NC Environmental Stewardship Initiative

Annual Report

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Executive Summary

The N.C. Department of Environmental Quality's Environmental Stewardship Initiative 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.

Reductions and cost savings reported by members demonstrate real results and improvements to the environment and economy in North Carolina. The ESI model addresses environmental challenges through partnerships and a voluntary, comprehensive and innovative approach that benefits the environment and continued economic growth.

This approach combines recognition with assistance, training, mentoring and networking opportunities. A 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 while higher tiers require organizations to be models of stewardship, as well as provide mentoring and educational resources to others in the program. In 2017, the ESI had 189 member sites as shown in Figure 1 below.

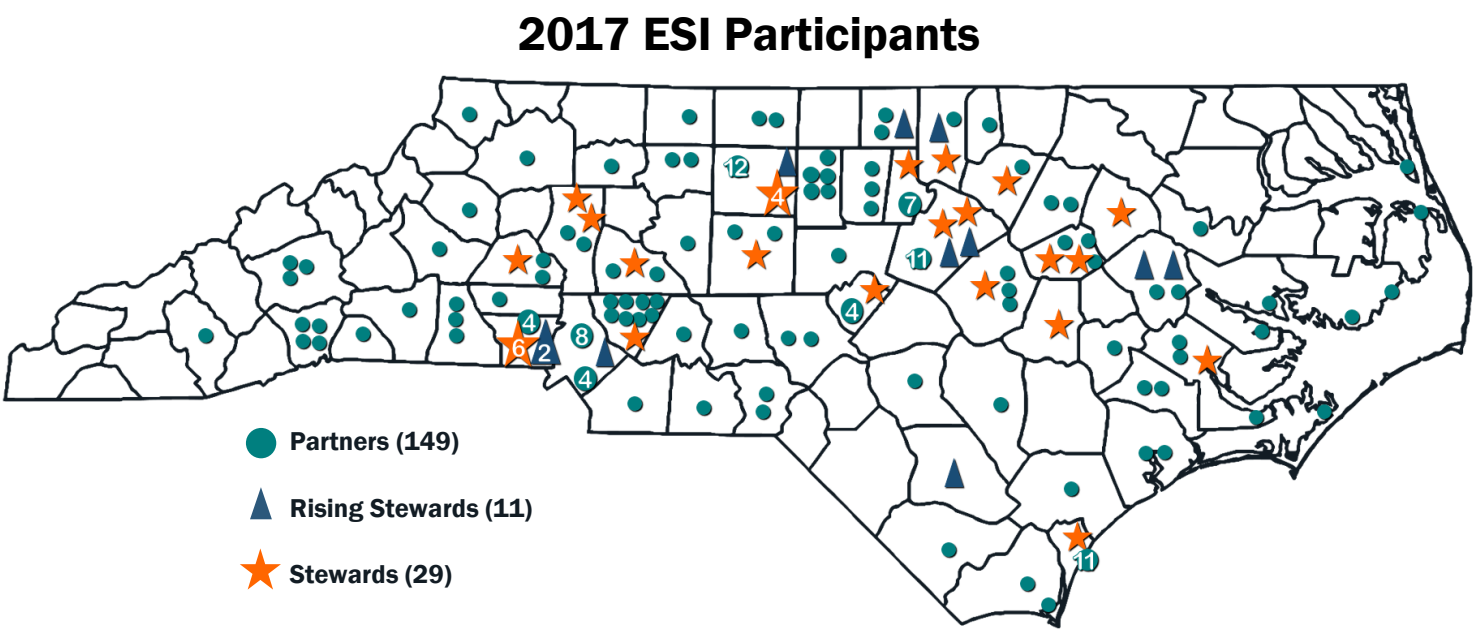


Figure 1: Map of 2017 ESI Participants

The ESI is open to any entity in North Carolina that commits to improving its environmental impact. (See the Membership section of this report for more information on eligibility and the three levels of the program). ESI members commit to developing environmental management systems and/or setting measurable goals that lead to continual improvement and stewardship. In 2017, ESI members set 269 goals covering multi-media, regulated and non-regulated impacts including energy and water conservation. Eighty-three members reported progress toward these specific goals*. In 2017, ESI members reported the following reductions in environmental impacts as shown in Table 1.

2017 ESI MEMBERS REPORTED RESULTS			
REDUCTIONS	Air Emissions	1,694	Tons
	Greenhouse Gas Emissions*	2,546	Metric Tons CO2e
	Hazardous waste	105	Tons
	Landfilled waste	350,911	Tons
	Energy	1,093,033	mmBtu
	Water Use	1,038,806,743	Gallons
	Material Consumption	356	Tons
	Wastewater Pollutants	6,783.38	Tons
	Wastewater Volume	490,620,971	Gallons
REUSE	Biomass Recovery**	95,625	Tons
	Total Recycled Volume	97,774	Tons
TOTAL COST SAVINGS $ 8,178,746			

*Indirect not reported in energy reductions

**Category created for compost/mulch related goals

Table 1: 2017 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.*

2017 Progress Report

With the goal of supporting and encouraging superior environmental performance from North Carolina's business and industrial communities, the ESI assists organizations 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 all of the self-reported annual data collected by the ESI members in 2017. Starting in 2005, members began to include cost savings from implementing environmental improvements in their reporting. Reporting on greenhouse gas emissions 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 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 in order 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

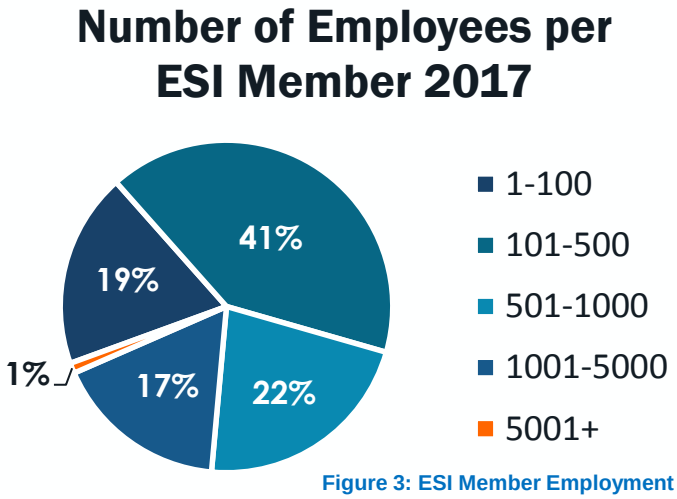
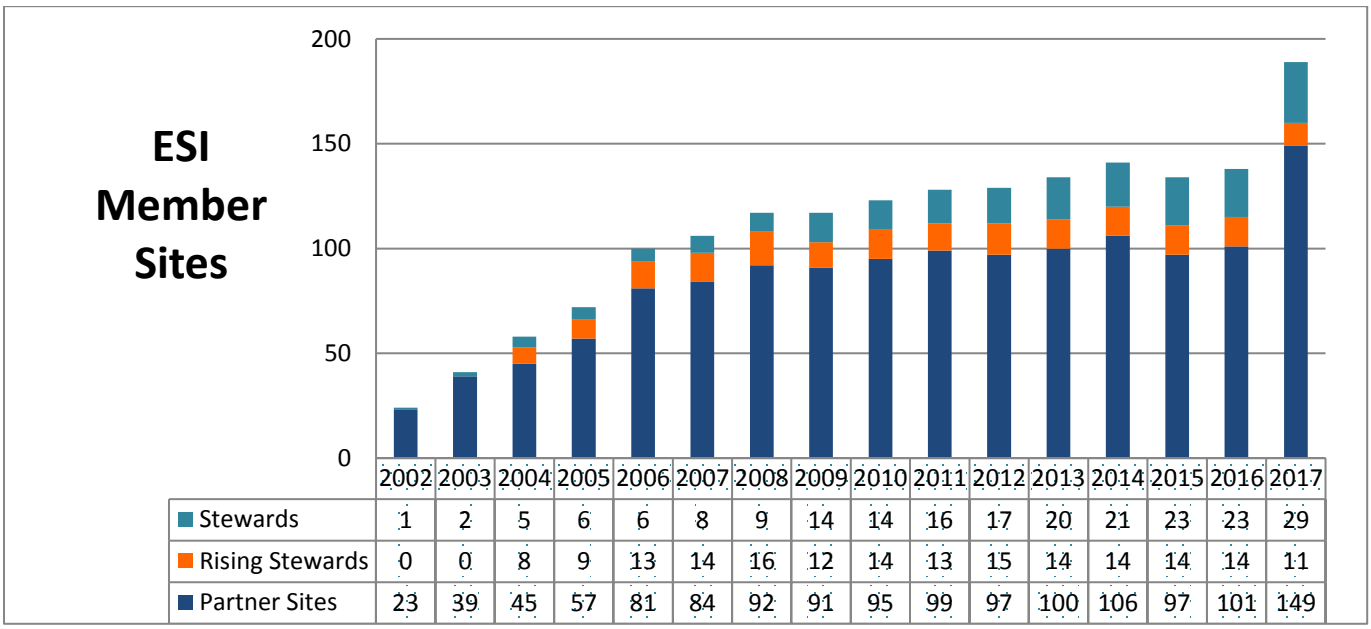


Figure 3: ESI Member Employment

ESI membership has grown by almost six times its original membership of 24 member sites in 2002 to 189 member sites in 2017. In 2004, a middle tier, the Rising Steward level, of membership was added (Figure 2). 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 3). Sixty-four members are registered to ISO 14001 by third-party auditors and six have been deemed functionally equivalent by ESI staff. In 2017, two member facility sites closed, one chose to drop out of the program, 4 sites merged into 2 reporting members due to their management structures, and six members at 9 sites were terminated for failure to submit the required ESI annual report. One partner site asked to be put on hold for a year due to growth of the site. In 2017, 64 new sites joined the ESI (Figure 4), one Partner moved to the Rising Steward level, and three Partners & three Rising Stewards moved to the Steward level.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Stewards	1	2	5	6	6	8	9	14	14	16	17	20	21	23	23	29
Rising Stewards	0	0	8	9	13	14	16	12	14	13	15	14	14	14	14	11
Partner Sites	23	39	45	57	81	84	92	91	95	99	97	100	106	97	101	149

Figure 2: ESI Membership Growth, 2002-2017

2017 New ESI Members

Facility Name	ESI Level	Year Joined	City	County
Core Technology Molding Corporation	P	2017	Greensboro	Guilford
Leggett & Platt Cincro	P	2017	Liberty	Randolph
Louisiana-Pacific Corp, Roaring River Plant	P	2017	North Wilkesboro	Wilkes
Martin Marietta (58 sites across state)	P	2017	Greensboro	Guilford
Mylan Pharmaceutical Greensboro	P	2017	Greensboro	Guilford
Piedmont Service Group Raleigh Office	P	2017	Raleigh	Wake
Southern Research Institute - Energy & Environment	P	2017	Durham	Durham

Figure 4: 2017 New ESI Members

Member Goals

In 2017, ESI members reported on 269 goals that covered multi-media regulated and non-regulated impacts. As shown in Figure 5, the greatest number of goals set in 2017 were related to energy use reductions.

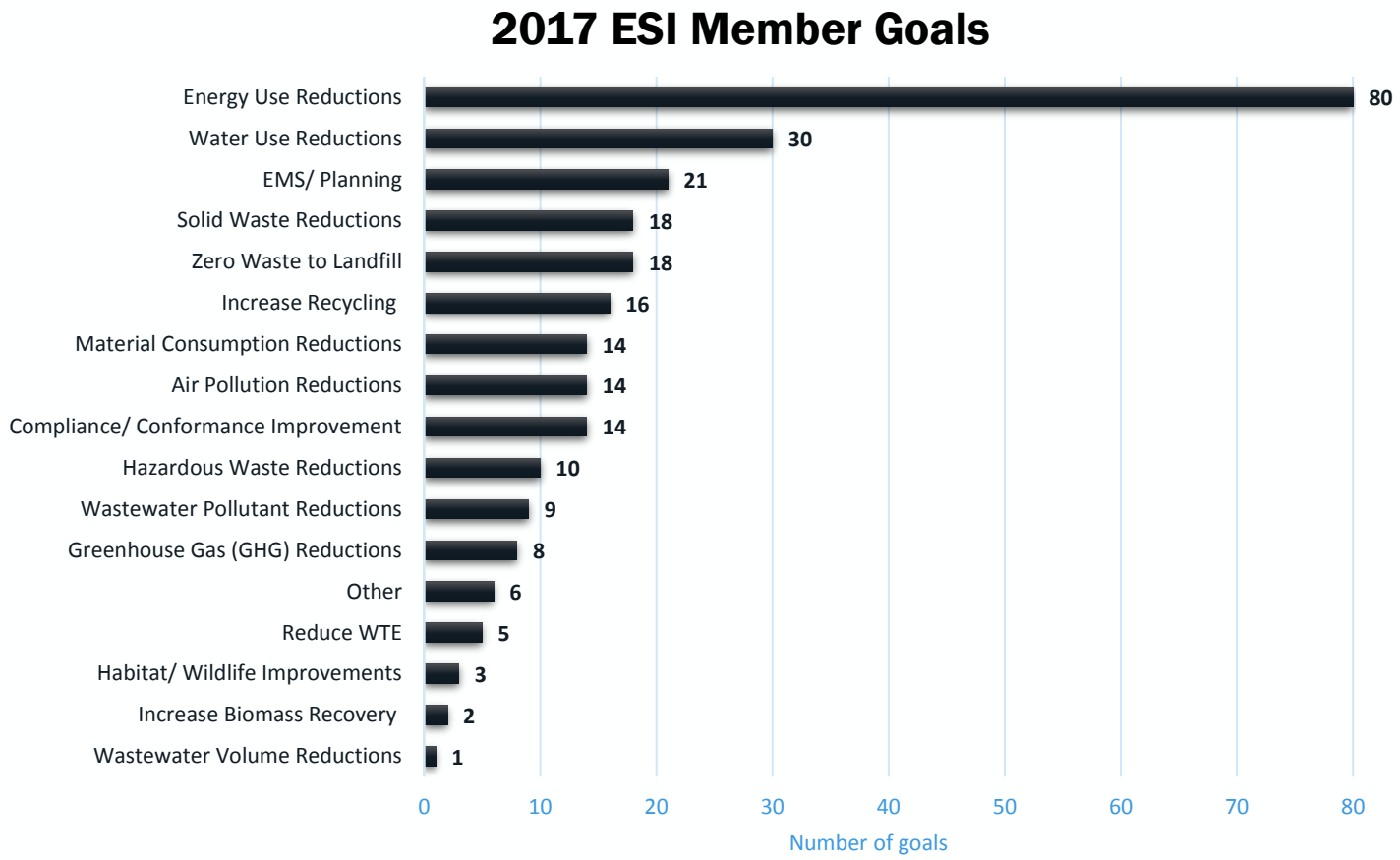


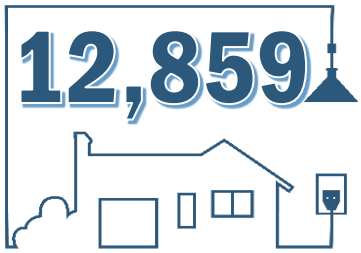
Figure 5: 2017 ESI Member Goals

Member Results

ESI members are required to report on performance toward environmental goals and reductions in environmental impacts. While there are 189 sites in the program, there are eight 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, 83 members reported progress toward these goals, resulting in the following environmental impact reductions (See Tables 2 through 5). 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 occurence, 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
Totals	**$77,548,097**

Table 2: Total cost savings from reported environmental projects



Number of North Carolina homes that could be powered for a year by ESI member energy savings in 2017.

ESI members saved enough money on 2017 environmental projects to pay the salary of 272 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
Total	**74,630,614**	**120,561**	**6,156**
Units	**mmBtu**	**Metric Tons CO2e**	**Tons**

*Indirect not reported in energy reductions

**Not including GHG emission reductions

Table 3: Energy and air emission reductions 2004-2017

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
Totals	**10,943,642,774**	**978,236,968**	**34,867**
Units	**Gallons**	**Gallons**	**Tons**

Table 4: Water and wastewater reductions 2004-2017

ESI members saved enough water in 2017 to fill more than

47,200

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
Totals	**3,063**	**779,234**	**69,036**	**28,339,041**	**1,191,201**	**571,684**
Units	**Tons**	**Tons**	**Tons**	**Gallons**	**Tons**	**Tons**

Table 5: Solid and hazardous waste reductions, material consumption reductions and beneficial use totals 2004 - 2017

Reducing energy usage, water usage and solid waste generation as well as increased recycling were the most common reduction goals of ESI members in 2017. Goals of increasing biomass recovery and reducing the amount of waste sent to energy while maintaining zero waste to landfills were also reported.

- Eighty 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 1,093,000 mmBtus (million British Thermal Units, or BTUs). The majority of these reductions came from natural gas usage reductions in 2017. The reductions occurred even with the increased production that came with and improving economy. Re-lamping projects, process efficiency improvements as well as boiler, chiller, 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 assesments to find opportunities for improvement. Monitoring of data and educational campaigns also contributed to the reductions.
- Thirty goals related to water usage were reported with reductions of over a billion gallons of water. The vast majority of water saved came from a paper plant implementing a water conservation team to look for opportunities to reduce the extremely high demand at their site. Other reductions were due mainly to improvements in maintenance; cooling tower replacements; water reuse projects; new chillers and other cooling equipment; and reductions in potable water for landscaping.
- Eighteen goals related to solid waste reduction, fourteen related to material consumption and sixteen related to recycling with a reduction of almost 351,000 tons of waste going to landfill and almost 98,000 tons of material being recycled were accomplished and eighteen sites also indicated having zero-waste-to-landfill goals.
- Two goals related to biomass recovery were reported, and additional data was provided on composting and other organic material recovery such that almost 96,000 tons of organic material was diverted from landfills into beneficial uses.
- Five goals to reduce the amount of waste sent to produce energy while maintaining zero waste sent to landfill resulted in almost 24,000 tons of material eliminated from the waste stream.

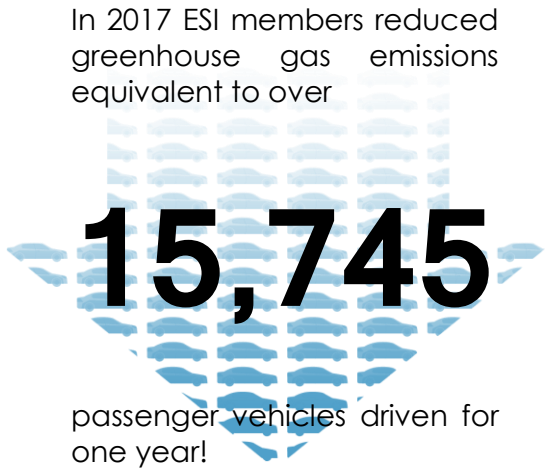
Facilities also reported reductions in air pollutants, hazardous waste generation, wastewater volume and pollutants discharged and greenhouse gas emissions in 2017.

- Ten goals were reported on hazardous waste generation reductions that resulted in almost 105 tons less of hazardous waste generated. Changes in cleaning chemicals, a rag reuse program, inventory management improvements, the ability to recycle swarf (oily metal shavings and dust), and reduction of solvent use all contributed to this reduction.
- Fourteen goals were reported on air pollutant emission reductions of almost 1,700 tons.
- Twenty facilities reported wastewater volume reductions of more than 490 million gallons. However, only one facility reported a goal to reduce wastewater discharges.
- Nine goals were related to wastewater effluent and stormwater pollutant reductions of over 6,700 tons.
- Eight facilities reported on reduction goals related to greenhouse gas emissions that were not included in the energy reductions. Additional information on GHG emissions is on the next page.

Twenty-one goals related to EMS development and improvement were reported for 2017. Members were mainly focused on upgrading their EMS to meet the updated ISO 14001:2015 standard. 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 impact on the environment. Table 6 and Figure 6 show the breakdown 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 were reported separately from energy reductions. The Simplified Greenhouse Gas Calculator tool provided by the EPA Climate Leaders program was used to convert the heating values to metric tons of carbon dioxide equivalent (CO_2e). 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_2e
Electricity	176,131	18,972
Natural Gas	740,345	39,323
Diesel	104,452	7,854
Gasoline	62,876	4,247
GHG (not reported in energy reductions)	NA	2,546
Propane	8,303	523
Residual Oil	0	0
Distillate Oil	862	64
Biofuel	NA	0
E-85	65	1
Total Energy	**1,093,033**	**73,529**

Table 6: 2017 Reported Greenhouse Gas Reductions

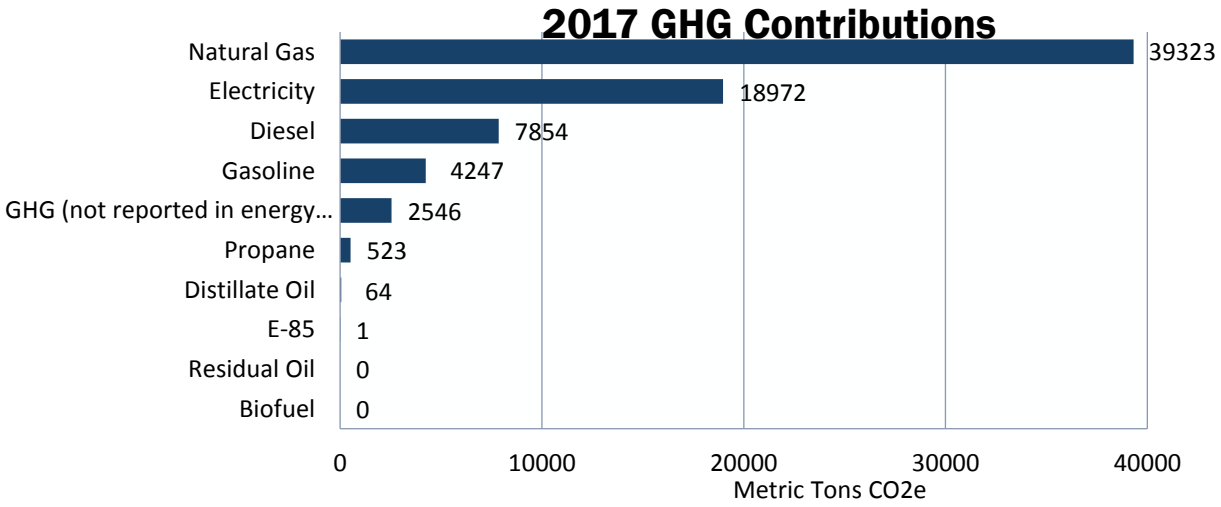


Figure 6: 2017 Greenhouse Gas Emission Reductions by Energy Source in Metric Tons CO2e

Cost Savings

More than $8 million in cost savings were reported by ESI members for projects conducted in 2017. Savings were reported by 25 facilities with most money saved through energy reduction projects. Savings were also reported from water and wastewater reductions as well as solid waste related reductions and recycling rebates. Figure 7 shows the breakdown of cost savings by goal type.

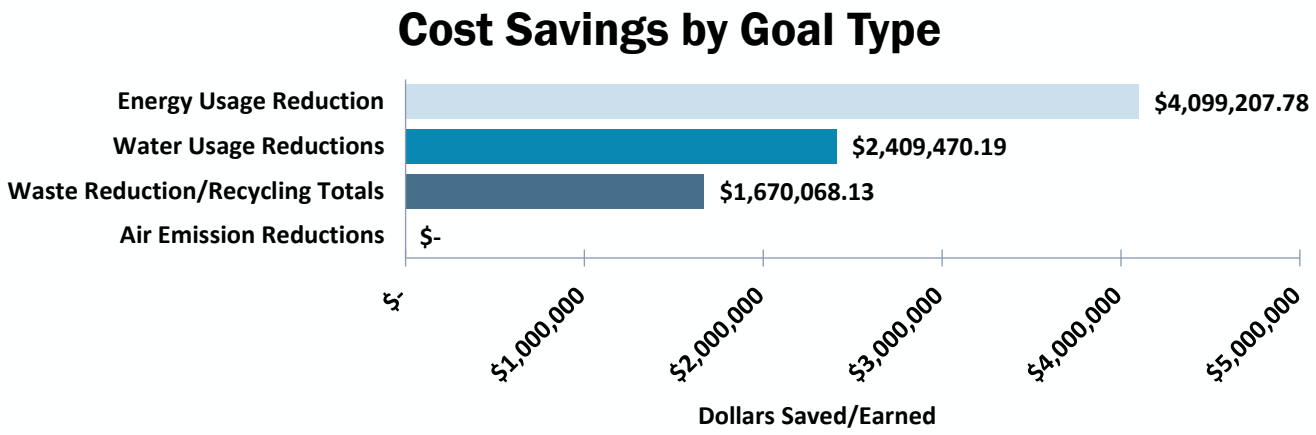


Figure 7: 2017 ESI Member Cost Savings

Community Involvement

In addition to reporting on goals, ESI members also submit information on their environmental involvement in the community. ESI Stewards are required to communicate with their communities about their environmental performance.

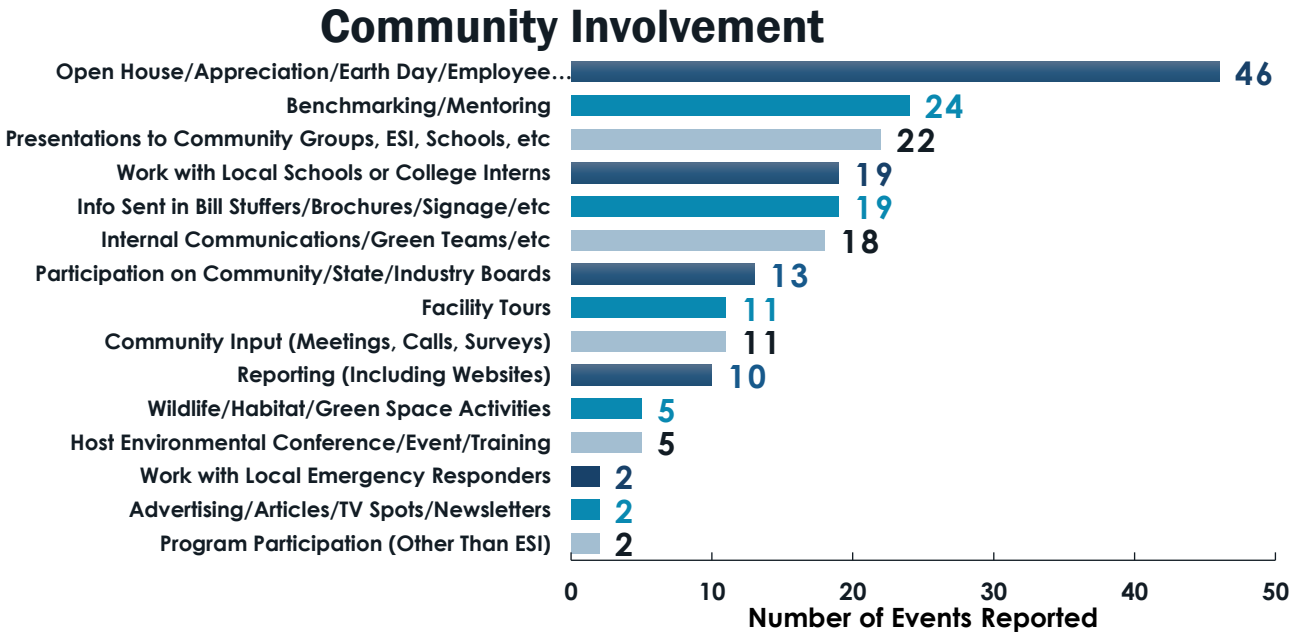


Figure 8: 2017 ESI Member Community Involvement Activities

Although only the Stewards are required to report these activities, other ESI members may choose to report their activities as well. For 2017, 209 activities were reported by 45 members. Figure 8 shows the breakdown of activities.

New Member Accomplishments

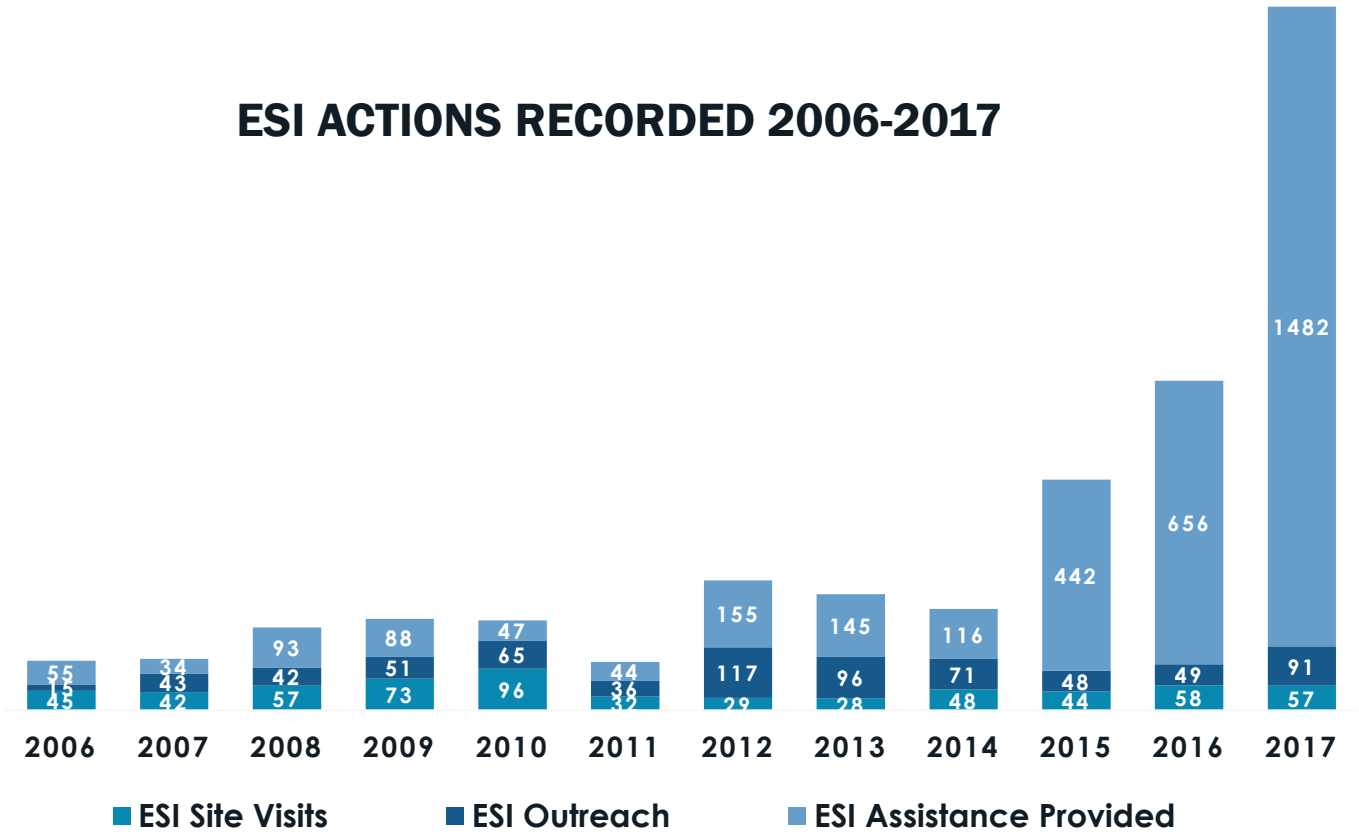
Members who have been in the ESI program for less than one year do not have any results included in the reduction totals in this report and are not required to report since only baseline data is required in their applications. However, some choose to submit data to demonstrate their achievements. One new member chose to submit a report for 2017 with the following results (Table 7).

2017 NEW MEMBER RESULTS		
Landfilled waste reduction	60.73	Tons
Energy use reduction	4,031	mmBtu
Total recycled volume	145.21	Tons

Table 7: 2017 Reductions Reported by New Members

Program Updates

The ESI is administered by the N.C. DEQ Division of Environmental Assistance and Outreach. 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 9 below for a breakdown of 2006 through 2017 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 all other information provided through email and phone calls, including the electronic newsletter to our ESI members. In 2017, the numbers of email contacts rose dramatically as our outreach to members and others related to ESI



networking events, Conference, and newsletters were a focus

In 2017, ESI Staff:

- Provided on-site ISO 14001:2015 internal auditor training at Thomas Built Buses.
- Held ceremonies at the newest Environmental Stewards: Uchiyama Manufacturing Corporation; Eaton Corporation – Youngsville; Firestone Fibers & Textiles; and Daimler Trucks North America – Mt. Holly.
- Performed verification visits at 7 Steward and 1 Rising Steward applicant facilities.
- Performed an on-site gap analysis to assist Uchiyama Manufacturing Corporation with conversion from the ISO 14001:2004 to ISO 14001:2015.
- Created and provided a management update training for the ISO 14001:2015 changes. This was created for ASMO NC in Statesville and provided at their facility.
- Performed five-year renewal verification visits at four Stewards and three Rising Stewards. Also performed follow-up visits to two sites that had issues during their previous renewal visits.
- Presented at ASEE Catawba County meeting about ESI & DEACS services.
- Hosted booths at the Statewide Safety Conference and Carolina Star Safety Conference.
- Held the annual ESI Members Meeting at the N.C. Art Museum, where members networked with each other and heard from other members and DEACS staff on various environmental topics.
- Organized and facilitiated the ESI Networking and Training Event at the N.C. Art Museum, which was held the day after the Members Meeting. This training included topics ranging from Recycling Market updates, Stormwater self-assements, Understanding electric bills, and ESI applications and reports.
- Held two Advisory Board meetings to review and make recommendation to the DEQ Secretary on program changes and Steward and Rising Steward applications.
- Worked with the N.C. Division of Air Quality to provide two 2-day training events on the Boiler MACT and RICE rules. DAQ employees and ESI members received this training at the same time. One of the two trainings was held on-site at an ESI member facility, the other was held at a neutral site in another part of the state.
- Attended, presented, and had 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 2016.
- Created and provided training regarding conversion from ISO 14001:2004 to ISO 14001:2015. This 2-day class was held three times during 2017 including one on-site at an ESI member's facility. All were open to ESI members as well as others who were interested.
- Arranged and participated in an Environmental Benchmarking Series event at TE Connectivity in Greensboro on energy reductions and compressed air. This event was open to all ESI members and others interested in the topic. TE Connectivity presented on their achievements and provided site tours to demonstrate their projects.
- Arranged and participated in an Environmental Benchmarking Series event at Caterpillar BCP in Sanford on solid waste challenges. This event was open to all ESI members and others interested in the topic. Caterpillar presented on their achievements and provided a site tour to demonstrate their projects.
- Planned and participated in a networking event in Randolph County with our partners at the Economic Development Partnership of North Carolina. This event discussed the assistance available through the Division of Environmental Assistance and Customer Service, including participation in the ESI, with local organizations.

- Performed four assessments to determine the functional equivalency of member sites' EMS with the ISO 14001:2004 standard.
- Attended trainings on Project Management, Managing Multiple Projects, and Facilitation.
- Performed an informational visit to one potential ESI member and five additional 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 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 2017, 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 ISO 14001 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 eleven Rising Environmental Stewards by Dec. 31, 2017.

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

- Set measureable 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 2017, 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 participants 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;
- A listserv of all ESI members as well as DEQ and WRP staff to provide answers to questions and examples of best practices;
- Recognition of program participation;
- Use of a program logo for the achieved level;
- Coverage by U.S. EPA and DEQ self-reporting policies;
- A single point of contact within DEQ; and
- Other benefits as deemed appropriate by the Secretary based on recommendations from the Advisory Board.

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 Advisory Board when appropriate positions are available.

During the annual members meeting, 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. 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 10).

Figure 10: 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 (Table 8) from regulatory and non-regulatory divisions within DEQ:

2017 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
JOHN NICHOLSON – CHIEF DEPUTY SECRETARY
TOBY VINSON – Div. Energy Mining and Land Resources

Table 8: 2017 DEQ Internal Workgroup Members

2017 ADVISORY BOARD MEMBERS AND REPRESENTATION
SMALL BUSINESS DANIEL BAGNELL – The Scrap Exchange
STEWARD – LARGE BUSINESS TAUSHA FANSLAU – Bridgestone Americas Tire Operations
STEWARD – AGRIBUSINESS KELLY FIE – Santa Fe Natural Tobacco
STEWARD – LARGE BUSINESS AUBREY MEADOWS– Engineered Sintered Components
N.C. DEQ – CHAIR JOHN NICHOLSON – N.C. Department of Environmental Quality
STEWARD – STATE/FEDERAL FACILITY MARY JOAN PUGH– N.C. Zoological Park
STEWARD – LOCAL GOVERNMENT DAVID SHELLENBARGER – City of Gastonia/Two Rivers Utilities
STEWARD – AT LARGE ALICE WESSELMAN – Thomas Built Buses
STEWARD – AT LARGE JANE WOODALL – DELL

Table 9: 2017 Advisory Board Members

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 2017 board is listed in Table 9 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 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.

2017 ESI Members

Stewards

- ASMO North Carolina Inc. – Statesville
- Bridgestone Americas Tire Operations LLC – Wilson
- City of Gastonia Crowders Creek Resource Recovery Facility
- City of Gastonia Long Creek Resource Recovery Facility
- City of Gastonia Water Treatment 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
- Eaton Corporation, Youngsville Plant Operations
- Engineered Sintered Components – Troutman
- Firestone Fibers & Textiles – Kings Mountain & Gastonia
- Fleet Readiness Center East – Cherry Point
- GKN Driveline – Sanford Precision Forming Facility
- Grifols Therapeutics – Clayton
- Hickory Manufacturing and Technology Center, Corning Optical Communications
- John Deere Turf Care – Fuquay-Varina
- Keihin Carolina System Technology, LLC – Tarboro
- Leggett & Platt ON64 – High Point
- N.C. Zoological Park – Asheboro
- Santa Fe Natural Tobacco Knotts Grove Campus – Oxford
- Smithfield Packing Company – Wilson
- Stanley, Black & Decker – Kannapolis
- TE Connectivity – Pegg Rd – Greensboro
- TE Connectivity – Burgess Rd – Greensboro
- Thomas Built Buses, Inc. – High Point
- Uchiyama Manufacturing America LLC – Goldsboro
- U.S. Environmental Protection Agency – RTP

Rising Stewards

- **Ajinomoto North America, Inc. – Raleigh**
- **ASMO Greenville of North America, Inc.**
- **Bridgestone-Bandag, LLC – Oxford**
- **City of Gastonia Resource Recovery Farm**
- **Eaton Corporation, Raleigh Production Operations**
- **GKN Driveline – Roxboro**
- **GKN Sinter Metals – Conover**
- **Hyster-Yale Group – Greenville**
- **Mecklenburg Co. Solid Waste Operations – Charlotte**
- **Qorvo, Inc – Greensboro**
- **Smithfield Farmland – Tar Heel Facility**

Partners

- Alliance One International Inc. (5)*
- American Emergency Vehicles
- American Snuff Company / Taylor Brothers
- Baker Furniture – High Point
- Baker Furniture – 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 – Clayton
- Caterpillar BCP – Sanford
- Charlotte-Mecklenburg School System
- City of Gastonia Public Works Division
- City of Hendersonville Water Treatment Plant
- City of Shelby First Broad River Wastewater Treatment Plant
- City of Shelby Water Treatment Plant
- CommScope – Greensboro
- Core Technology Molding Corporation
- Crown Equipment – Kinston
- Domtar Paper Company, LLC – Plymouth
- Eaton – Capital Blvd – Raleigh
- Freudenburg Nonwovens – Durham
- General Electric Company – Aviation – RTP
- Haeco Airframe Services – Greensboro
- Industrial Connections & Solutions LLC – Mebane
- International Paper – Riegelwood Mill
- Iredell Fibers, Div. of Leggett & Platt – Statesville
- Kao Specialties Americas, LLC – High Point
- 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
- PRC Industries
- PSNC Energy Carolinas Inc. (21)*
- RJ Reynolds Tobacco (3)*
- SELEE Corporation – Hendersonville
- Siemens Medical Solutions, CSG Service Headquarters – Cary
- Smithfield Clinton Plant
- Southern Research Institute - Energy & Environment
- 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

Division of Environmental Assistance and Customer Service

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Cover Photo 1: Employees of Grifols Therapeutics in Clayton receive Environmental Steward recognition from Governor Roy Cooper and DEQ Secretary Michael Regan.