



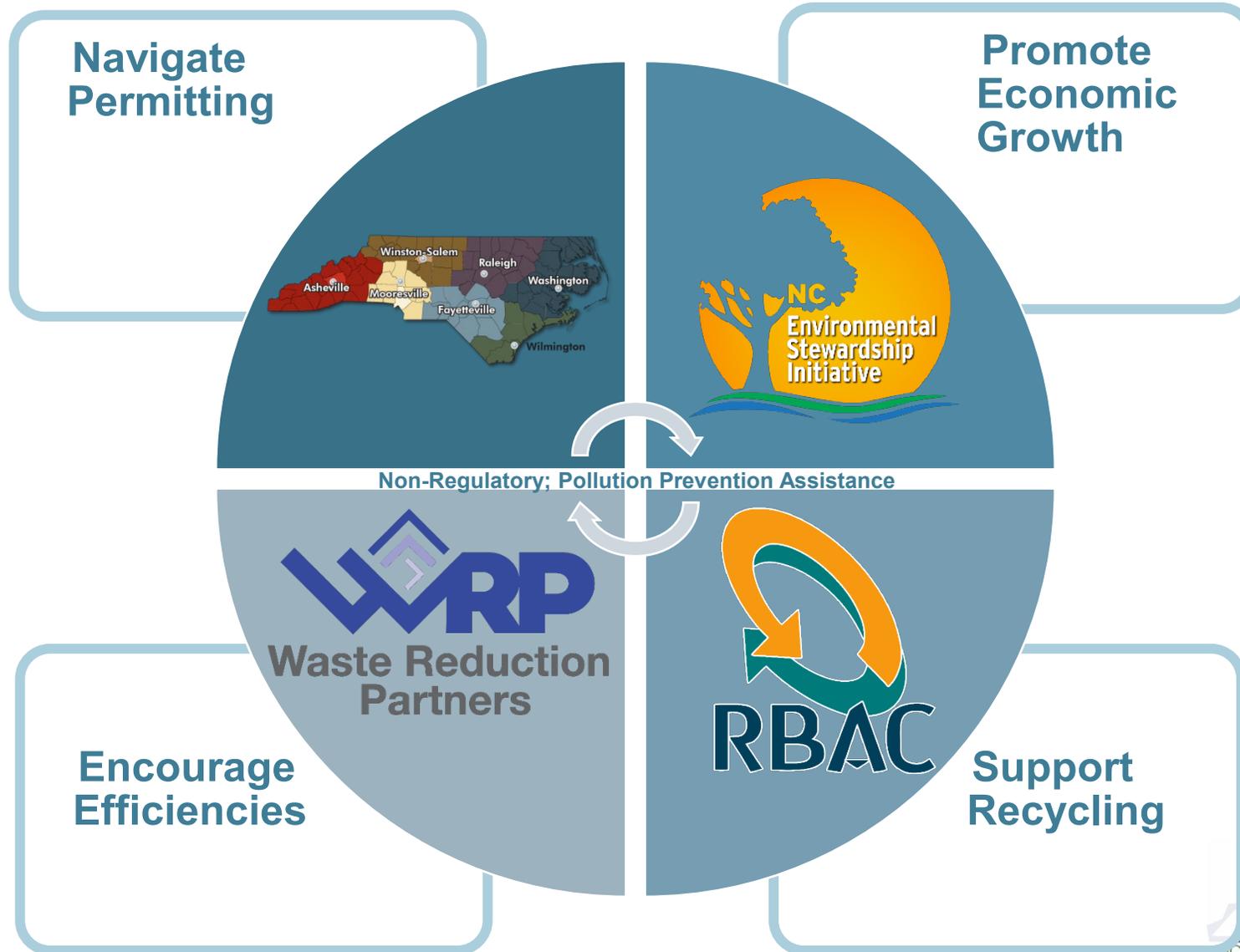
October 24, 2022

ESI Pre-Conference Workshop - 20th Anniversary

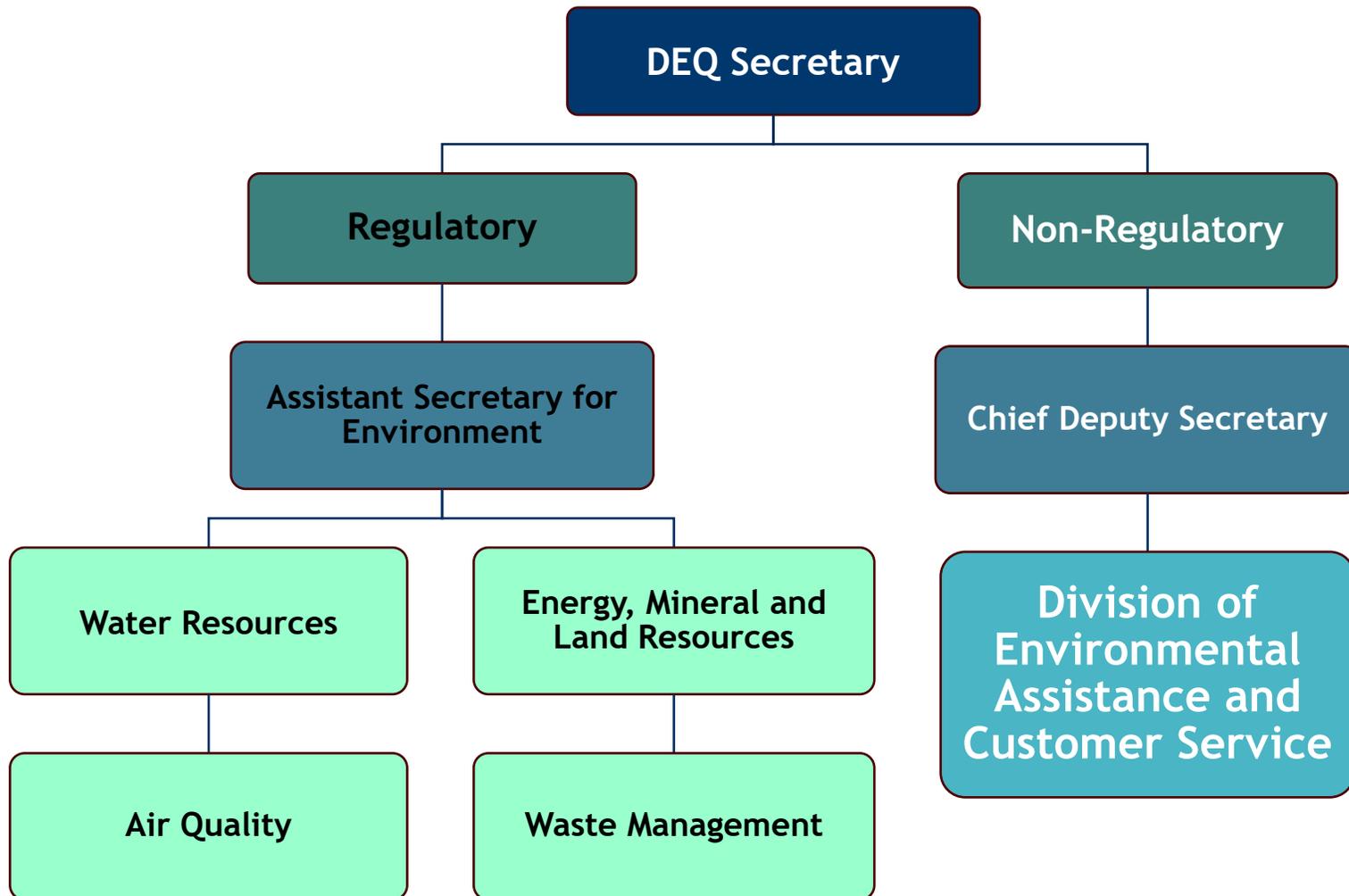
Department of Environmental Quality



Division of Environmental Assistance and Customer Service



Division of Environmental Assistance and Customer Service



Division of Environmental Assistance and Customer Service



Helping Businesses, Manufacturers and Industry

- Navigate regulatory and permitting challenges.
- Use resources responsibly and move towards a more circular economy.
- Achieve and be recognized for environmental excellence.
- Implement pollution prevention and sustainability strategies.
- Grow local economies and create jobs.
- Understand how to address environmental problems.





Permitting and Compliance Assistance

Environmental Assistance Coordinators

- Serve as non-regulatory liaison in regional office
- Facilitate Express, pre-application, multi-agency permit scoping
- Offer compliance assistance
- Provide customized permit lists



Environmental Assistance Coordinators



Permit Assistance Request Form

Complete this brief form and a non-regulatory, Regional Environmental Assistance Coordinator will contact you soon. Prefer to call? Download the [regional contact information](#) document for phone numbers and contact information. If you need information regarding a particular type of permit, please go to the [DEQ Permit Directory](#). [Learn more](#) about DEQ permitting assistance.

*Indicates required field

First Name

Last Name

City/Town

County*

Telephone

Email*

- ARO - Alison Davidson: (828) 296-4698
- FRO** - Johnathan Watts: (910) 433-3353
- MRO** - Jesse McDonnell: (704) 235-2107
- RRO - David Lee: (919) 791-4204
- WSRO - Paul Williams: (336) 776-9631
- WaRO - Lyn Hardison: (252) 948-3842
- WiRO - Cameron Weaver: (910) 796-7265

***new positions added in 2022*



Recycling and Materials Management Assistance

North Carolina Recycling Markets Directory

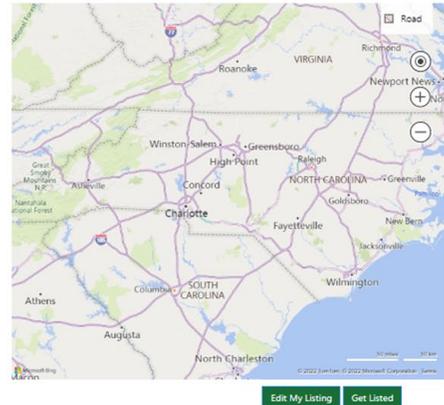
The North Carolina Recycling Markets Directory connects businesses looking to recycle materials they generate with companies who can process those materials. Search the directory by material using the drop-down menus below to find recycling companies near you. Please contact these companies directly to discuss specifications, restrictions and availability to accept recyclable materials.

We recommend using this directory with Chrome, Firefox, or Edge internet browsers.

Select a Category Select a Material

OR

Search by Company Name



NORTH CAROLINA
RECYCLING
MARKETS DIRECTORY

Brand New Look!

- Provides market research on commodities
- Assists in sourcing recyclable materials & organic matter
- Oversees outreach campaigns and special initiatives

USE THE
FoodNC
FOOD WASTE STOPS WITH ME



Recycling and Materials Management Assistance

Monday October 24, 2022

2:45	3:15	Food Waste Initiatives	Ms. Christine Wittmeier, NCDEQ
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Tuesday October 25, 2022

9:45	10:15	Recycling Updates	Mr. Mike Greene, NCDEQ
3:15	3:45	How to implement a composting program	Mr. David Auge, Grifols
		Composting challenges	Ms. Wendy Worley, NCDEQ



Technical and Pollution Prevention Assistance



Welcome to Waste Reduction Partners

Waste Reduction Partners helps organizations improve environmental and energy management through efficiency techniques that save money. The WRP team conducts on-site assessments and provides consulting services to businesses and public facilities throughout North Carolina. Highly-experienced volunteer engineers, scientists and staff provide clients with innovative cost-saving strategies and resources to meet their goals. Consulting services are non-regulatory and are provided at no cost to the client, supported through government and utility-sponsored grants.



Energy



Water



Solid Waste



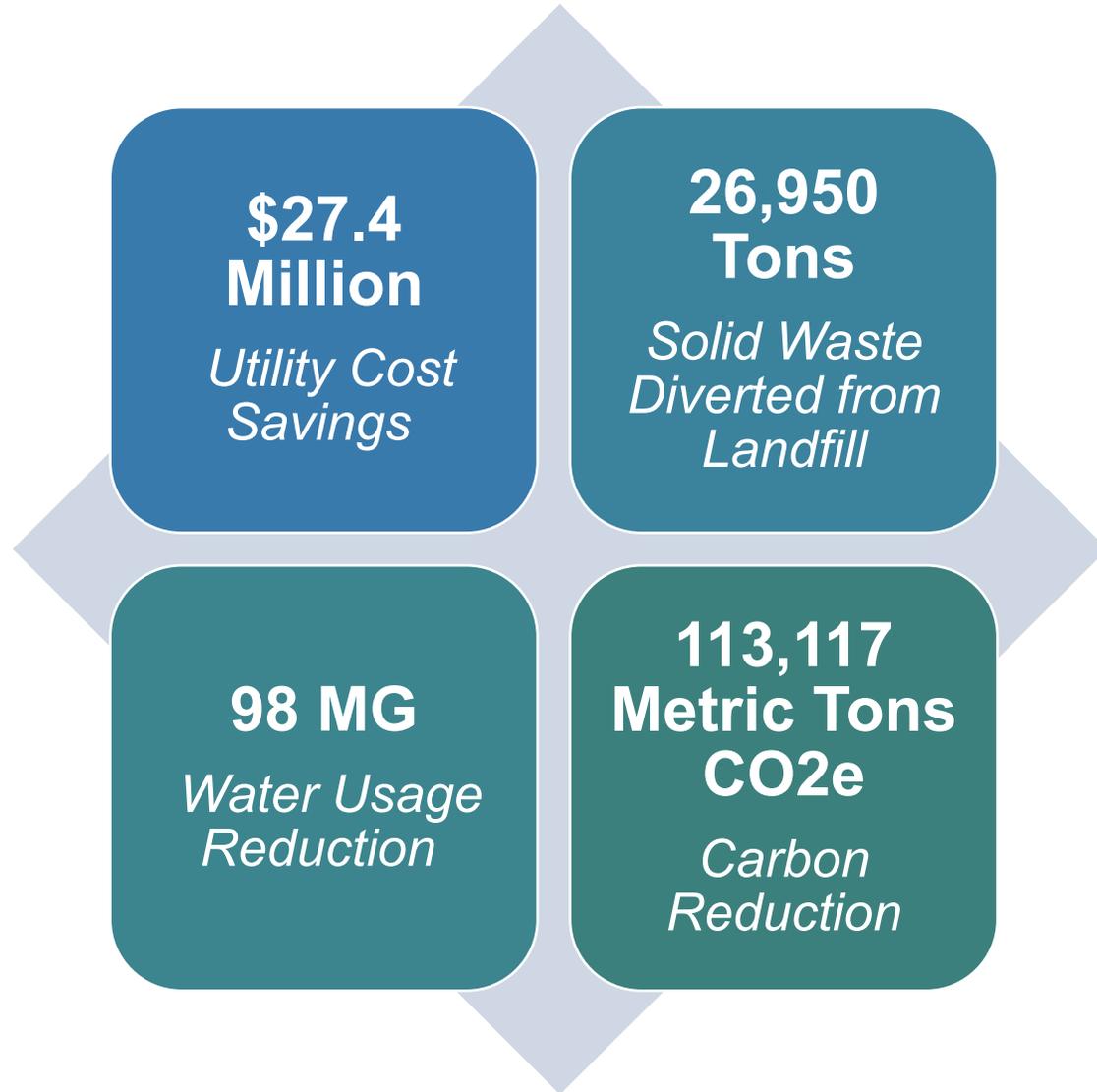
Lean & Green



- Conducts **on-site assessments**
 - Energy and Water Efficiency Assessments
 - Waste Reduction Assistance
 - Addresses sustainability and carbon goals
- Provides **cost saving** strategies and resources to meet sustainability goals
- Provided at **no cost***



WRP Past 5 Year Performance Achievements



WASTE REDUCTION PARTNERS' CLIENT PERFORMANCE FY 2021-22

CLIENT OUTCOMES	FISCAL 2021-22
Number of On-site Assessments	124 in 41 counties
Total Utility Cost Savings	\$5.1 million
Energy Reduced	227,147 million Btu
Greenhouse Gas Reduction	22,461 MTCO2e
Solid Waste Reduced	8,640 tons
Water-use Conserved	8,640,000 gallons
Technical Assistance Provided	9,459 hours



WRP Assessments Examples

- **Paper Mill Recycling, Sylva, NC –** Identified recycling solution helping Jackson Paper recycle 2,076 tons per year and save more than \$80,000 in annual disposal costs
- **Poultry Processor’s Carbon Goal, Marshville, NC –** Assisted Pilgrim’s Pride with project and roadmap strategies to address net zero GHG reduction goals.
- **Tire Recycler’s Sustainability Goals, Cameron, NC -** Provided Liberty Tire a pilot energy assessment to help establish corporate sustainability goals.



Examples used with client permission.



WRP

Waste Reduction
Partners



DEACS Biennial Report



DIVISION OF ENVIRONMENTAL ASSISTANCE AND CUSTOMER SERVICE

BIENNIAL REPORT

2021 AND 2022

ECONOMIC DEVELOPMENT

ECONOMIC DEVELOPMENT

JDIG ENVIRONMENTAL COMPLIANCE CHECKS

DEACS staff provide technical assistance before and after a business becomes operational in North Carolina. In 2018, DEACS became responsible for Environmental Compliance Reviews (ECRs) that are performed when businesses apply for Job Development Investment Grants (JDIGs) or grants through the One North Carolina Fund (OneNC). JDIG grants are available for new and expanding companies to help offset expansion or locating costs. JDIGs are based on North Carolina Department of Commerce (NC Commerce) criteria for operation. The One NC Fund is a discretionary cash-grant allowing for quick response to job creation projects. It is based on the number of jobs created, overall level of investment, location, and economic impact for the specified area or region.

To complete an ECR, the regional Environmental Assistance coordinator (EAC) reviews the project information such as project location, industrial processes, new or expanding an established business. The EAC then creates a compliance report for the project, and DEQ staff are contacted for historical compliance information and potential permitting needs. The EAC conducts internal database searches, as well as querying the EPA's Enforcement and Compliance History Online database. This information is compiled, summarized and added to the final ECR report, which is shared with DEQ's Projects Liaison for submission to NC Commerce.

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WHITE RIVER MARINE SAILS INTO

ON-SITE TECHNICAL ASSISTANCE

ON-SITE TECHNICAL ASSISTANCE

ing assistance services, grant programs and recognition of local governments can call on DEACS staff to provide on-site assistance to help achieve their environmental performance needs address resource efficiency, recycling-, water-ent, pollution prevention and sustainability strategies.

HELPING MANUFACTURERS FIND RECYCLING MARKETS

Partners (WRP) and five (ESI) staff provided Malt House (RMH) in IH creates unique, high-end distilling industries, farms and produced in a possible manner.

requested assistance with a plan. DEACS staff to complete a materials or used wooden pallets, reuse of process water, rolls for energy savings, re staff electric vehicle suggestions, RMH later commitments.

HELPING MANUFACTURERS FIND RECYCLING MARKETS

The WRP field staff helped Jackson Paper Manufacturing, a 100% corrugated paper manufacturer in Sylva, connect with Bitmore Iron and Metal (BIMCO) to recycle a paper-making residual called "tag rope." Jackson Paper now receives a small revenue for this by-product instead of paying a disposal fee. The recycling arrangement is diverting up to 2,076 tons per year from the landfill and saves more than \$80,000 in annual disposal costs.

ASSISTING LIBERTY TIRE WITH AN ENERGY ASSESSMENT

In March 2022, Liberty Tire Recycling staff contacted Waste Reduction Partners to request assistance with conducting an energy efficiency review for its Cameron site. WRP Engineer Adrian Boutwell conducted a pilot energy and water assessment and guidance report for the site to identify cost-effective efficiency and renewable energy projects. The work is helping Liberty develop environmental sustainability goals at a corporate level.

"This (energy assessment) report is extensive and really helps us define priorities as we move forward."

AMY BRACKIN, VP SUSTAINABILITY
LIBERTY TIRE RECYCLING

CREATING A BREWERY RECYCLING PARTNERSHIP

After meeting with a series of breweries, DEACS' Mike Greene discovered they all generate the same hard-to-recycle material streams but in quantities too small to attract a recycler. In coordination with Sierra Nevada, the Western North Carolina Brewery Recycling Co-Operative was launched in April 2021 that allowed regional breweries to bring source-separated recyclable materials including plastic wrap, cardboard, polypropylene grain bags and mylar hops bags to Sonoco Recycling (formerly American Recycling of WNC) in Candler. DEACS awarded a grant to Sonoco Recycling to make facility modifications and buy equipment to accommodate the brewery recycling station.

ESI FACILITATES ISO AUDITOR TRAINING EVENT

The ESI staff revamped its training to provide a generalized class on auditing techniques, applicable to the ISO 9001, 14001 and 50001 standards implemented by members. This training provided participants with presentations, hands-on exercises (including mock audits), and in-depth discussion about ISO internal auditing. The new course launched on May 26, 2022 at ESI Steward Thomas Built Buses - High Point.



ESI's ISO Internal Auditor Training Event at ESI Steward Member Thomas Built Buses in High Point (May 26, 2022).



Division of Environmental Assistance and Customer Service (DEACS) is a division of North Carolina DEQ offering technical and financial assistance to business owners, local governments, institutions, economic developers and environmental management. For questions, call 1-877-623-6748.

N.C. DIVISION OF ENVIRONMENTAL ASSISTANCE AND CUSTOMER SERVICE

Customer service through technical, compliance and financial assistance

NC Environment Stewardship Initiative

DEACS Booth



Environmental Stewardship Initiative (ESI)

PEER-TO-PEER PROMOTION OF ENVIRONMENTAL EXCELLENCE

- DEQ recognition and leadership program
- Began 20 years ago in 2002 and has continued to evolve to meet members' needs
- **Free** and **voluntary**
- Promotes and encourages outstanding environmental performance
- Going beyond compliance while conserving natural resources and resulting in economic benefits



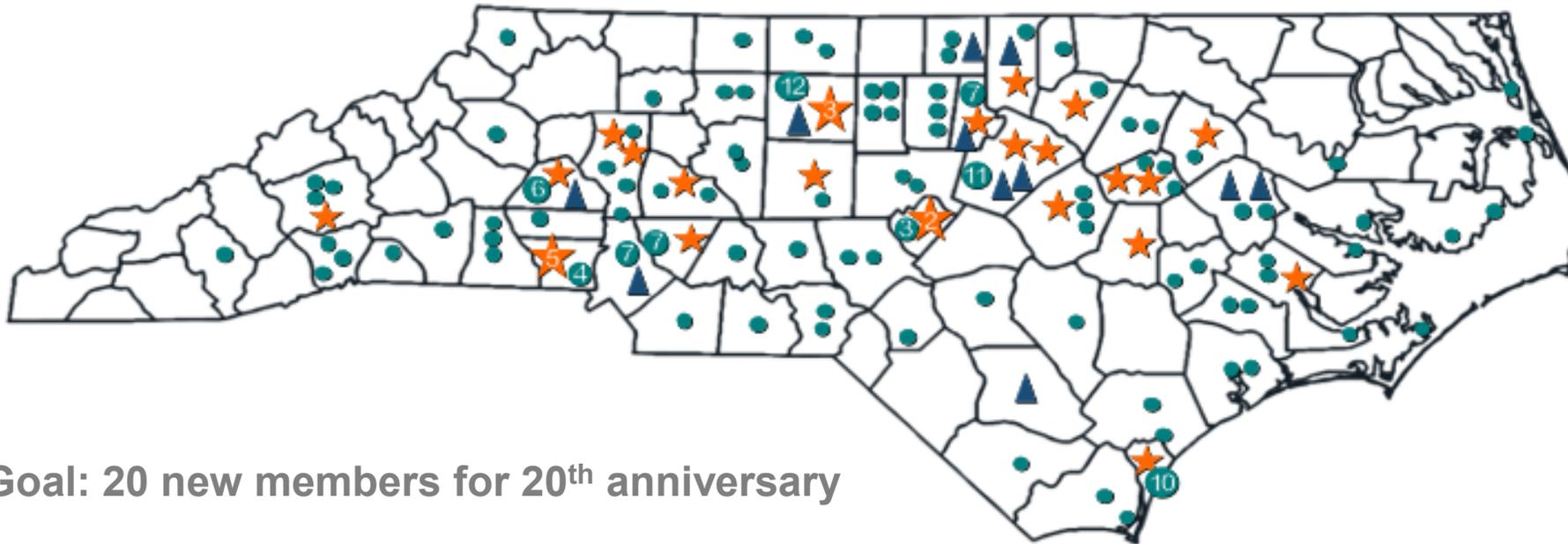
Environmental Stewardship Initiative

2002

- 1 Steward
- 27 Partners

2022

- 55 Partners @ 158 Member sites
- 12 Rising Stewards
- 30 Stewards



Goal: 20 new members for 20th anniversary

Rising Steward level added in 2004



ESI Membership Levels*

Stewards

- Set aggressive environmental goals
- Integrate EMS into core business functions
- Communicate with local community
- Agree to mentor other ESI members

Rising Stewards

- Demonstrate mature EMS
- Commit to go beyond compliance
- Set long-term environmental goals

Partners

- Establish environmental goals
- Report annually on goals and compliance
- Not be under criminal indictment/conviction

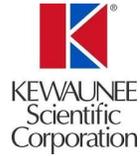
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Recognition:

- Joining program
- Every 5 years of membership
- Advancement to higher level
- Steward ceremony
- Steward/Other Tweets
- eNews articles

*Membership requirements are added as you move up the hierarchy; e.g., Stewards must also meet the member requirements at the Partner and Rising Steward levels.

ESI Members



Member Benefits and Services

- Dedicated coach/DEQ point-of-contact
- Personalized on-site assistance
 - Waste reduction
 - Water conservation
 - Energy assessment
- Recognition awards/marketing
- Electronic newsletter
- ESI member listserv



ESI Partner, Cape Fear Public Utility Authority, conducted a waste sort to educate employees on recyclable items that can be diverted from landfill disposal.

Member Benefits and Services



- No-cost training
- Peer mentorship
- Steward Forum
- Networking opportunities
 - Annual member conference
 - Topic-based facility led on-site events



Energy and GHG Series



Welcome to Today's Webinar
Understanding Carbon Emissions Reporting:
The New Belgium Journey
July 21, 2022
10:00 am – 11:30 am EST

DEQ
NORTH CAROLINA
Department of Environmental Quality

0:05 / 1:32:42

www.ncesi.org



Environmental Benchmarking Series

Host	Topic
Grifols Therapeutics LLC	Biodiversity and Wildlife Habitat
Two Rivers Utility	Setting Env. Goals to Gain Additional Benefits for Your Organization
Domtar, Plymouth	Landfill Reduction and By-product Reuse
Smithfield Foods – Wilson	Water Reduction
Sierra Nevada Brewing Company	“Bigger than Beer” Sustainability Initiatives



ESI Logo Use for Members

Members of the North Carolina Environmental Stewardship Initiative may use the logo designed for the highest level of the program the site has achieved. Examples of the program level logos are at the end of this paragraph. These logos vary slightly from the overall ESI program logo (above). The official program logo use is reserved for the ESI (DEQ) staff only.



Partner



Partner

ESI Partner Logos



Partner



Rising Steward



Rising Steward

ESI Rising Steward Logos



Rising Steward



Steward



Steward

ESI Steward Logos



Steward

Organizations agree to adhere to the following guidance on proper use of these logos.

The ESI program level logos:

- 1) May only be used by the organization or part of the organization recognized at that level. When using the logo, the member must make clear in its use of the logo what portion of the organization's operations (specific site or sites) are considered an Environmental Steward, Rising Steward, or Partner.
- 2) May be used on internal and external printed and electronic media. Examples of where the ESI program level logos may be used include:
 - Organization letterhead
 - Organization business cards
 - Organization signs and flags
 - Organization advertisements and newsletters
 - Organization web site
- 3) May not be used by an organization terminated from the program.
- 4) May not be used by an organization to imply that it is certified by DEQ, that it is a "green" company, or that its operations do not have impacts on the environment.
- 5) May not be used by external parties such as vendors, customers/clients, boards or contractors.

Recognition of an organization as an Environmental Steward, Rising Steward, or Partner by DEQ does not imply that the organization is a "green" company or that its operations do not impact the environment. This recognition instead distinguishes an organization as having made a public commitment to continuous environmental improvement. Misleading statements in the marketplace or to the general public should be avoided.

Participating organizations should distribute these guidelines to the appropriate members of their organization who will be responsible for marketing and promotion. Following the use guidelines is the responsibility of the participating organization and is essential to maintaining program credibility.

If an organization's participation in the ESI is terminated for any reason, use of the logo must cease immediately, and all related benefits are withdrawn. DEQ will periodically monitor use of the logo. Continued inappropriate use of the logo by participating organizations may result in revocation of logo use privileges or in termination of program participation.

ESI e-News

ESI eNews October 2022 - Message (HTML)

File Message Help Acrobat

Ignore Junk Delete Archive Reply Reply All Forward Share to Teams FOG Team Email ESI To Manager Move Tags Editing Immersive Translate Zoom Viva Insights Report Phish

Delete Respond Teams Quick Steps Language Zoom Add-in PhishAlarm

ESI eNews October 2022

BD NCDEQ DEACS - ESI <wendy.worley@ncdenr.ccsend.com> on behalf of NCDEQ DEACS - To Conners, Davis Tue 10/4/2022 2:01 PM



www.ncesi.org

Environmental Stewardship Initiative e-News October 2022

Celebrating the 20th Anniversary of the Environmental Stewardship Initiative in 2022!

Register for Upcoming ESI Events!

GRIFOLS ESI Environmental Benchmarking Series

The Environmental Stewardship Initiative will be offering an in-person Environmental Benchmarking Series on October 19 from 10:00am – 12:00pm EDT with ESI Steward *Cifalo Therapeutics LLC* hosting (Clayton, NC).

ESI eNews October 2022 - Message (HTML)

File Message Help Acrobat

Ignore Junk Delete Archive Reply Reply All Forward Share to Teams FOG Team Email ESI To Manager Move Tags Editing Immersive Translate Zoom Viva Insights Report Phish

Delete Respond Teams Quick Steps Language Zoom Add-in PhishAlarm

ESI eNews October 2022

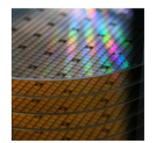
BD NCDEQ DEACS - ESI <wendy.worley@ncdenr.ccsend.com> on behalf of NCDEQ DEACS - To Conners, Davis Tue 10/4/2022 2:01 PM

ESI Member News

COOLEST THING MADE IN NC

The N.C. Chamber is asking the public to name the "Coolest Thing Made in NC." The N.C. Chamber knows "North Carolina has much to be proud of, especially when it comes to the products it manufactures. Celebrate the Tar Heel State's creativity, innovation, and talent by nominating your favorite made-in-N.C. product."

On August 25, the N.C. Chamber announced the full field of nominees. The 80 nominees for 2022's "The Coolest Thing Made in N.C." competition included ESI Rising Steward **Wolfspeed, Inc.** (Durham/Durham County) for their silicon carbide technology. Wolfspeed, Inc. joined the ESI program in 2018 as a Partner and became a Rising Steward in 2019. On September 22, 2022, it was announced that Wolfspeed was one of the final 10 organizations in the competition!



Wolfspeed's Silicon Carbide semiconductor technology is the key to efficiently powering emerging and established technologies. These include electric vehicles, drones, and air conditioning units. Silicon Carbide semiconductors are replacing traditional silicon semiconductors as the newer technology leads to significant reductions in greenhouse gas emissions and helps to displace fossil fuel usage in transportation, energy generation, and energy storage. Silicon Carbide is one of the most difficult materials to make in the world as it requires half the heat of the sun and a highly specialized crystal structure for creation. Out of over 200 possible crystal formations, only one can be used to make Silicon Carbide.

Go to coolestthingmadeinnc.com to vote for the coolest thing made in NC. The field of candidates will narrow with each round of voting, and the winning product will be revealed the before National Manufacturing Day, Thursday, October 6.

October is Manufacturing Month, organized nationally by the National Association of Manufacturers and The Manufacturing Institute. Manufacturing Month highlights the

2021 ESI MEMBER SUCCESS STORIES



DAIMLER

- Daimler Trucks North America (DTNA)**, an ESI member since 2010, has four facilities in the program that have all achieved Steward membership by 2017. The company announced that the first J.B. Hunt Intermodal delivery using the eCascadia, an all-electric Class 8 truck that pulled out of the Southgate terminal in August 2020, barely making a sound.
- With zero tailpipe emissions, the eCascadia is an environmentally friendly vehicle that can greatly reduce a fleet's carbon footprint. On a full charge, the series-produced eCascadia is expected to have a driving range of up to 250 miles, making it ideal for local and regional distribution and drayage. The all-electric tractor has a 525-horsepower engine and can recharge as much as 80 percent in just 90 minutes.
- Charging stations have been installed at the Los Angeles terminal, and drivers are being trained to operate the vehicle. The eCascadia vehicle that J.B. Hunt uses is part of the Freightliner Customer Experience Fleet, an initiative to provide DTNA customers with first-hand experience implementing electric vehicles within their operations.



- Eaton - Arden**, an ESI Steward member since 2019, was presented the Clean Air Excellence Award in November 2020 by the Western North Carolina Regional Air Quality Agency (WNCRAQA). The award gives special recognition to local businesses and organizations that have gone above and beyond air quality rules and regulations to implement voluntary, innovative programs that reduce air pollution in Western North Carolina.
- Eaton - Arden is a manufacturer of power management products such as low-voltage switchgear, medium-voltage drives, automatic transfer switches, and power factor correctors. To support the plant objective to reduce greenhouse gas emissions and energy consumption, 52,000 of the 134,000-square feet of roofing was replaced in 2019. Additional insulation was added to the roof in accordance with manufacturer's recommendations to achieve R30 insulation value and reduce energy loss from the facility. In addition, two of the roof-mounted HVAC units using R-22 refrigerant were replaced with more efficient Energy Star units, using the more environmentally friendly R-410A refrigerant.
- Projected annual decreases in greenhouse gas (carbon dioxide) emissions for the projects:
 - 517,903 pounds of carbon dioxide for roofing upgrade and
 - 26,610 pounds of carbon dioxide for HVAC upgrade.
- The facility's projected cost-savings for the roofing project when completed is \$17,239 each year. HVAC energy use and associated costs are expected to decrease by 6 percent.

PREPARED BY
NORTH CAROLINA
DEPARTMENT OF
ENVIRONMENTAL QUALITY



Incorporating J.B. Hunt's all-electric Freightliner eCascadia to its fleet.

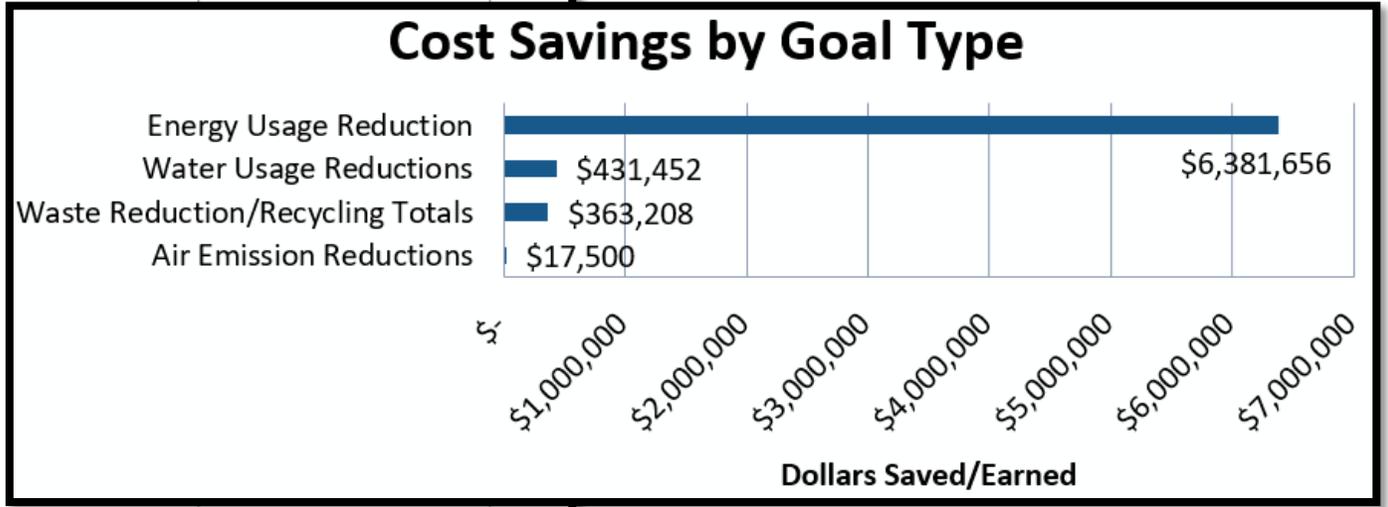
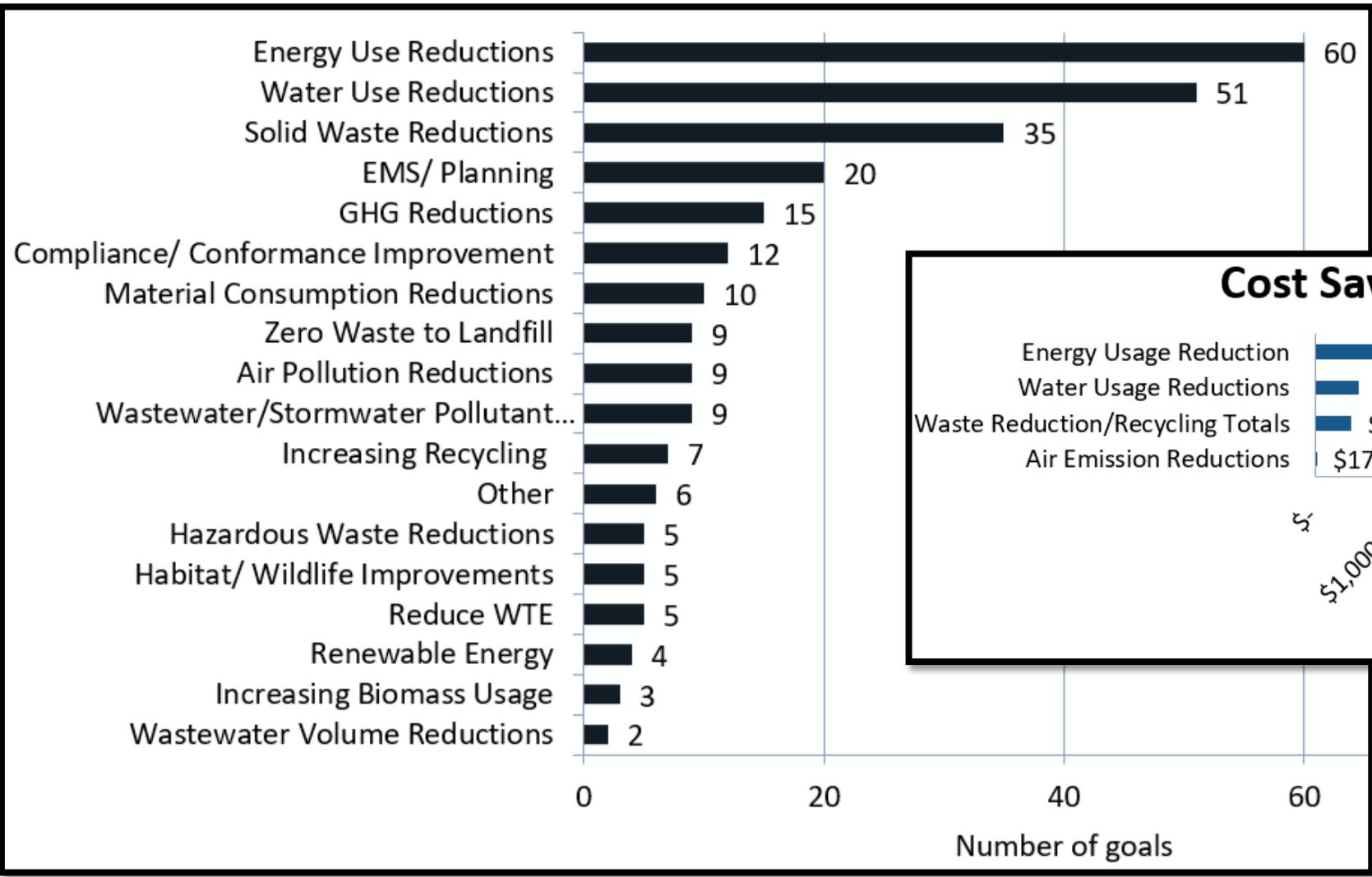
- Thomas Built Buses - High Point**, an ESI Steward since joining the program in 2011, was visited by Vice President Kamala Harris, EPA Administrator Michael Regan, and N.C. Governor Roy Cooper on April 19, 2021, as part of the Biden Administration's infrastructure plan rollout.
- A facility tour included the bus floor assembly area, automated vehicle guidance system, electric vehicle charging station and electric vehicles fleet. Thomas Built Buses had recently rolled out the new SAF-T-Liner EC2 electric school bus. Both Vice President Harris and Governor Cooper touted the electric buses as models for clean energy advancement. For more, check out this [article](#).
- The Board of Education in Maryland's Montgomery County voted unanimously on Feb. 23, 2021 to approve a 16-year, \$169 million contract to lease 326 buses that could result in the county replacing its entire 1,422-bus fleet over the next two decades. The deal represents the largest municipal government order of any kind for buses and promotes clean energy use.



A SAF-T-Liner EC2 electric school bus, manufactured by Thomas Built Buses.



ESI Member Goals/Results



2020 ESI MEMBERS' REPORTED RESULTS

REDUCTIONS	Air Emissions	498	Tons
	Greenhouse Gas Emissions*	22,320	Metric Tons CO ₂ e
	Hazardous waste	723	Tons
	Landfilled waste	32,268	Tons
	Energy	8,203,092	MMBtu
	Water Use	1,290,141,538	Gallons
	Material Consumption	600	Tons
	Wastewater Pollutants	6,730	Tons
	Wastewater Volume	1,029,291,748	Gallons
	REUSE	Biomass Recovery**	86,620
Total Recycled Volume		341,881	Tons
TOTAL COST SAVINGS \$ 7,193,816			

*Indirect not reported in energy reductions

**Category created for compost/mulch related goals

Reported ESI Member Savings



ESI members saved enough money on 2020 environmental projects to pay the salary of 240 people earning \$30,000 per year.



Number of North Carolina homes that could be powered for a year by ESI member energy savings in 2020.

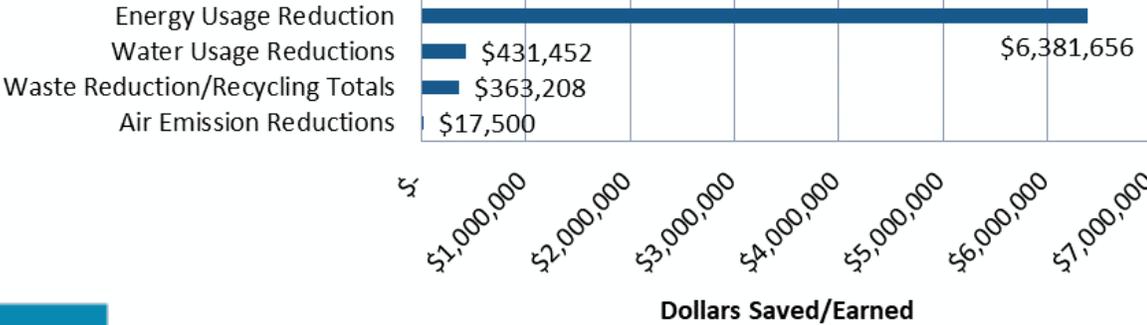


ESI members saved enough water in 2020 to fill almost

58,643

average-sized swimming pools!

Cost Savings by Goal Type

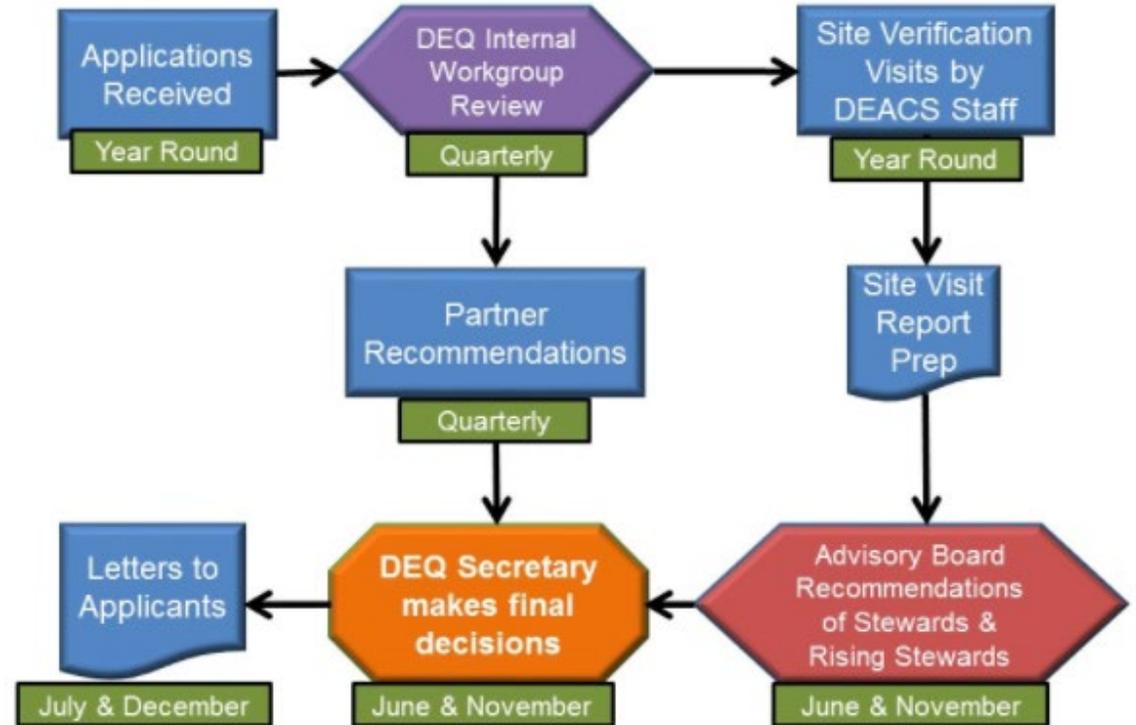


In 2020 ESI members reduced greenhouse gas emissions equivalent to more than

25,593
passenger vehicles driven for one year!

To Join ESI

- Requirements:
 - Commitment to compliance
 - Not under environmental criminal indictment or conviction
 - Report annually
- Apply online



ESI application process flow



ESI Contact Information

DEQ Customer Service: 1-877-623-6748

**Marcia Allocco, Environmental Assistance
Section Chief**

Marcia.allocco@ncdenr.gov - 919.707.8206

Don Burke, ESI Coach

Don.burke@ncdenr.gov - 919.707.8131

Website: www.ncesi.org

Email: esi@ncdenr.gov

