

New York State Pollution Prevention Institute

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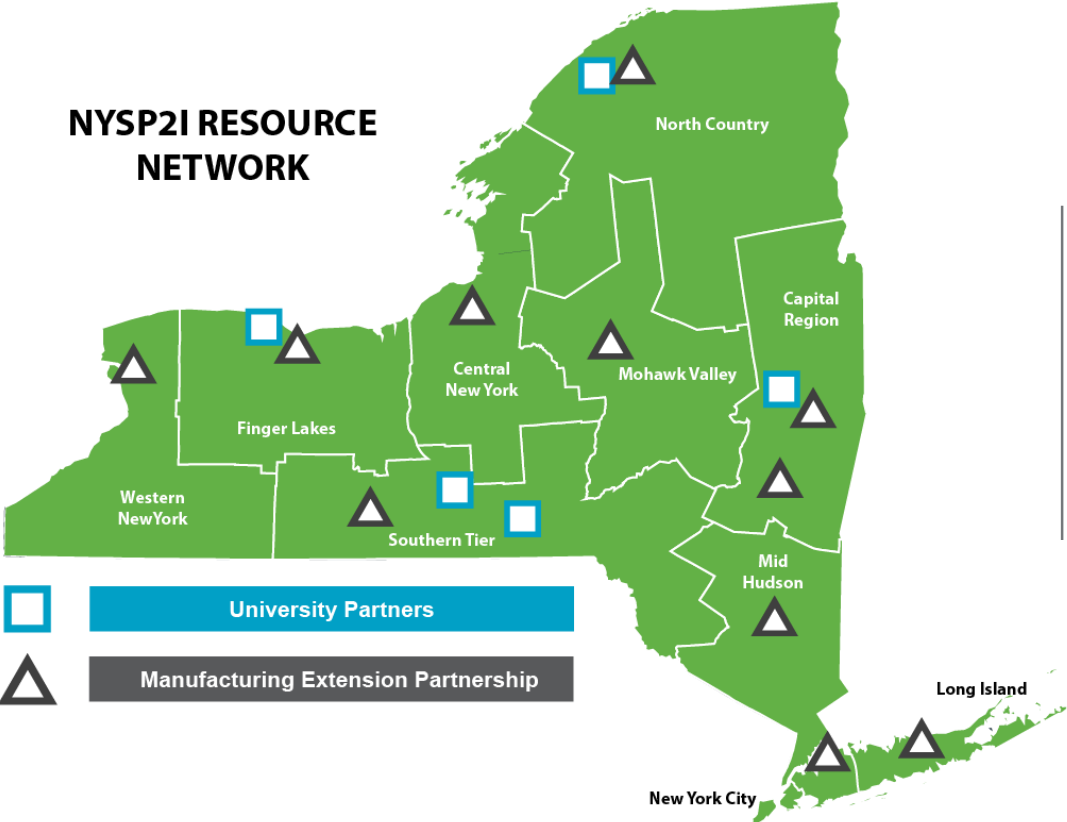
- Leads NYSP2I's Community Grants Program, University Initiative and K-12 Program
- Worked in non-profit management and environmental advocacy for 10+ years prior to NYSP2I



NYS Pollution Prevention Institute

- HQ at RIT
- Established in 2008
- \$3.9M in annual NYS funding administered through the NYS Department of Environmental Conservation
- Focus areas include:
 - Sustainable Manufacturing Assessments
 - Supply Chain Sustainability
 - Technology Commercialization
 - Food Waste Diversion
 - Emerging Contaminants
 - Outreach & Education
 - Research & Development

NYSP2I RESOURCE NETWORK



**Department of
Environmental
Conservation**



NEW YORK
Manufacturing
Extension Partnership

Assistance for NYS Companies, Municipalities & Non-Profits

- **Must be NY-based**
- **Typical project cost range is \$15K - \$50K**
- **NYSP2I funding offsets most of the project cost to the organization**
 - Expenses are non-capital expenses
 - RIT's engineering, technical and project management services
- **Post-project reporting**
- **Typical project takes about 2 - 6 months**

Impact Across NYS

- Almost **300** companies assisted to date
- R&D projects totaling **\$2.7M** funded to solve industry problems
- Over **\$1.7M** invested in over **100** communities in NYS



Materials/waste reduction

99 K lbs

Non-Hazardous

7.2 M lbs

Hazardous



Water usage
reduction

105M

gallons



Energy usage reduction

15M kWh

Electricity

314MMBTU

Natural Gas

NYSP2I Can Help Businesses

- Focus the goal and scope of an project.
- Design a study that meets their needs.
- Support product development, manufacturing, and supply chain by identifying areas for environmental improvement.
- Identify opportunities for results to help increase market share and meet customer demands.



Make a difference.

Staples recycles your ink and toner cartridges.

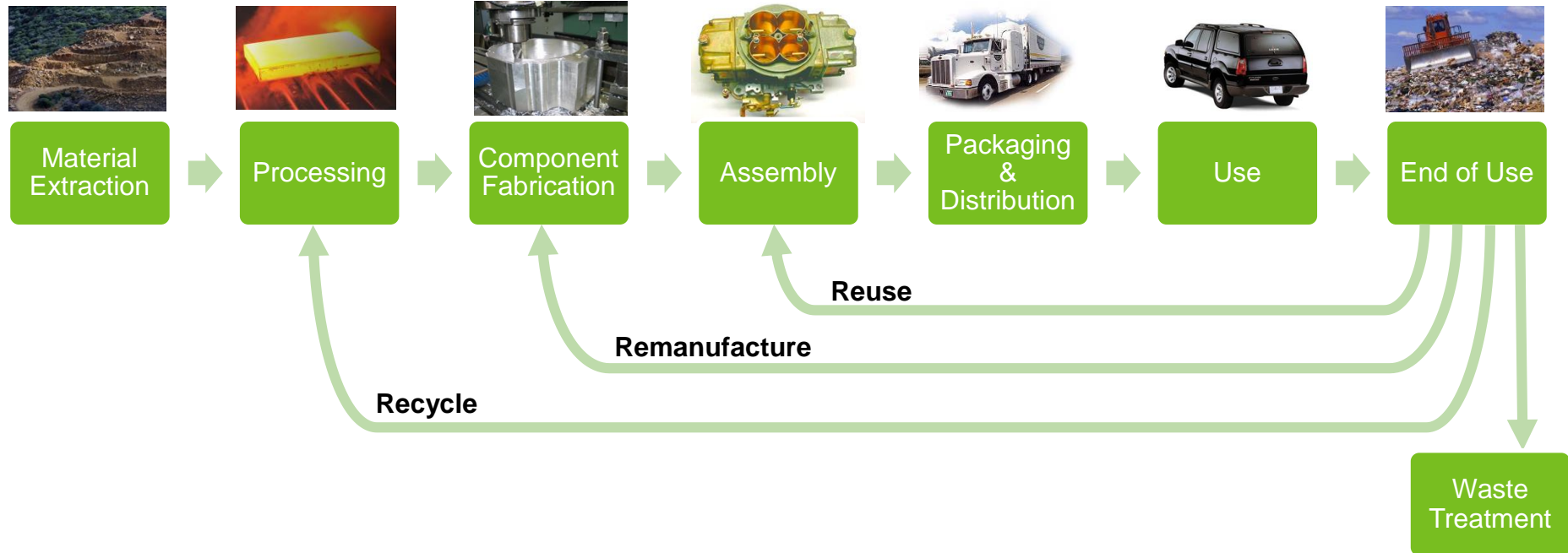
Staples is committed to recycling or reusing 100% of a cartridge's components, ultimately limiting the number of cartridges sent to landfills. The remanufactured toner process emits 60% fewer carbon equivalents than manufacturing a new cartridge. And each remanufactured toner helps save 2 quarts of oil.¹

Cartridges that cannot be reused are recycled to create new products. The process is as follows:



Life Cycle Assessment (LCA)

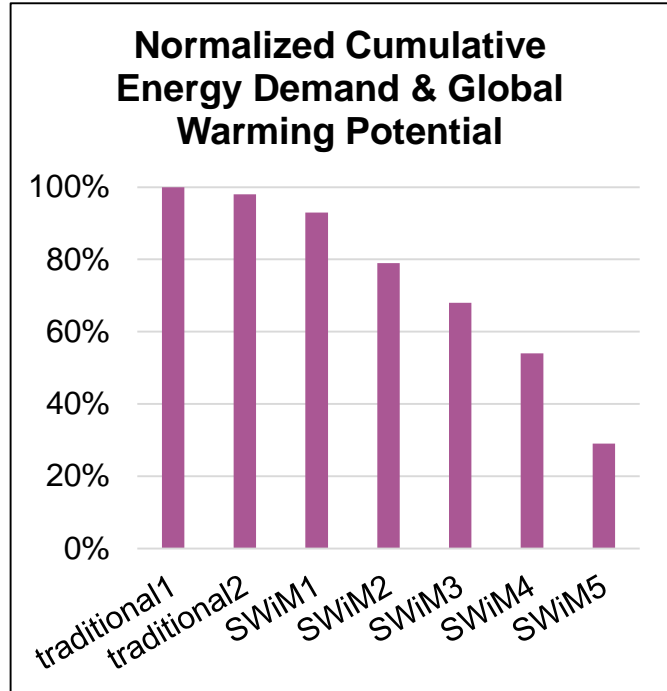
LCA is a technique used to quantify the environmental impact of a product or process from raw material acquisition through to end-of-life disposition.



Cost and Environmental Impact of Alternative Process



- **Challenge:** Quantify cost and environmental impact of a snow- and ice-management removal process at 7 Syracuse-area grocers
- **Solution:** streamlined LCA, focused on mass of salt and global-warming potential
- **Impact of results:**
 1. Increased client base
 2. Focused company's data collection
 3. Hot spot analysis identified opportunities and tightened up process



NYSP2I Can Help Non-Profits & Municipalities

- Outreach and Education
 - > Case Studies, Webinars & Conferences

- Funding
 - > Community Grants Program
 - > College Council Grant

- Brief Assistance or Technical Support
 - > Sustainable Food Program
 - > Recycling (Glass)

Outreach & Education

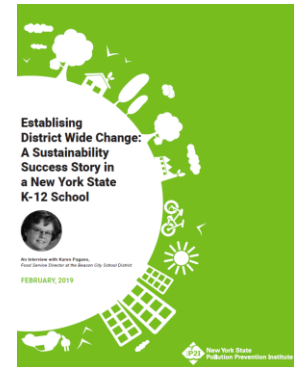
Goals:

- Enhance community awareness
- Engage new private & public stakeholders
- Broaden Community support and engagement in pollution prevention activities
- Increase knowledge about pollution prevention and adaption of p2 behavior change



Support:

- Training events- webinars, conferences, workshops
- Educational materials
- Brief Assistance and referrals



Community Grants Program

*Since 2008, NYSP2I's Community Grants Program has over 500 applicants from across New York State and supported **113** community grant projects with over **\$1.7 million** worth of funding.*



Community Grants Program

- Who is eligible
- What type of projects
- [Next Request for Application \(RFA\)](#)
 - Early Spring 2020



CGP 2019 Grantees



New York State
Pollution Prevention Institute

2019 Community Grant Awardees

Buffalo Zoo
Teaching K-12 Pollution Prevention through Video, Art, and Sciences, Phase II will build on the Buffalo Zoo's previous Pollution Prevention through Art project, including rain barrel painting and single-use plastic bag art, by increasing student participation in the program and adding an informative video program.

Capital Roots
The Youth Empowerment for Community Change project aims to provide environmental justice neighborhoods with innovative food access and education programs that reduce the impacts of poverty, poor nutrition, and lack of access to healthful foods. Their job-readiness and youth leadership program trains students in data collection, public health education, and community engagement.

Children's Environmental Literacy Foundation
Citizen Science in NY School Communities will engage NY public school students as environmental health researchers to collect, analyze, and compare air-quality data from their neighborhoods to identify the sources of air pollution, connect the sources to human behaviors, and then develop prevention plans for their communities.

Clean and Healthy New York
Reducing Toxic Chemicals through Local Procurement will conduct research needed to develop materials to create awareness about chemical hazards in food service ware, identify safer alternatives, and promote nontoxic packaging.

Corn Hill Waterfront and Navigation Foundation
Environmental Education on the Erie Canal (E3C) aims to position the Erie Canal as a testbed for STEM education by educating teachers, students, and the community to raise the public's awareness of the sources and effects of water pollution.

Gowanus Canal Conservancy
Gowanus Blue Schools will implement a program and STEM curriculum model that addresses issues of Combined Sewer Overflows (CSOs). Students will design comprehensive green infrastructure proposals on environmental justice topics and then present them at a final competition.

Healthy Baby Network
Environmental Reproductive Wellness for Black Women aims to create a community driven health education series targeting black women and girls with respect to personal care products and the development of a steering committee to champion black women's environmental wellness.



New York State
Pollution Prevention Institute

2019 Community Grant Awardees Continued

Hudson River Park Friends
The Hudson River Park Community Compost Center Program will support and enhance their existing Community Compost Program by recruiting additional volunteers, sustaining and increasing the number of Community Compost Programs, extending outreach to parks and municipalities, and securing additional supplies and equipment.

Hudson River Sloop Clearwater Inc.
The Microplastics Pollution Prevention Project will focus on training teachers in environmental justice communities because their experience educating showed greater potential impact in training educators who can deliver the curriculum to their students thus multiplying the impact of their work. The project will have a greater emphasis on plastics pollution prevention strategies.

Onondaga County Resource Recovery Agency
Cafeteria Food Scraps Recovery Educational Video will produce a professional educational video to train students on how to implement a school-wide cafeteria food scraps recovery compost program and explore why it's beneficial to do so. It will serve as support to the NYS DEC 'Beyond Waste' solid waste plan.

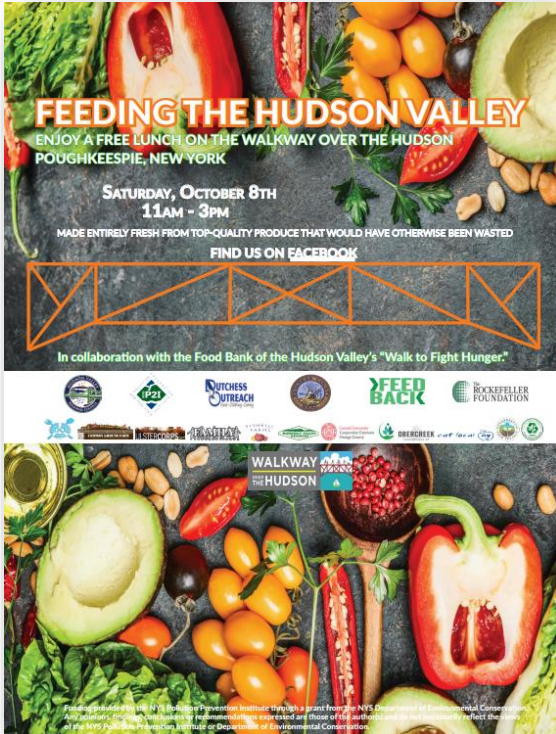
Rockaway Waterfront Alliance
Living Classroom is a series of hands-on experiential learning workshops that empowers kids to address issues directly, giving them an opportunity to effect change. The program will grow students' sense of environmental stewardship, and their role in reducing pollution, with a goal of a behavioral change in diverting trash to recycling and compost.

SU Center for Sustainable Community Solutions
The Save CNY Wasted Food project aims to increase community support for local food recovery efforts that work to aid those facing food insecurity by engaging, educating, and empowering CNY residents about food waste, food insecurity issues, and food waste prevention practices they can adopt.

The Art Effect
The Creativity and Connection at the Fall Kill Creek project engages low-income youth and community residents alongside the creek to increase knowledge about environmental harms. Youth will research, clean, and monitor two sites, implement public education campaigns, and design and install public art encouraging them to become ambassadors for the environment.

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CGP Materials & Case Studies



FEEDING THE HUDSON VALLEY
ENJOY A FREE LUNCH ON THE WALKWAY OVER THE HUDSON
POUGHKEEPSIE, NEW YORK

SATURDAY, OCTOBER 8TH
11AM - 3PM

MADE ENTIRELY FRESH FROM TOP-QUALITY PRODUCE THAT WOULD HAVE OTHERWISE BEEN WASTED

FIND US ON **FACEBOOK**

In collaboration with the Food Bank of the Hudson Valley's "Walk to Fight Hunger."

Logos: Dutchess Outreach, Feed Back, Rockefeller Foundation, Walkway Over the Hudson, etc.

WALKWAY OVER THE HUDSON

Feeding the Hudson Valley is a project of the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation. Any actions, findings, conclusions, or recommendations expressed are those of the authors and do not necessarily reflect the views of the NYS Department of Environmental Conservation.

COMMUNITY GRANTS PROGRAM	IP21 CASE STUDY
<h3>Human Impacts Stories Project Fosters Creativity through Sustainability</h3> <p>The Human Impacts Institute is an organization of social entrepreneurs who create and share innovative approaches to tackling social and environmental issues. Founded in 2011 in Brooklyn, New York their programs pair artists and scientists to engage new audiences in climate change solutions, bring youth to the boardroom, and get policy makers' hands dirty as they care for local street trees. Their goal is to help people of diverse ages and backgrounds personally connect to the most pressing environmental issues of our times, and give them the tools needed to take positive, long-term actions.</p> <p>CHALLENGE North Brooklyn is a socio-economically undeserved region bearing a disproportionately high pollution burden; its residents may be vulnerable to health risks, which have been positively correlated to air pollution, water pollution, and chemical exposure.</p> <p>Particulate matter air pollution is produced mainly from diesel-burning vehicles and can cause long-term impacts in air quality and human health. North Brooklyn experiences long-term health impacts from particulate matter air pollution derived mainly from diesel-burning vehicles from transport to and from its many industrial business zones. North Brooklyn faces pressure because residential housing and industrial facilities are often within close proximity, making residents vulnerable to indoor and outdoor air pollutants.</p> <p>North Brooklyn is disproportionately saddled with a high pollution burden in terms of both solid waste and wastewater. Wastewater treatment plants burden communities with foul odors and when overcapacity may discharge raw sewage into the waterways. North Brooklyn is home of The Newtown Creek Water Pollution Control Plant, which serves approximately one million residents and is one of NYC's largest wastewater treatment plants. In addition, according to the Newtown Creek Alliance, North Brooklyn neighborhoods host 19 waste transfer stations. Collectively, these WTS handle almost 40% of the 12 million plus tons of waste moving through WTS in NYC annually. This is the densest concentration of WTS stations in New York City.</p> <p>Another risk to residents includes the widespread use of household hazardous chemicals. Harmful cleaning products can cause skin irritations, allergies, respiratory problems, cancer, developmental and reproductive toxicity issues.</p> <p>SOLUTION While addressing all of the above challenges was outside the scope of this project, they illustrate the great need for a community-based, participatory approach to pollution prevention. It is important to showcase residents' stories relating to pollution, to put a "face" to the environmental risks, exposures, and solutions in the community is paramount. Through the Human Impacts Stories project, Human Impacts Institute (HII) personalized pollution impacts and enabled people to engage with fellow community members who are experiencing these complex issues and are working to find innovative ways to address them.</p>	<p>CHALLENGE</p> <ul style="list-style-type: none"> North Brooklyn experiences long-term health impacts from particulate matter air pollution derived mainly from diesel-burning vehicles from transport to and from its many industrial business zones North Brooklyn is disproportionately saddled with a high pollution burden in terms of both solid waste and wastewater. These wastewater treatment plants burden communities with foul odors and when overcapacity may discharge raw sewage into the waterways <p>SOLUTION</p> <ul style="list-style-type: none"> Through the Human Impacts Stories project, Human Impacts Institute personalized pollution impacts and enabled people to engage with fellow community members who are experiencing these complex issues The Human Impacts Stories project developed and offered a successful series of community trainings, focus groups, and storytelling which culminated in the creation of a Climate s!sters event <p>RESULTS</p> <ul style="list-style-type: none"> Four community trainings were held with a total of 56 participants Climate s!sters event was held at the French Consulate on June 17, 2015 to showcase a combined StoryCorps exhibit The Health and Consumer training materials were shared at an Inaugural Youth Leadership Intensive at the Green School <p>CONTACT INFO</p> <p>TARA DEPORTE Executive Director and Founder 917-727-0761 tara@humanimpactsinstitute.org Human Impacts Institute 312 S 3rd Street Brooklyn, NY 11211</p>



Hamilton County Implements Green Infrastructure to Manage Stormwater Runoff

- **Challenge:** Soil erosion, pollution and invasive species affect water quality and quantity in Hamilton County.
Solution: Rain garden, bioswale and rain barrel were installed at HCSWCD as educational tools for homeowners.
- **Impact of Results:**
 - Events and outreach reached over 6,400 people



College Council Grant

- Awards for up to \$5,000 for a NYSAR3 College Council Members or P2I affiliated partner school
- Deadline is will be March 13, 2020th
- Award will be announced on or before Earth Day 2020
- Projects should be commence by September 2020
- [Link to Application](#)



Sustainable Food Program

■ Why it matters

■ Who is eligible

- food production, processing, and manufacturing
- grocery
- food waste hauling
- K-12 education
- municipalities

■ What we do

- pathway utilization to improve cost efficiencies
- technology assessment and validation
- process-effectiveness and -efficiency studies
- sustainability strategy development and implementation
- environmental impact evaluation



P2 Tools/Resources – Food Waste e-book

Understanding
Sources

Managing the
System

Prevention
Opportunities

Donation Best
Practices

Recycling
Basics

Available at nysp2i.rit.edu/resources



Sustainable Food Program Resources

- Best practices (reduction/diversion)
- Source separation guidance
- Food donation guidance
- Self-assessment tools
- Food waste estimator tool
- Organic resource locator



Additional Funding

- DEC Food Scraps Reduction, Food Donation, and Food Scraps Recycling Grant https://www.dec.ny.gov/docs/materials_minerals_pdf/muniwebinarpres.pdf
- Climate Smart Communities Grant Program <https://www.dec.ny.gov/energy/109181.html>

Village of Clifton Springs WWTP Implements Municipal Food Waste Composting

- **Challenge:** 63 million tons of food wasted each year in US. Clifton Springs is aiming to reduce waste going to landfill
- **Solution:** Developed implementation plan to incorporate food waste into existing sludge composting operation
- **Impact of results:**
 1. Diverting 2k lb. food waste/month from 3 businesses
 2. WWTP expansion plan in place for full pilot program



NYSP2I Client Testimonials

“NYSP2I is a very thorough team. They are a pleasure to work with and they helped us to understand our product and its impact on a deeper level.”

- Patrick Manian, Director of Operations;
Ener.co, LLC

“It was an absolute pleasure working with the NYSP2I team. Their resources, and networking were imperative to the success of our pilot program. The study has provided a clear path of direction to further expand our vision.”

– Eric Merkley, Chief Operator Wastewater Department Village of Clifton Springs, New York

“Our project, thanks to NYSP2I support, was a success- we went beyond demonstration, and encouraged our community to take action and install green infrastructure at their own homes. We installed green infrastructure projects not only to protect water quality and quantity, but to demonstrate to the public that rain gardens, bioswales and rain barrels can be efficient and installed to prevent stormwater pollution”

– Elizabeth Mangle, District Manager Hamilton County Soil & Water Conservation District

“While at the Google headquarters in Mountain View, California, we were challenged to find a solution to the problem of CRT glass disposal. The results have assured us that this is a winning solution for the electronics, recycling and building industries: eliminating a growing waste glass problem and creating a superior product for green building.”

– Louis Grasso, Jr., Managing Partner, Urban Mining Northeast

“The LCA performed by NYSP2I’s experts was useful in a number of ways. Results allowed our product designers to better understand how the choices they make affect the environmental impact of our EcoCuffs throughout their life. Operations that contribute significantly to environmental impact were identified and targeted to further reduce the impact of future designs. The LCA results validate and support our EcoCuff’s environmental claims which help our customers make more informed purchasing and end of life management decisions. Working with NYSP2I helped us to better understand how to make more environmentally friendly products in the future.”

- Sean Karla, Senior Global Category Manager, Welch Allyn

Thank you



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