ECOL (LTM) EC |
| Return on Capital | 6.3% 6.7 |
| | |

18.1%

14 4%

8.8%

-0.7%

12.8%

61,2%

26.7%

0.23

0.0%

0.0%

bb to bb+

a- to a

3 96%

9.46%

8.24%

RR

ECOL (LTM)

ECOL (LTM)

11.19% 15.5%

8 7%

3.9%

8 4% 57.8%

31.2%

0.22

0.0%

0.0%

ECOL Historical

FCOL Historical

7.9%

| Thursd | av Oc | toher | 10 | 2019 |
|--------|-------|-------|----|------|
| | | | | |

Investment Thesis

Unwarranted bearish short term revenue growth forecasts creates potential buy opportunity.

I am initiating continuing coverage of U.S Ecology Inc. with a BUY at \$62.54 and a \$77.39 one year price target. I view ECOL as a financially strong player in the environmental services industry, with significant competitive advantages over other waste management firms, and strong upside potential. The company's strategy of concentrating their sales efforts on high margin wastes – specifically in the growing special ty chemical manufacturing industry-will help support their revenue growth over the next 1-2 years, despite declines in some of the properties of the support their revenue growth over the next 1-2 years, despite declines in some of the properties of the properties of the support their revenue growth over the next 1-2 years, despite declines in some of the properties of the propeother industries that they service. Analysts are generally bearish on the company's short term revenue growth due to the overall decline in the industrial manufacturing industry, but as the company continues to follow its high margin waste concentration strategy, they will be less exposed to the decline in the manufacturing industry, and they will experience higher than anticipated revenue growth

 $Additionally, U.S \, Ecology \, has \, an \, extensive \, transportation \, and \, logistics \, network, \, as \, well \, as \, a \, geographically \, wide \, spread \, network \, of \, continuous \, cont$ treatment and disposal facilities, which gives the company a significant competitive advantage over its peers, as it allows the company to reduce its operating and transportation costs. These reduced costs then allow the company to aggressively bid on contracts, and increase its sales and revenue volume.

For the long:

1. Large network of waste storage, refining, treatment and recycling facilities:
U.S Ecology has a portfolio of facilities located throughout the United States that covers all aspects of waste management including hazardous, non-hazardous and radioactive waste treatment, recycling ad disposal. The Company's radioactive waste facility (located in the state of Washington) is only 1 of 3 facilities of its kind in the United States, and

 $handles \, the \, radio active \, was te \, disposal \, for \, all \, of \, Washington, \, and \, 11 \, surrounding \, states.$

 $\underline{\textbf{2. Extensive transportation/logistics capabilities:}}\\ \textbf{U.S ecology owns and operates its own logistics network that includes trucking and rail car services that allow the company to offer full the transportation of the company to offer full the transportation of the company to offer full the transportation of the company to offer full the company the company to offer full the company the c$ spectrum waste management services, and helps to reduce costs.

3. Concentration in specialty, high margin wastes

U.S Ecology focuses its selling and bidding efforts on inherently higher margin, specialty wastes that have lower competition. These wastes are typically some form of chemical that is classified as a hazardous material, and requires special equipment, and additional expertise to be qualified to handle and transport.

For the short:

To Decline in industrial manufacturing, and exposure to declines in other industries

Although U.S Ecology's strategy is to specialize in more specialty wastes, they still have significant exposure to other industries including metal and general industrial manufacturing, as well as oil refining. With the industrial manufacturing industry already on a downward trend, the possibility exists that a large enough regression in growth in these industries could offset the growth in the spe cialty chemical

2. Environmental regulations

Environmental regulations are a double edged sword in the environmental services industry. While new and more comprehensive $regulations \ could \ lead \ to \ a \ greater \ demand for \ U.S \ ecology's \ services, they \ could \ also \ mean \ greater \ costs \ that \ the \ company \ must \ incur \ in \ demand \ for \ u.S \ ecology's \ services, they \ could \ also \ mean \ greater \ costs \ that \ the \ company \ must \ incur \ in \ demand \ for \ u.S \ ecology's \ services, they \ could \ also \ mean \ greater \ costs \ that \ the \ company \ must \ incur \ in \ demand \ for \ u.S \ ecology's \ services, they \ could \ also \ mean \ greater \ costs \ that \ the \ company \ must \ incur \ in \ costs \ that \ the \ costs \ the \ costs \ that \ the \ that \ the \ costs \ that \ the \ costs \ that \ the \ that \ that \ the \ that \ that \ the \ that \ that \ the \ that \ tha$ order to comply with them. While in the long run, more regulations generally mean more demand, in the short term it can be a zero sum

3. <u>Unpredictable event based business revenue</u>
Historically, year-to-year 20% of U.S Ecology's revenue is classified as 'event based'. This means that the revenue was generated as a result of a onetime occurrence, such as an oil spill cleanup, or remediation of a construction project. Because of this, the company has a risk of high revenue volatility.

Key Catalysts for price change

- Growth in specialty chemical manufacturing
- Organic growth strategy, concentration in high margin wastes

Shares outstanding (mil)

My \$77.39 price target is derived from 50% Discounted Unlevered Free Cash Flow estimates, 25% EV/REV estimates, and 25% EV/EBITDA estimates

22 01

| Weighted Diluted shares outstanding (mil) | 22.15 | |
|---|----------------------------------|-------------------------|
| Options and Warrants (Shares equivalent) | 0.09 | |
| % shares held by institutions | 89% | 0.61% |
| % shares held by investments Managers | 76% | -0.68% |
| % shares held by hedge funds | 0.56% | 0.05% |
| % shares held by VC/PE firms | 0.261% | -0.03% |
| % shares held by insiders | 1,03% | 0.50% |
| Poison Pill and Type | NONE | |
| | Quarterly Earning Surprises (Ad | ctual/Median Estimates) |
| Peers' Median (LTM) | Revenue | Last 5 quarters |
| 3,23% | 6/30/2018 | \$547.648 (1.1%) |
| 16.90% | 9/30/2018 | \$605,664 (5.3%) |
| 6.4% | 12/31/2018 | \$630.164 (5.9%) |
| 2.5% | 3/31/2019 | \$524.148 (0%) |
| Peers' Median (LTM) | 6/30/2019 | \$623.208 (6%) |
| 2.6% | History: | Last 10 years |
| 0.4% | Mean Surprise | 2.76% |
| 60.6% | 99th percentile "surprise" range | -8% to 14% |
| 27.5% | EBITDA | Last 5 quarters |
| Peers' Median (LTM) | 6/30/2018 | \$122.852 (-0.9%) |
| 0.43 | 9/30/2018 | \$137.628 (2.8%) |
| 0.0% | 12/31/2018 | \$127.092 (-4.3%) |
| 0.0% | 3/31/2019 | \$89.376 (-16.5%) |
| ccc | 6/30/2019 | \$136.636 (-5%) |
| bb to bb+ | History: | Last 10 years |
| bbb- | Mean Surprise | 0.04% |
| 4.39% | 99th percentile "surprise" range | -26% to 26% |
| 9.89% | | |
| | | |

| CENTER FOR GLOBAL FINANCIAL STU | DIES | ECOL | | Thursday, | October 10, 2019 | Page |
|---|---------------------------|---------------------------|-----------------------------------|---------------------------------------|---|---|
| US Ecology, Inc. | Symbol: ECOL | | Cost of Capital Estimates | | | |
| Analyst | Bradley Smith | | · | CGFS Credit Rating | Credit Rating Model | Probability of Default ModelMode |
| Buy below | \$62.54 | | Implied Cost of Borrowing (ECOL) | 4.4% | 5.1% | 4.0% |
| Sell above | \$88.27 | | Implied Cost of Borrowing (Peers) | 5.1% | 5.2% | 4.8% |
| Probability of Price Increase | 89% | | Implied cost of borrowing (Feers) | | | |
| • | | | | Base Year | Explicit Period (15 years) | Continuing Period |
| ast Price | \$61,92 | | Cost of New Debt Estimate | 4.43% | 3.90 | |
| Intrinsic Value | \$71.40 | | Country Risk Premium Estimate | 5.50% | 5.50 | 5.9 |
| Target Dividends | \$0.78 | | Cost of Equity Estimate | 9.93% | 9.46 | 5% 9.4 |
| Target Price | \$77.39 | | WACC Estimate | 8.54% | 8,10 | 0% 8. |
| Forecast Assumptions | | | | | | |
| Fiscal Year | Revenue Growth | EBITDA Margin | CAPEX/Revenue | DPR/CAPEX | Other | |
| Base Year (Actual) | 11.08% | 19.5% | 7.2% | 1.04 | SBC/Revenue | 0.80% |
| rear 1 | 8,00% | 23.1% | 9.3% | 0.75 | | Constant/same as LTM |
| rear 2 | 10,00% | 23.4% | 7.2% | 0,94 | Lease term | 10 |
| ear 3 | 20,00% | 23.6% | 8.9% | 0.95 | Rent Expense/Revenue | 0.95% |
| | 18.00% | 23.0% | 8.5% | 0.95 | Kerr Expense, Revenue | Tappers off to historical average |
| ear 4 | | | | | DAD III | |
| ear 5 | 5.51% | 23.1% | 8.1% | 0.96 | R&D life | 10 |
| ear 6 | 5.50% | 24.3% | 7.7% | 0.96 | R&D Expense/Revenue | 0.00% |
| ear 7 | 5.21% | 24.4% | 7.3% | 0.96 | | Constant/same as LTM |
| ear 8 | 5.18% | 24.5% | 6.9% | 0.97 | LIFO Reserve | Tappers off to zero |
| ear 9 | 5.18% | 24.5% | 6.5% | 0.97 | Non-operating pension costs | Tappers off to zero |
| rear 10 | 5.20% | 24.6% | 6.1% | 0.98 | Net financing pensions costs | Tappers off to zero |
| rear 11 | 4.76% | 23.7% | 4.0% | 0.98 | Overfunded pension plans | Tappers off to zero |
| ear 12 | 4.31% | 22.8% | 4.0% | 0.98 | Capitalized interests | Constant/same as LTM |
| ear 13 | 3.86% | 21.8% | 4.0% | 0.99 | Dividends/Revenue | 0.25% |
| | 3,41% | 20.9% | | 0.99 | | 28.48% |
| ear 14 | | | 3.0% | | Tax Rate | 28.46% |
| ear 15 | 2.97% | 20.0% | 3.0% | 1.00 | | |
| Continuing Period | 2.52% | 20.0% | 4% | 1,00 | | |
| Simulation Assumptions | | | | | | |
| Random Variables | Distribution Assumption | MAX | Likelly | MIN | Sansitivity: Price Vari | ance Attribution Analysis |
| Deviations in annual Revenue GrowthExpl. Per. | Triangular | 30.00% | 0% | -15,00% | - | • |
| Deviations in annual Revenue GrowthCont. Per. | Normal | 1.52% | 0% | -1.52% | 6 | Revenue growth |
| peviations from EBITDA Margin base annual estimates | Triangular | 5.00% | 0% | -8.00% | 6 | EBITDA Margin |
| Deviations from CAPEX/Revenue base annual estimates | Triangular | 5,17% | 0% | _ | 16.04% | CAPEX/Rev |
| Deviations from Kd base annual estimates | Triangular | 1,24% | 0% | -0.78% | | 64.09% Discount Rate |
| | | 1.82% | 0% | 4.00% | _ | |
| Deviations from CRP base annual estimates | Triangular | | | -1.92% | 6 | TEV/Rev |
| Deviations from TEV/Revenue base estimate | Triangular | 2.29 | 0% | -2.08 | 6 | TEV/EBITDA |
| Deviations from TEV/Revenue base estimate | Triangular | 7.31 | 0% | -5.79 | 3 | P/BV |
| hange in P/BV (TTM) | Triangular | 18.25 | 0% | -2,35 | = = | |
| hange in P/E (FW) | Triangular | 41,01 | 0% | -13.76 | 6 | P/E |
| tecovery Rate | Triangular | 10.00% | 0% | -10% 0.00% | 6 | Asset Recovery R |
| 'aluation | | | | | | |
| OF Valuation | | | _ | . | | 130 40 11 200 |
| | Base | Explicit Period (Average) | Continuing Period | Intrins | ic Value DistributionProb | dbility (Upside)=69% |
| Devenues | \$595.80 | \$1,173.31 | - | | _ = | |
| Revenues | | | \$1,692.41 | | | - |
| BITDA Margin | 18% | 23% | 20% | | | |
| JFCF | -\$16.83 | \$136.67 | \$233.04 | | | i i. |
| VACC | 8.54% | 8.10% | 8.10% | | | Isilo . |
| OIC | 6.30% | 14.76% | 8.10% | | | |
| | | | | _ | | |
| Relative Valuation | | | | | | 6166666 |
| | Median Justified Multiple | Basis | Implied Equity Value | | | _2_ 22222222 |
| V/Rev (FW) | 2.4x | \$663,20 | \$1,206.18 | | | |
| V/EBITDA (FW) | 11,5x | \$153.83 | \$1,392.24 | 133 W 8 18 -0 | \$63. **00. **00. **10. **10. **10. **05. ** | 27 23 60 76 92 .08 .28 .20 |
| /BV (TTM) | 3.3x | \$395.65 | \$1,296.56 | * * * * * * * * * * * * * * * * * * * | \$ 50, \$ 90, \$ 90, \$ 1,0, \$ 1,0, \$ 1,0, \$ 20,0 \$ | 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 |
| | 3.3x 25.5x | \$395.65 \$78.07 | | | | ~ * * |
| /E (FW) | 20,0X | Ψ/8.0/ | \$1,987.46 | | | |
| | | | | | | |
| Asset Based Valuation | | | Valuation Summary | Intrinsic Value | Target Price | Model Weight |
| Recovery Rate | 60% | | DCF Valuation | \$ 88.7 | 8 \$ 96.6 | 50% |
| Capital | \$1,803.05 | | EV/Rev (FW) | \$ 54.2 | 4 \$ 58.0 | 25% |
| ntangibles | \$485.33 | | EV/EBITDA (FW) | | 0 \$ 67,1 | |
| laims | \$468.97 | | P/BV (TTM) | | 0 \$ 62.4 | |
| implied Equity Value | \$321.66 | | P/E (FW) | | 7 \$ 96,1 | |
| impried Equity value | φ321,00 | | | | | |
| | | | Asset Based Valuation | • | 6 \$ 14.8 | |
| | | | Price per Share | s 73.6 | ∩ \$ 79 F | 100% |

Price per Share

73.60 \$

79.59

100%