



Annual Report



Table of Contents

Table of Contents.....	2
Executive Summary.....	3
2018 Progress Report.....	5
Program Achievements.....	7
Membership Growth.....	7
Member Goals.....	8
Member Results.....	9
Greenhouse Gas Reductions.....	12
Cost Savings.....	13
Community Involvement.....	14
New Member Accomplishments.....	15
Program Updates.....	16
Membership.....	18
Criteria.....	19
Benefits.....	20
Application Process.....	21
Conclusions.....	23
2018 ESI Members.....	24
Stewards.....	24
Rising Stewards.....	25
Partners.....	26

Executive Summary

The N.C. Department of Environmental Quality's Environmental Stewardship Initiative (ESI) is a voluntary program that assists and encourages facilities to use pollution prevention and innovation to meet and go beyond regulatory requirements. The ESI takes a unique approach to supplement regulation by providing a voluntary, systematic and holistic approach to environmental management.

Reduced impacts and cost savings reported by members demonstrate real results and improvements to the environment, economy and health of the citizens in North Carolina. The ESI program assists members in addressing environmental challenges through partnerships and a comprehensive and innovative voluntary approach that benefits the environment and supports continued economic growth.

This approach combines recognition with assistance, training, mentoring and networking opportunities. The three-tiered membership structure of Environmental Partners, Rising Environmental Stewards and Environmental Stewards allows participation from a variety of organizations. The Partner level is the entry level of the program and helps organizations set environmental goals and/or develop an Environmental Management System (EMS) while higher tiers require organizations to be models of stewardship, as well as provide mentoring and educational resources to others in the program. In 2018, the ESI had 190 member sites as shown in Figure 1 below.

2018 ESI Participants

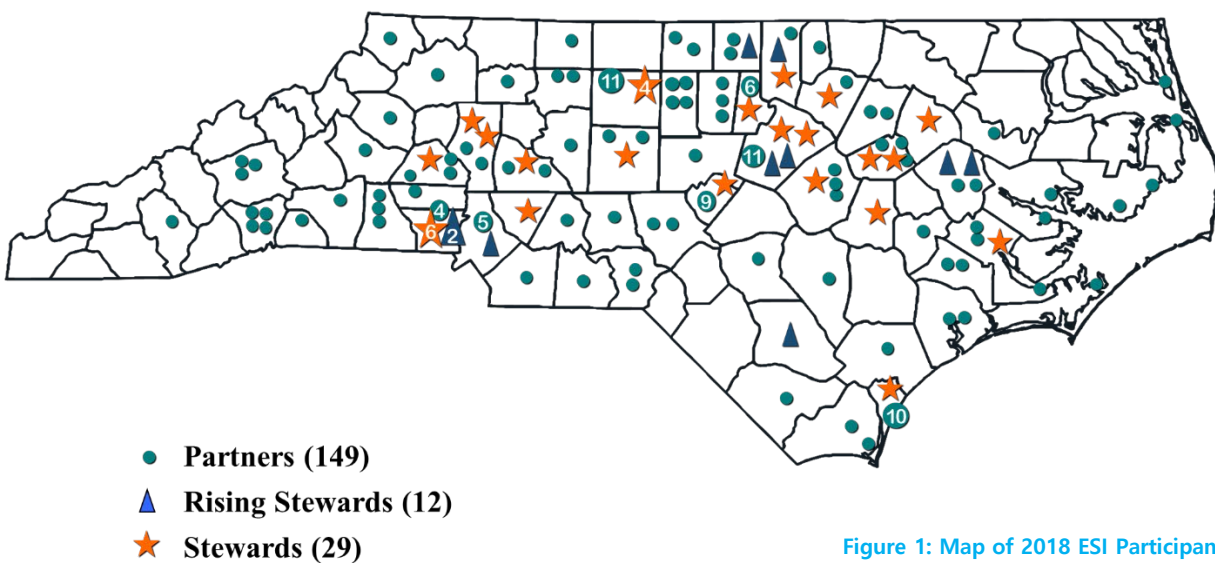


Figure 1: Map of 2018 ESI Participants



The ESI is open to any entity in North Carolina that commits to improving its environmental impact. (See the Membership section on page 18 of this report for more information on eligibility and the three tiers of the program). ESI members commit to developing environmental management systems and/or setting measurable goals that lead to continual improvement and stewardship. In 2018, ESI members set 280 goals covering multi-media, regulated and non-regulated environmental impacts including energy and water conservation. Eighty-five members reported progress toward these specific goals†. In 2018, ESI members reported the following reductions in environmental impacts as shown in Table 1.

2018 ESI MEMBERS REPORTED RESULTS			
REDUCTIONS	Air Emissions	2,595	Tons
	Greenhouse Gas Emissions*	30,616	Metric Tons CO ₂ e
	Hazardous waste	30	Tons
	Landfilled waste	3,430,522	Tons
	Energy	3,065,511	mmBtu
	Water Use	2,091,856,088	Gallons
	Material Consumption	515	Tons
	Wastewater Pollutants	109,134	Tons
	Wastewater Volume	1,840,602,313	Gallons
REUSE	Biomass Recovery**	89,607	Tons
	Total Recycled Volume	329,229	Tons
TOTAL COST SAVINGS \$ 6,717,739			

*Indirect not reported in energy reductions

**Category created for compost/mulch related goals

Table 1: 2018 ESI Members' Reported Results

†Partners may apply to the program as a multi-site facility, which allows a collection of sites to submit a single annual report. New members must be in the program for at least one year prior to having their results included in the overall totals. Therefore, the total number of members reporting may be less than the total membership number.

2018 Progress Report



2018 ESI Annual Conference

With the goal of supporting and encouraging superior environmental performance from North Carolina's companies and organizations, the ESI assists members in implementing environmental management systems and making progress on environmental goals. The ESI helps organizations share ideas and has developed an atmosphere of collaboration while fostering a culture of continual improvement.

The typical command and control regulatory approach to environmental management is necessary and has led to significant improvements. However, it is not practical or fiscally possible for North Carolina to regulate all pollution and consumption of natural resources. The ESI was established to help organizations reduce their environmental impacts beyond measures required by any permit or rule in a way that will improve the environment, conserve natural resources, encourage community involvement and provide long-term economic benefits.

Each organization within the ESI has committed to report annually on its progress toward its environmental goals. This annual report summarizes the self-reported annual data collected by the ESI members in 2018. Starting in 2005, members began to include cost savings from implementing environmental improvements in their reporting. Reporting on greenhouse gas emission reductions was first included in 2008. A new category was created in 2010 for biomass recovery to capture activities related to composting and mulching as a means of beneficial use by diverting waste from landfills. In 2012, the ESI was opened to organizations not regulated through North Carolina Department of

Environmental Quality (DEQ) issued permits in order to increase the program's reach and build a larger network of organizations working together to make North Carolina a model of environmental stewardship. The annual report form was updated for the 2016 reporting year allowing members to provide additional reduction data that may not have been directly tied to the site's environmental goals. Facilities were also allowed to report in either Fiscal Year or Calendar Year spans to ease the capture of data. It was requested that sites remain consistent from that point forward in the timeframe reported.



Program Achievements

Membership Growth

Number of Employees per ESI Member 2018

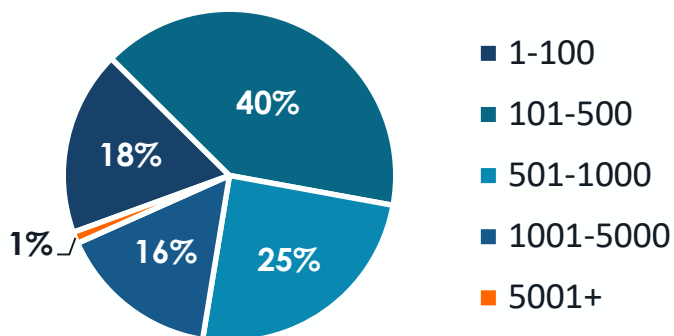


Figure 2: ESI Member Employment

ESI membership has grown almost six-fold from its original membership of 24 member sites in 2002 to 190 member sites in 2018. In 2004 a middle tier, the Rising Steward level, of membership was added (Figure 3). Beginning in 2005, Partner applicants were allowed to submit one application for multiple sites. Facilities of all sizes participate with the smallest having only one employee and the largest employing more than 19,000 (Figure 2). Sixty-five member sites are registered to ISO 14001 by third-party auditors and seven have been deemed functionally equivalent by ESI staff. In 2018, one member facility site closed, two chose to drop out of the program, two sites merged into one reporting member due to their management structures, and two members sites were terminated for failure to submit the required ESI annual report. Three partner sites asked to be put on hold for a year due to changes at the sites. In 2018, eight new sites joined the ESI (Table 2) and one Partner moved to the Rising Steward level.

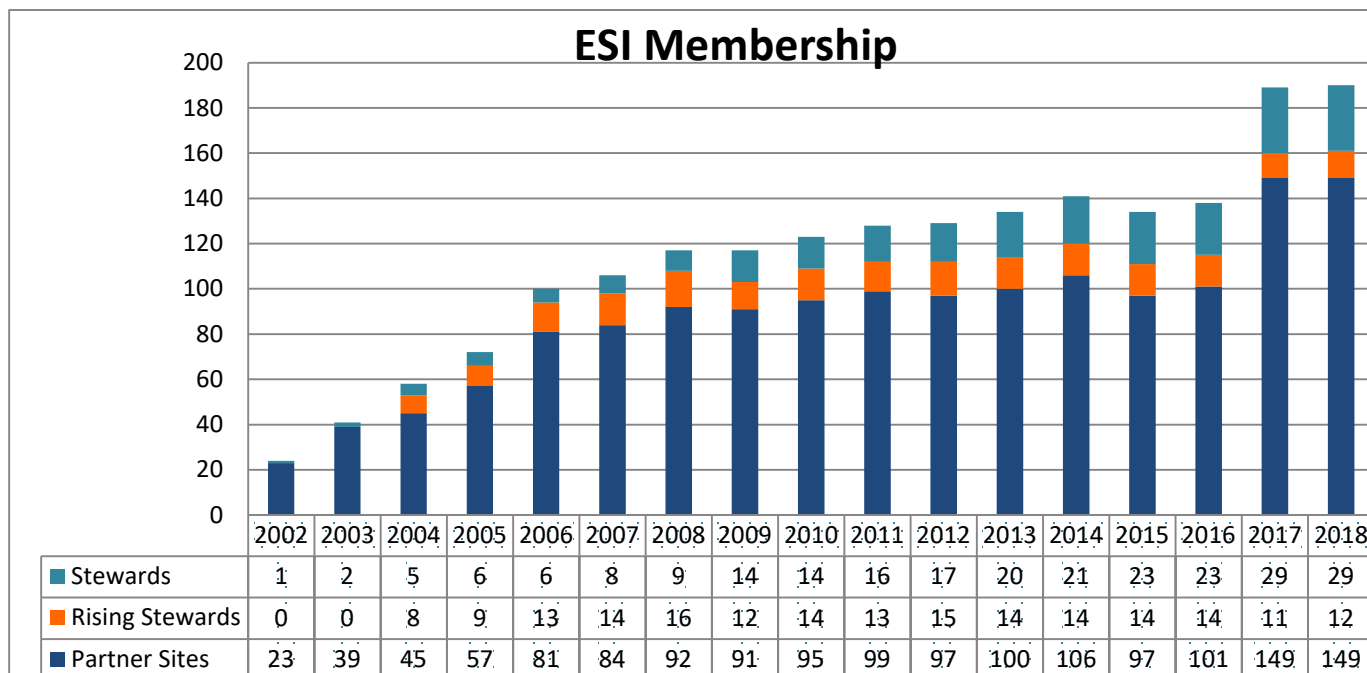


Figure 3: ESI Membership Growth, 2002-2018

2018 New ESI Members

Facility Name	ESI Level	Year Joined	City	County
Continental Automotive Henderson Plant	Partner	2018	Fletcher	Henderson
Corning Newton Cable Plant	Partner	2018	Newton	Catawba
Cree, Inc. (Cree Durham and Cree RTP/Wolfspeed)	Partner	2018	Durham	Durham
Kewaunee Scientific Corporation	Partner	2018	Statesville	Iredell
Leggett/Platt Branch 0548	Partner	2018	Statesville	Iredell
Leggett/Platt Branch 8814	Partner	2018	Conover	Catawba
MATREX - A Division of Leggett & Platt Components Company, Inc.	Partner	2018	Greensboro	Guilford
Static Control Components, Inc.	Partner	2018	Sanford	Lee

Table 2: 2018 New ESI Members

Member Goals

In 2018, ESI members reported on 280 goals that covered multi-media regulated and non-regulated impacts. As shown in Figure 4, the greatest number of goals set in 2018 were related to energy use reductions.

2018 ESI Member Goals

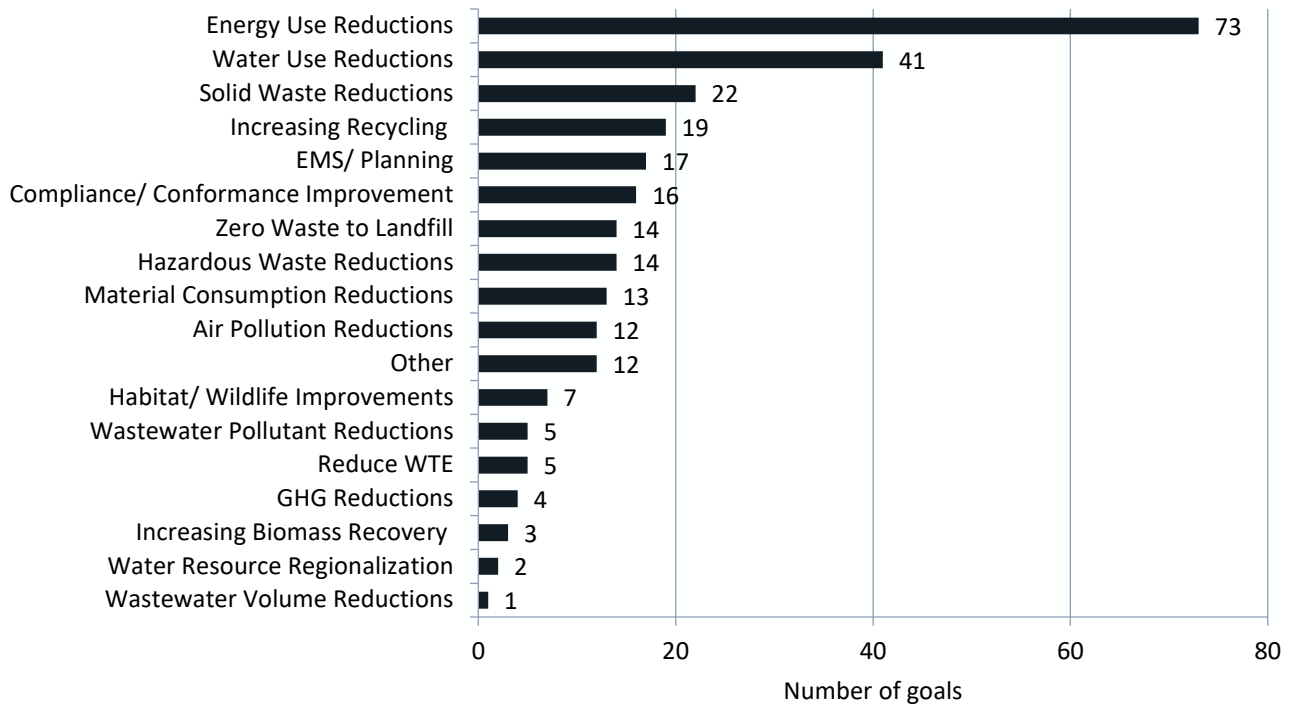


Figure 4: 2018 ESI Member Goals

Member Results

ESI members are required to report on performance toward environmental goals and reductions in environmental impacts. While there are 190 sites in the program, there are nine multi-site members reporting and new members must be in the program for at least one year prior to having their results included in the totals. Therefore, 85 members reported progress toward these goals, resulting in the following environmental impact reductions (See Tables 3 through 6). All reduction data are self-reported by member facilities and are not verified by the N.C. Department of Environmental Quality. While reductions are only counted in the first year of their occurrence, most are permanent reductions.

Year	Total Cost Savings
2004	NA
2005	\$12,721,772
2006	\$10,393,930
2007	\$2,961,039
2008	\$4,523,391
2009	\$3,070,439
2010	\$3,270,504
2011	\$13,292,968
2012	\$5,262,972
2013	\$836,537
2014	\$2,188,478
2015	\$2,626,307
2016	\$8,221,015
2017	\$8,178,746
2018	\$6,717,739
Totals	\$84,265,837

Table 3: Total cost savings from member reported environmental projects



Number of North Carolina homes that could be powered for a year by ESI member energy savings in 2018.



ESI members saved enough money on 2018 environmental projects to pay the salary of 224 people earning \$30,000 per year.

Year	Energy Reductions	GHG Emission Reductions *	Air Emission Reductions**
2004	11,736	NA	297
2005	48,451	NA	208
2006	123,821	NA	232
2007	28,527,501	9,370	243
2008	9,196,666	5,466	29
2009	1,549,175	64,224	155
2010	598,591	1,444	46
2011	1,626,534	18,677	4
2012	547,878	1,277	13
2013	8,643,348	2,041	73
2014	79,175	11,136	112
2015	22,289,629	818	76
2016	295,075	3,562	2,973
2017	1,093,033	2,546	1,694
2018	3,065,511	30,616	2,595
Total	77,696,125	151,177	8,750
Units	mmBtu	Metric Tons CO₂e	Tons


*Indirect not reported in energy reductions

**Not including Greenhouse Gas (GHG) emission reductions

Table 4: Energy and air emission reductions 2004-2018

Year	Water Use Reductions	Wastewater Volume Reductions	Wastewater Pollutant Reductions
2004	369,529,216	NA	379
2005	54,201,286	85,566,162	527
2006	591,356,273	106,092,200	400
2007	83,929,264	881,690	0.02
2008	183,587,248	202,701	105
2009	1,444,617,822	18,304,480	138
2010	41,895,325	20,449,660	4
2011	347,399,898	5,904,175	7,210
2012	455,656,908	10,862,255	230
2013	547,725,143	16,252	3,616
2014	2,105,928,788	7,381,860	11,139
2015	2,439,754,313	1,690,643	3,530
2016	1,239,254,545	230,263,919	806
2017	1,038,806,743	490,620,971	6,783
2018	2,091,856,088	1,840,602,313	109,134
Totals	13,035,498,862	2,818,839,281	144,001
Units	Gallons	Gallons	Tons

Table 5: Water and wastewater reductions 2004-2018



ESI members saved enough water in 2018 to fill more than

95,084

average-sized swimming pools!

Year	Hazardous Waste Reductions	Landfilled Waste Reductions	Material Consumption Reductions	Total Biosolids Volume	Total Biomass Recovered*	Total Recycled Volume
2004	12	997	509	NA	NA	10,015
2005	119	82,453	37,728	7,208,691	NA	8,047
2006	405	59,441	973	2,720,350	NA	12,594
2007	13	205,169	60	18,410,000	NA	23,986
2008	200	737	2,136	Not Reported	2,783	4,777
2009	10	4,072	639	Not Reported	258,635	34,233
2010	6	10,245	1,792	Not Reported	333,375	36,667
2011	15	3,755	115	Not Reported	346,437	29,901
2012	4	3,071	665	Not Reported	2,959	33,837
2013	37	1,605	24	Not Reported	3,122	46,350
2014	1,538	11,505	23,073	Not Reported	17	32,158
2015	284	42,737	589	Not Reported	54,360	42,150
2016	314	2,535	376	Not Reported	93,888	159,194
2017	105	350,911	356	Not Reported	95,625	97,774
2018	30	3,430,522	515	Not Reported	89,607	329,229
Totals	3,093	4,209,757	69,551	28,339,041	1,280,808	900,913
Units	Tons	Tons	Tons	Gallons	Tons	Tons

Table 6: Solid and hazardous waste reductions, material consumption reductions and beneficial use totals 2004-2018

Reducing energy usage, water usage and solid waste generation as well as increasing recycling were the most common reduction goals of ESI members in 2018. Goals of increasing biomass recovery and reducing the amount of waste sent to energy generation while maintaining zero waste to landfill were also reported.

- Seventy-three goals related to reducing consumption of energy (natural gas, propane and electricity) as well as fuel used in vehicle fleets (gasoline and diesel) were reported. In total members reduced their usage by more than 3,065,000 mmBtus (million British Thermal Units, or BTUs). The majority of these reductions came from natural gas usage reductions in 2018. The reductions occurred even with the increased production that came with an improving economy. Re-lamping projects, process efficiency improvements as well as boiler, chiller, HVAC, and compressed air projects were the main contributors to the energy reductions. Replacement of older equipment with more efficient devices was credited with efficiency increases which either reduced the overall energy needed or kept demand steady during production growth. Multiple sites also completed energy assessments to identify opportunities for improvement. Monitoring of data and educational campaigns also contributed to the reductions. One facility completed a LEED Certified plant expansion.
- Forty-one goals related to water usage were reported with reductions of more than two billion gallons of water. Almost half of the water saved came from a paper plant implementing a water reuse project. Other reductions were attributed to improvements in maintenance; equipment replacement; water reuse projects; new chillers and other cooling equipment; and reductions in potable water used for landscape irrigation.

- Twenty-two goals related to solid waste reduction, thirteen related to material consumption and nineteen related to recycling with a reduction of more than three million tons of waste going to landfill and over 329,000 tons of material being recycled were accomplished. Fourteen sites also indicated having zero waste to landfill goals despite the current challenging recycling markets.
- Three goals related to biomass recovery were reported, and additional data was provided on composting and other organic material recovery resulting in more than 89,000 tons of organic material diverted from landfills to beneficial reuse.
- Five goals to reduce the amount of waste sent to produce energy while maintaining zero waste sent to landfill resulted in over 6,500 tons of material eliminated from the waste stream.

Facilities also reported reductions in air pollutants, hazardous waste generation, wastewater volume and pollutants discharged and greenhouse gas emissions in 2018.

- Fourteen goals were reported on hazardous waste reductions that resulted in the generation of 30 tons less of hazardous waste. Changes in the handling of solvent rags, coating chemical reformulation, inventory management improvements, the ability to recycle materials that previously were deemed hazardous waste, and reduction of solvent use all contributed to this reduction.
- Twelve goals were reported on air pollutant emission reductions of more than 2,500 tons. Most reductions were of volatile organic compounds (VOCs) related to paint/coating operation efficiency improvements.
- Thirteen facilities reported wastewater discharge volume reductions of more than 1.8 billion gallons. However, only one facility reported a goal to reduce

wastewater discharges. Therefore, it is assumed the wastewater reductions are related to the water use reductions.

- Five goals were related to wastewater effluent and stormwater pollutant reductions of more than 109,000 tons. The ESI members that were the largest contributors to these numbers did not report on goals specific to water pollutants. However one paper mill performed a major product shift that reduced the solids in their wastewater discharge. Stormwater

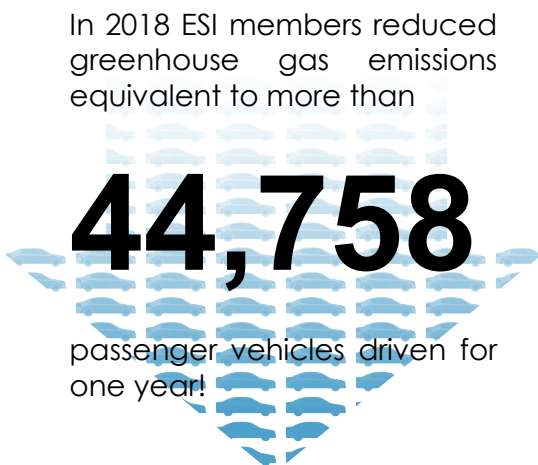
projects including adding filters to drains and testing to determine sources contributed to the reported reductions. Additionally, a couple of public utilities performed maintenance to reduce leaks and improve efficiencies.

- Four facilities reported on reduction goals specific to greenhouse gas emissions that were not included in the energy reductions. Additional information on GHG emissions is in the next section.

Seventeen goals related to environmental management system (EMS) development and improvement were reported for 2018. Members also reported on goals related to compliance, wildlife and habitat improvements, and other environmentally related goals specific to individual sites.

Greenhouse Gas Reductions

Member reported energy reductions can be converted to greenhouse gas reductions to show a direct positive impact on the environment. Table 7 and Figure 5 provide a summary of reductions in energy use and the subsequent metric tons of carbon dioxide prevented from entering the atmosphere. They also include the greenhouse gas reductions that members reported separately from energy reductions. The Simplified Greenhouse Gas Calculator tool provided by the U.S. EPA Climate Leaders program was used to convert the heating values to metric tons of carbon dioxide equivalent (CO₂e). This tool can be found on the US EPA website at: <https://www.epa.gov/climateleadership/center-corporate-climate-leadership-simplified-ghg-emissions-calculator>.



	mmBtus	metric tons CO ₂ e
E-85	71	1
Kerosene	163	12
Biofuel	9,057	75
Distillate Oil	5,056	370
Gasoline	9,996	675
CNG	24,436	1,478
Propane	25,966	1,636
Diesel	31,762	2,388
GHG (not reported in energy reductions)	NA	30,616
Electricity	300,241	32,340
Natural Gas	2,658,764	141,218
Total Energy	3,065,440	210,808

Table 7: 2018 Reported Greenhouse Gas Emission Reductions

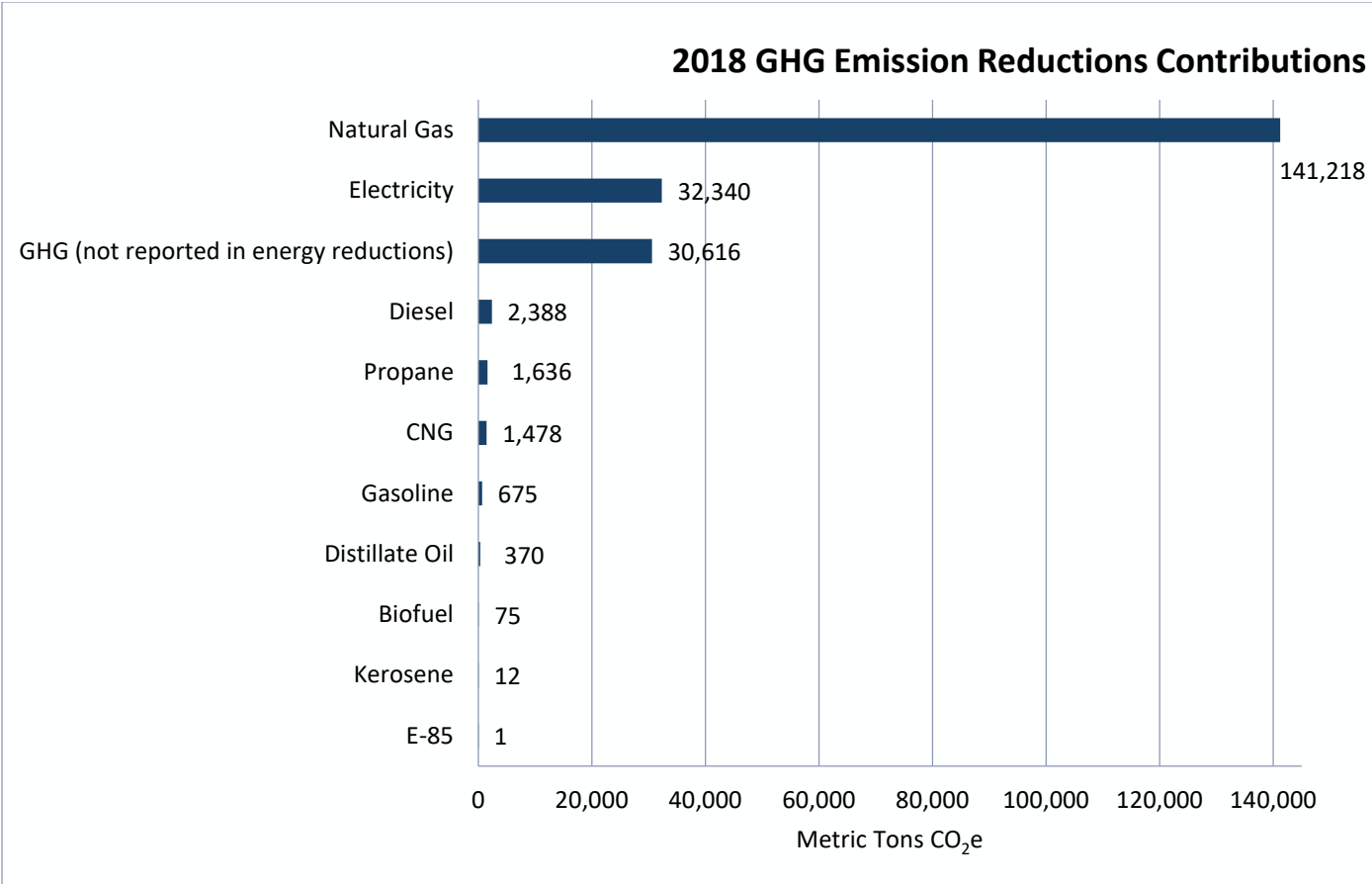


Figure 5: 2018 Greenhouse Gas Emission Reductions by Energy Source in Metric Tons CO₂e

Cost Savings

More than \$6.7 million in cost savings were reported by ESI members for environmental projects conducted in 2018. Savings were reported by 19 facilities with most money saved through solid waste related reductions and recycling. Savings were also reported from energy reduction project rebates as well as water and wastewater reductions. One facility reported cost savings on an air emissions goal of replacing paint spray equipment. Figure 6 shows the breakdown of cost savings by goal type.

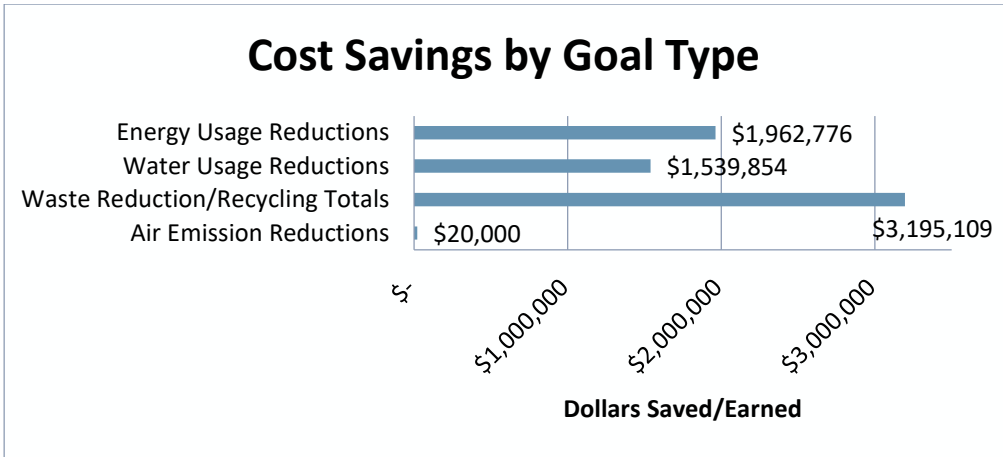


Figure 6: 2018 ESI Member Cost Savings by Goal Type

Community Involvement

In addition to reporting on goals, ESI members also submit information on their environmental involvement in the community. ESI Steward members are required to communicate with their communities regarding their environmental performance. Although only ESI Stewards are required to report these activities, other members may choose to report their activities as well. For 2018, 264 activities were reported by 52 members. Figure 7 provides a summary of these activities.

ESI Member Community Involvement Activities

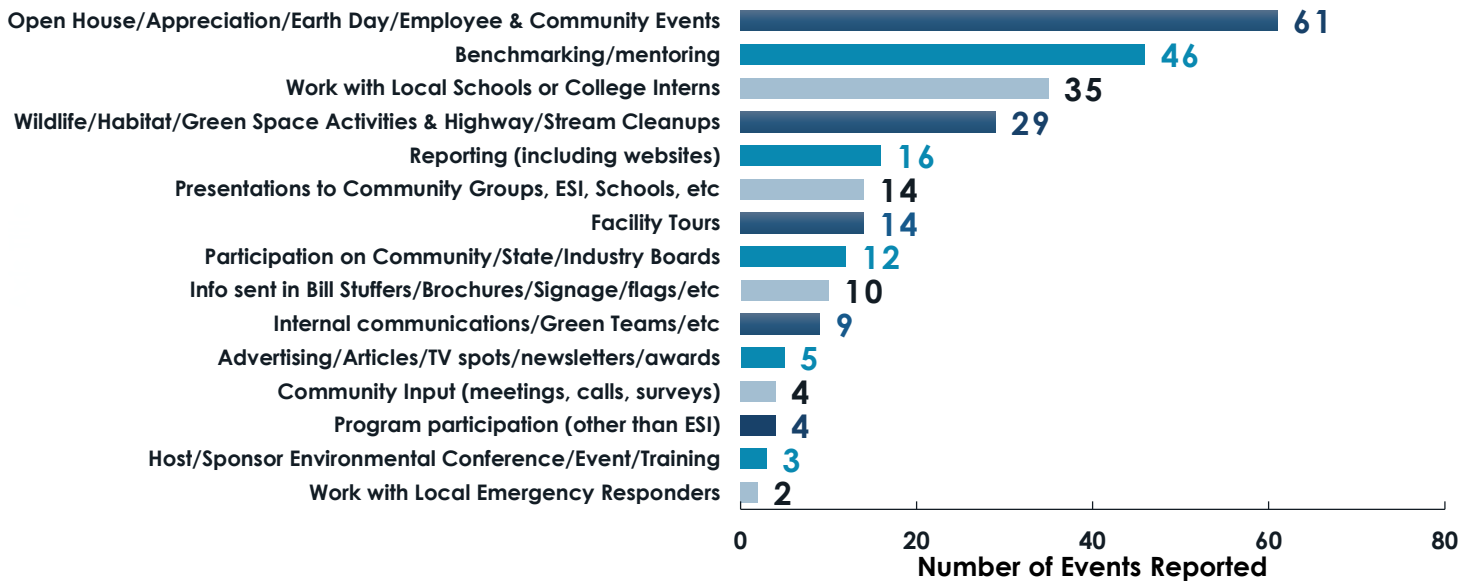


Figure 7: 2018 ESI Member Community Involvement Activities



New Member Accomplishments

Members who have been in the ESI program for less than one year do not have any results included in the reduction totals in this report and are not required to report since only baseline data is required in their applications. However, some new members choose to submit data to demonstrate their achievements. Six new members chose to submit reports for 2018 with the following results (Table 8).

2018 NEW MEMBER RESULTS			
REDUCTIONS	Air Emissions	82.42	Tons
	Greenhouse Gas Emissions*	4,832	Metric Tons CO ₂ e
	Hazardous waste	183.52	Tons
	Landfilled waste	140	Tons
	Energy	16,812.19	mmBtu
	Water Use	2,370,663	Gallons
	Material Consumption	4,600	Tons
	Wastewater Pollutants	1.46	Tons
	Wastewater Volume	NA	Gallons
REUSE	Biomass Recovery**	29.06	Tons
	Total Recycled Volume	12,659	Tons
TOTAL COST SAVINGS \$ 203,659			

*Indirect not reported in energy reductions

**Category created for compost/mulch related goals

Table 8: 2018 Reductions Reported by New Members

QUOTES FROM STUDENTS IN ESI COURSES

"THANK YOU FOR ALL OF THESE TRAININGS. THE MATERIALS HAVE BEEN BEYOND USEFUL!"

"CLASS WAS HELPFUL AND THOROUGH"

"THE STAFF AT NCDEQ STAND READY TO HELP YOU BECOME AN ENVIRONMENTAL STEWARD."

Program Updates

The ESI is administered by the DEQ Division of Environmental Assistance and Customer Service (DEACS). It operates on a limited budget that is funded by a federal grant and appropriations from the N.C. General Assembly. From 2002 through 2005, 560 actions were recorded by employees with the N.C. Department of Environmental Quality related to EMS development and assistance. These activities included site visits, presentations, meetings and other technical assistance. See Figure 8 below for a summary of 2006 through 2018 actions. Outreach includes training classes provided by ESI staff, networking events, speaking engagements, booths at various events and other program marketing activities. Site visits are made specifically to ESI or potential ESI member sites. Each new member received a site visit to inform them of program benefits and assistance and to establish a relationship with the facility's coach. Assistance provided includes information provided through email and phone calls, including an electronic newsletter provided to our ESI members. In 2017, the number of email contacts rose dramatically as our outreach to members and others related to ESI networking events, conference, and newsletters were a focus area. In 2018, the ESI program had fewer staff in place and thus the numbers were lower, however they are expected to rise again in 2019 and 2020 now that the open positions have been filled.

ESI ACTIONS RECORDED 2006-2018

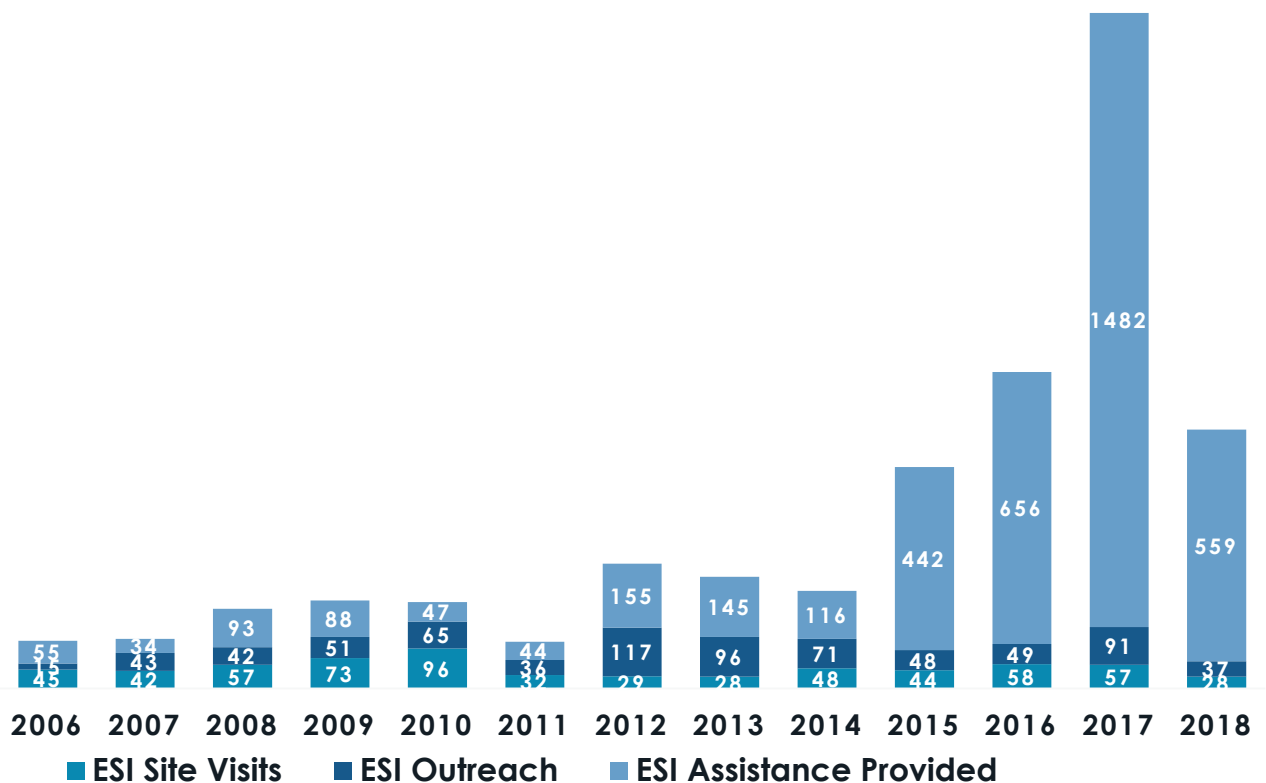


Figure 8: ESI Actions Recorded 2006-2018

In 2018, ESI Staff:

- Provided assistance with an internal audit at Hyster-Yale, Greenville.
- Provided on-site ISO 14001:2015 internal auditor training 3 times in 2018 at WSACC, TE Connectivity, and City of Shelby.
- Held ceremonies at the newest Environmental Stewards: Grifols Therapeutics – Clayton (attended by the Governor) and Leggett & Platt – High Point.
- Performed a verification visit at one Rising Steward applicant facility.
- Performed a document review of the City of Shelby's environmental management system to assist with conversion from ISO 14001:2004 to ISO 14001:2015.
- Performed five-year renewal verification visits at seven Steward and one Rising Steward facilities.
- Presented ESI & DEACS services at Randolph County Safety Alliance meeting, Carolinas Recycling Association Conference, Mecklenburg County Air Quality Workshop, Sustainability in Manufacturing Event, four EDPNC networking events, State of NC Safety & Health Steering Committee, Guilford County LEPC BISE Conference and the WRP quarterly meeting.
- Hosted booths at the Wake County LEPC BEST Conference, NC Septic Tank Association, NCMA Water Quality Workshop, Statewide Safety Conference, NC Rural Water Conference, NCMA Hazardous Waste trainings, and Carolina Star Safety Conference.
- Held the annual ESI Conference at the N.C. Rural Development Center, where members spent two days networking and learning from each other as well as DEACS and other DEQ staff on various environmental topics.
- Held the annual Steward Forum where ESI members who have reached the Steward level meet with the DEQ Secretary to discuss any challenges, ideas, upcoming changes, that they want to share. This meeting also provides an informal advisory group for DEQ leadership to openly discuss ideas.
- Held a meeting of the ESI Internal DEQ Workgroup. This group is comprised of members from each of the regulatory agencies within DEQ. They perform compliance checks on all ESI member applications and member renewals as well as offering technical assistance to ESI staff regarding regulatory compliance.
- Held two External Advisory Board meetings to review and make recommendation to the DEQ Secretary on program changes and Steward and Rising Steward applications and renewals.
- Attended and hosted a booth at the NCMA Energy, Environment, Health, and Safety School; a two-day training event with multiple tracks covering many environmental topics from compliance to sustainability.
- Provided a series of six training modules on environmental management systems specifically based on the updated ISO 14001:2015 standard. The modules were scheduled one per month beginning in July. January through March also contained the last three modules to complete the series that was started in 2017.
- Provided training regarding conversion from the 2004 version to the 2015 version of the ISO 14001 EMS standard. This two-day class was open to ESI members as well as others who were interested.
- Provided training on achieving zero waste to landfill via a conference call/webinar with multiple Hyster-Yale sites.
- Arranged and participated in an Environmental Benchmarking Series event at Bridgestone Americas Tire Operations (BATO) in Wilson on stormwater best practices during expansion. This event was open to all ESI members and others interested in the topic. BATO presented on their achievements and provided a tour to demonstrate their stormwater upgrade project.
- Arranged and participated in an Environmental Benchmarking Series event at Eaton in Raleigh on zero waste to landfill. This event was open to all ESI members and others interested in the topic. Eaton presented on their achievements and provided a site tour to demonstrate their environmental projects and to get additional ideas from other attendees.
- Performed two assessments to determine the functional equivalency of member environmental management systems with the ISO 14001:2004 standard.
- Performed four informational visits to potential ESI members and nine coaching visits to ESI members.

Membership



Using pollution prevention and other innovative approaches, this voluntary program offers benefits and recognition to members for developing and implementing environmental projects to meet and go beyond regulatory requirements.

Any company or organization that operates one or more facilities in North Carolina and whose activities impact the environment is eligible to participate in the ESI. This includes manufacturers, businesses, agribusiness, service providers, government agencies, schools and nonprofit organizations. Members can enter the program at any of the three tiers: Environmental Partner, Rising Environmental Steward or Environmental Steward. Membership criteria in the ESI varies depending on the tier. In 2012, changes were made to open the Partner level to a wider range of interested organizations while still maintaining the integrity of the program at the Steward and Rising Steward levels.

Criteria

The Environmental Partner level is designed for adoption by a broad range of organizations that are interested in beginning the process of developing a systematic approach to improving their environmental performance. In 2012, Partners were given the option to implement measurable goals in lieu of developing an environmental management system. Additionally, Partners are no longer required to be regulated by a DEQ issued permit to apply. Partner applications may include multiple sites. By the end of 2018, the program had 149 Environmental Partner sites.

To be considered at the Partner level, the following criteria must be met:

- Demonstrate a commitment to compliance.
- Set environmental performance goals that include pollution prevention and are appropriate to the nature, scale and environmental impact of the organization and/or commit to developing, implementing and maintaining an environmental management system based on the ISO 14001 standard or a functionally equivalent model.
- Not be under any environmental criminal indictment or conviction.
- Agree to report annually on progress toward the organization's environmental performance goals, reductions in environmental emissions and/or discharges, solid and hazardous waste disposal, use of energy and water and any reportable non-compliance events.

The Rising Environmental Steward level is designed for those organizations that have a mature environmental management program. Rising Steward applications must be for a single site. The program had twelve Rising Environmental Stewards by Dec. 31, 2018.

Rising Environmental Steward applicants must meet all Partner criteria and the following:

- Set measurable environmental performance goals that are adopted into the framework of the EMS, and must demonstrate improvements to performance.
- Demonstrate a mature EMS based on ISO 14001 or a functionally equivalent model. The EMS for the site must be ISO 14001 third-party certified or be reviewed on-site and deemed functionally equivalent by DEQ staff.
- Have current or past regulatory oversight or demonstrate exemplary business and environmental practices normally expected of Rising Stewards.
- Demonstrate commitment to meet and go beyond compliance.

The Environmental Steward level is for those organizations that display a commitment to exemplary environmental performance beyond what is required by law. Steward applications must be for a single site. By year end 2018, the program had 29 Environmental Stewards.

Environmental Steward applicants must meet all Partner and Rising Steward criteria and the following:

- Set aggressive environmental performance goals.
- Have a process for communication with the local community on program activities and progress toward performance goals.
- Demonstrate how their environmental management system is integrated into core business functions.
- Agree to be a mentor to Environmental Partner and Rising Environmental Steward participants.

Rising Stewards and Stewards are reassessed after five years of membership for renewal at their current level. Partner members are reviewed annually, through their annual report submissions, to assess progress made toward environmental performance and overall program goals.

Benefits

All levels of ESI members are eligible for the following:

- Technical assistance on developing an environmental management system (EMS), pollution prevention approaches, environmental management and treatment technologies and maintaining compliance with local, state and federal regulations;
- Specialized training;
- Networking opportunities including an annual conference, environmental benchmarking series, and topic-specific roundtables and workshops;
- A listserv open to all ESI members as well as DEQ and Waste Reduction Partner staff to provide answers to questions and examples of best practices;
- Recognition of program participation;
- Use of a the program logo for the achieved level;
- A single point of contact within DEQ; and
- Other benefits as deemed appropriate by the DEQ Secretary based on recommendations from the External Advisory Board and the Internal DEQ Internal Workgroup.

Partners and Rising Stewards have the additional benefit of access to Stewards as mentors where appropriate. Environmental Stewards have the following additional benefits:

- Formal public recognition from the Secretary of DEQ that may include an on-site award ceremony, public announcements and press releases.
- Participation in the Steward Forum chaired by the DEQ Secretary.
- Priority membership on the ESI External Advisory Board when appropriate positions are available.

During the annual ESI Conference, facilities accepted into the program at the Environmental Partner level receive a certificate of recognition signed by the DEQ Secretary. Rising Environmental Stewards receive a plaque recognizing their achievement. Renewals at five year intervals for Rising Stewards and Stewards are also celebrated at the ESI Conference with a variety of recognition items.

Environmental Stewards accepted into the ESI receive a personal letter signed by the DEQ Secretary. The Secretary also presents Stewards with a large plaque during an on-site ceremony. DEQ highlights members' participation in the ESI program through press releases, the ESI website, newsletters and/or social media posts.

Application Process

Partner applications are accepted year-round and reviewed quarterly by the DEQ Internal Workgroup. In 2012, ESI began accepting Steward and Rising Steward applications year-round as well. The ESI Advisory Board meets twice per year to review applications and site visit reports. While applications at the higher levels are in process, the applicants join the ESI as Partners in order to

begin receiving benefits such as newsletters and training notifications.

Following receipt of an application, an environmental compliance check is completed to determine if the facility has been under environmental criminal indictment or convicted within the last two years, as well as identify any compliance issues (Figure 9).



Figure 9: Application Process Diagram

The DEQ Internal Workgroup reviews all Partner applications and makes a recommendation to the DEQ Secretary regarding acceptance into the program. The DEQ Internal Workgroup reviews Rising Steward and

Steward applications to provide regulatory and compliance information to the ESI Advisory Board. The DEQ Internal Workgroup is comprised of the following representatives (Figure 10) from regulatory and non-regulatory divisions within DEQ:

2018 DEQ INTERNAL WORKGROUP MEMBERS AND DIVISIONS

LINDA CULPEPPER – Div. Water Resources

DAVID LEE – Div. Env. Assist. and Customer Service

BERNARD MCKEE – Div. Air Quality

SHAWN MCKEE – Div. Waste Management

TOBY VINSON – Div. Energy Minerals and Land Resources

Figure 10: 2018 DEQ Internal Workgroup Members

2018 ADVISORY BOARD MEMBERS AND REPRESENTATION

N.C. DEQ – CHAIR

JOHN NICHOLSON – N.C. Department of Environmental Quality

INDUSTRIAL TRADE GROUP

JIMMY CARTER – NC Manufacturers Alliance

STEWARD – LARGE BUSINESS

TAUSHA FANSLAU – Bridgestone Americas Tire Operations

STEWARD – AGRIBUSINESS

KELLY FIE – Santa Fe Natural Tobacco

STEWARD – AT LARGE

ROSIE HUFFMAN – Firestone Fibers and Textiles

SMALL BUSINESS

JIM LANIER – Earth Farms

STEWARD – LARGE BUSINESS

AUBREY MEADOWS – Engineered Sintered Components

STEWARD – STATE/FEDERAL FACILITY

KELLY MURPHY – N.C. Zoological Park

STEWARD – LOCAL GOVERNMENT

DAVID SHELLNBARGER – City of Gastonia/Two Rivers Utilities

STEWARD – AT LARGE

MATT WILLIAMS – John Deere Turf Care

STEWARD – AT LARGE

JANE WOODALL – DELL

Following the compliance review by the Internal Workgroup, the Rising Steward and Steward applications are presented to the ESI Advisory Board.

The Department of Environmental Quality's Secretary established a volunteer advisory board to oversee program development and implementation. Membership consists of manufacturers, industries, industry trade groups, environmental and citizen nongovernmental organizations, small businesses, representatives of city and county governments, DEQ representatives and others as deemed appropriate. A DEQ employee, appointed by the Secretary, serves as the board's chairperson. Whenever possible, Environmental Stewards are given priority for membership for the business, government and at-large seats. Membership on the Advisory Board rotates on four-year intervals and is capped at 15 members. The 2018 board is listed in Figure 11 to the right.

Rising Steward and Steward applicants receive an on-site verification visit by DEQ staff to ensure the implemented Environmental Management System is functioning and gather observations supporting the organization's application. All information obtained through the application and the on-site verification visit is documented and summarized in a report presented to the Advisory Board for review. The Advisory Board then makes

Figure 11: 2018 Advisory Board Members

recommendations to the DEQ Secretary regarding acceptance of the Rising Steward and Steward applicants.

The DEQ Secretary reviews the recommendations made by the Advisory Board and makes final decisions regarding the recommendations. Organizations accepted into the program are usually announced in June and December of each year.

Conclusions

The results from the ESI annual report show that an approach that exceeds regulatory requirements can lead to positive impacts for regulated pollutants and non-regulated environmental and economic factors. This DEQ program is unique in its ability to collect environmental data across media, including monetary savings associated with the environmental improvements made. These savings to the financial and environmental bottom line help North Carolina organizations be resilient and promote economic growth. The Environmental Stewardship Initiative encourages North Carolina organizations to share their environmental success stories across sectors in order to provide a better environment for everyone in the state.



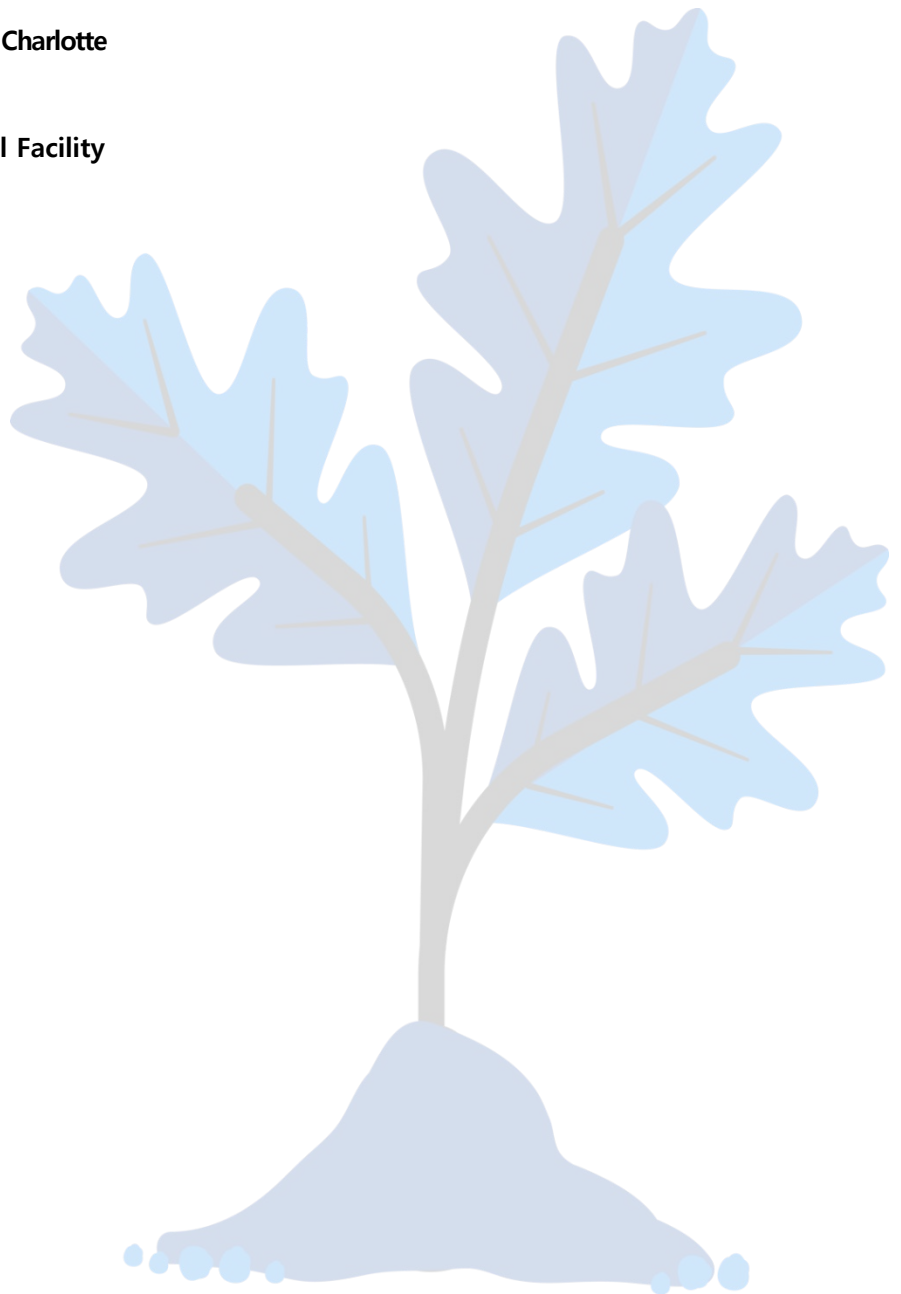
2018 ESI Members

Stewards

- Bridgestone Americas Tire Operations LLC – Wilson
- City of Gastonia Crowders Creek Water Resources Reclamation Facility
- City of Gastonia Long Creek Water Resources Reclamation Facility
- City of Gastonia Water Plant
- Corning Inc. – Wilmington
- Daimler Trucks North America LLC – Cleveland
- Daimler Trucks North America LLC – Gastonia
- Daimler Trucks North America LLC – Mt. Holly
- Dell – Apex
- DENSO Manufacturing North Carolina - Statesville Plant
- Eaton Corporation, Youngsville Production Operations
- Engineered Sintered Components – Troutman
- Firestone Fibers & Textiles – Kings Mountain & Gastonia
- Fleet Readiness Center East – Cherry Point
- GKN Driveline – Sanford
- Grifols Therapeutics LLC – Clayton
- Hickory Manufacturing and Technology Center, Corning Optical Communications LLC
- John Deere Turf Care – Fuquay-Varina
- Keihin Carolina System Technology – Tarboro
- Leggett & Platt Branch ON64 – High Point Furniture
- N.C. Zoological Park – Asheboro
- Santa Fe Natural Tobacco– Oxford
- Smithfield Packaged Meats Corp – Wilson Facility
- Stanley, Black & Decker – Kannapolis DC
- TE Connectivity – Burgess Rd – Greensboro
- TE Connectivity – Pegg Rd – Greensboro
- Thomas Built Buses, Inc. – High Point
- Uchiyama Manufacturing America LLC – Goldsboro
- U.S. Environmental Protection Agency at RTP

Rising Stewards

- Ajinomoto Health & Nutrition North America, Inc. – Raleigh
- Bridgestone-Bandag, LLC – Oxford
- City of Gastonia Resource Recovery Farm
- CommScope Greensboro Site
- DENSO Manufacturing North Carolina - Greenville Plant
- Eaton Corporation, Raleigh Production Operations
- GKN Driveline North America, Inc. – Roxboro Assembly
- GKN Sinter Metals – Conover
- Hyster-Yale Group – Greenville
- Mecklenburg Co. Solid Waste Operations – Charlotte
- QORVO, Inc – Greensboro
- Smithfield Fresh Meats Corp. – Tar Heel Facility



Partners

- Alliance One International Inc. (4)*
- American Emergency Vehicles
- American Snuff Company / Taylor Brothers
- Baker Interiors Furniture Company - High Point
- Baker Interiors Furniture Company - Hildebran
- Borg Warner Thermal Systems – Fletcher
- BorgWarner Turbo Systems – Arden
- Burt's Bees Inc. – Morrisville
- Cape Fear Public Utility Authority (8)*
- Cascades Tissue Group – North Carolina Inc. – Rockingham
- Caterpillar BCP – Sanford
- Charlotte-Mecklenburg School System
- City of Gastonia Public Works Division
- City of Shelby First Broad River Wastewater Treatment Plant
- City of Shelby Water Treatment Plant
- Continental Automotive Henderson Plant
- Core Technology Molding Corporation
- Corning Newton Cable Plant
- Cree, Inc. (Cree Durham and Cree RTP/Wolfspeed)
- Crown Equipment – Kinston
- Dominion Energy North Carolina, Inc. (21)*
- Domtar Paper Company, LLC – Plymouth
- Eaton – Capital Blvd – Raleigh
- Freudenberg Performance Materials– Durham
- General Electric Aviation – Durham Engine Facility
- Haeco Airframe Services – Greensboro
- Industrial Connections & Solutions LLC – Mebane
- International Paper – Riegelwood Mill
- Kao Specialties Americas, LLC – High Point
- Kewaunee Scientific Corporation
- Leggett & Platt Cincro – Liberty
- Leggett & Platt Branch 0548 and 8814*
- Liberty Tire Recycling, LLC (2)*
- Linamar Corporation
- Louisiana-Pacific Corp, Roaring River Plant
- Martin Marietta (58)*
- Michelin Aircraft Tire Co. – Norwood
- Mylan Pharmaceutical Greensboro
- NIEHS – RTP
- N.C. DOT Ferry Division (9)*
- Pfizer – Sanford
- Piedmont Service Group Raleigh Office
- SELEE Corporation – Hendersonville
- Siemens Medical Solutions USA, Inc. - SHS AM NAM SV National Service Headquarters– Cary
- Smithfield Fresh Meats Corp. – Clinton
- Southern Research Institute - Energy & Environment
- Static Control Components
- Universal Leaf North America US Inc. (2)*
- Water and Sewer Authority of Cabarrus Co. (4)*

*Denotes multi-site Partners



N.C. Department of Environmental Quality

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Cover Photo 1: Employees of Eaton in Arden receive Environmental Steward recognition from DEQ Secretary Michael Regan.