



Environmental Stewardship Initiative

ESI CONFERENCE

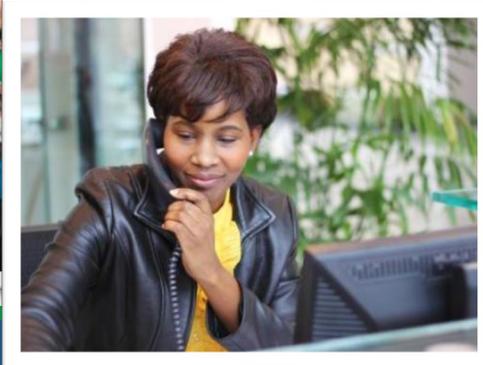
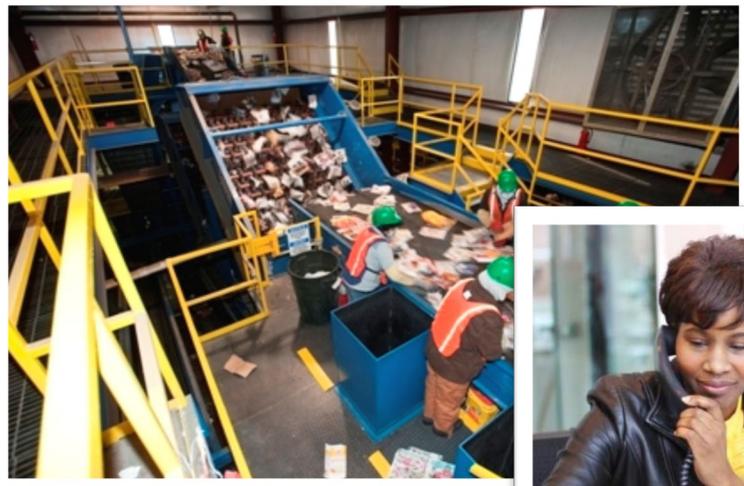
MAY 14 & 15, 2019

PRE-CONFERENCE WORKSHOP



Division of Environmental Assistance and Customer Service

- Non regulatory
- No cost-permit; compliance; technical assistance
- Engineers, chemists, environmental specialists





Environmental Stewardship Initiative

- DEQ **recognition** program for superior environmental performance
- DEACS staff serve as coach to member and manage program
- **Voluntary** and **free**
- Funded through EPA Pollution Prevention Grant





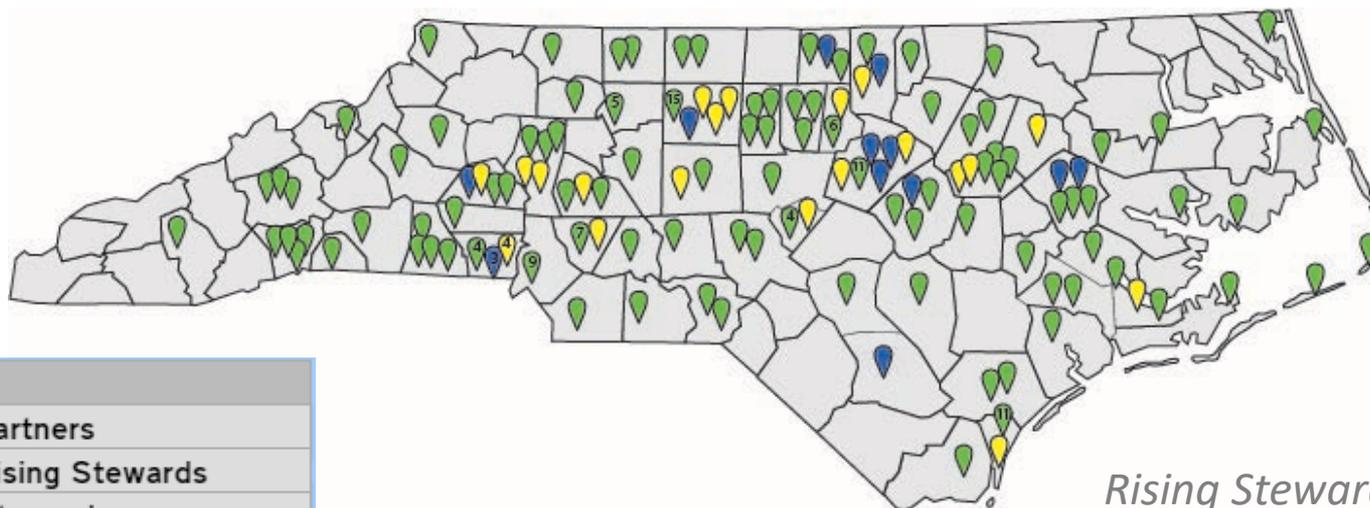
Environmental Stewardship Initiative

2002

- 1 Steward
- 27 Partners

2019

- 29 Steward
- 12 Rising Steward
- 53 Partners; 155 sites



Rising Steward level added in 2004

Legend

-  Partners
-  Rising Stewards
-  Stewards



To Join ESI

- Commitment to compliance
- Not under environmental criminal indictment or conviction
- Report annually on progress towards environmental performance goals and any reportable non-compliance



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
- Continental Automotive – Henderson Plant
- Core Technology Molding Corporation
- Corning Newton Cable Plant
- Cree
- Crown Equipment – Kinston
- Domtar Paper Company, LLC – Plymouth
- Eaton – Capital Blvd – Raleigh
- Freudenberg Nonwovens – Durham
- General Electric Company – Aviation – RTP
- HAECO Airframe Services – Greensboro
- Industrial Connections & Solutions LLC – Mebane
- International Paper – Riegelwood Mill

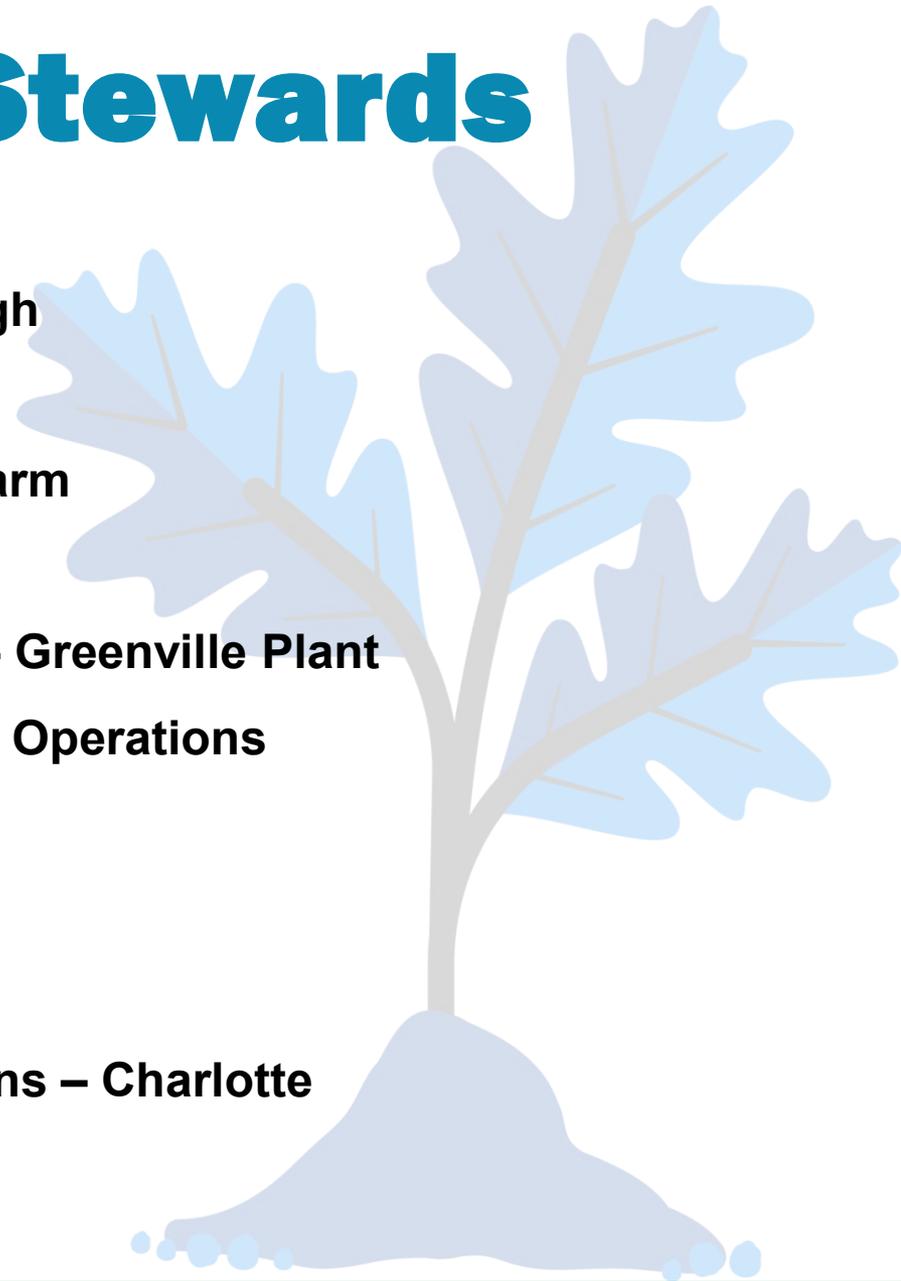
- Kao Specialties Americas, LLC – High Point
- Kewaunee Scientific
- Leggett & Platt – Cincro
- Leggett & Platt – 0548 & 8814
- Liberty Tire Recycling, LLC (2)*
- Linamar Corporation
- Louisiana-Pacific Corp, Roaring River Plant
- Martin Marietta (58)*
- Matrex – a div of Leggett & Platt
- Michelin Aircraft Tire Co. – Norwood
- Mylan Pharmaceutical Greensboro
- NIEHS – RTP
- N.C. DOT Ferry Division (9)*
- Pfizer – Sanford
- Piedmont Service Group Raleigh Office
- PSNC Energy Carolinas Inc. (21)*
- SELEE Corporation – Hendersonville
- Siemens Medical Solutions, CSG Service Headquarters – Cary
- Smithfield Clinton Plant
- 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



Rising Stewards

- **Ajinomoto North America, Inc. – Raleigh**
- **Bridgestone-Bandag, LLC – Oxford**
- **City of Gastonia Resource Recovery Farm**
- **CommScope – Greensboro**
- **DENSO Manufacturing North Carolina - Greenville Plant**
- **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**



Stewards



- **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**
- **DENSO Manufacturing North Carolina - Statesville Plant**
- **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**



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



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



ESI members saved
enough water in 2017
to fill more than

47,200

average-sized
swimming pools!



In 2017 ESI members reduced
greenhouse gas emissions
equivalent to over

15,745

passenger vehicles driven for
one year!



ESI members saved enough money on environmental projects in 2017 to pay the salary of

272 people

earning \$30,000 per year.



ESI Benefits and Services

- Technical Assistance
- Networking
- Recognition
- Electronic Newsletter
- DEACS Coach
- Trainings
- EMS Assistance
- Steward Forum
- ESI Listserv





ESI Activities

- Personalized onsite EMS assistance
- Internal Auditing Assistance
- EMS Gap Analysis
- Networking:
 - Annual ESI Conference
 - At ESI facilities
 - Facility tours
 - Networking with ESI members & DEQ
 - Topic based/facility lead
 - Energy
 - Solid waste reduction
 - EMS
- Events
 - Hazardous Waste Quarterly Topics
 - Energy Webinar Quarterly Series
- Training
 - ISO 14001 –
 - EMS Implementation Series (7 Modules)
 - EMS Internal Auditing
 - ISO 14001:2004 to 2015 Overview
 - Lean and Green
 - Zero Waste to Landfill 101
 - Developing SMART Environmental Goals

Welcome Packet



Environmental Management Systems and ISO 14001

EMS 101





What is an EMS?

Emergency Medical Service

Emergency Management Services

Express Mail Service

Electromagnetic Spectrum

Ethyl Methane Sulfonate

Electronic Mail Service

Excess Mileage Surcharge

European Monetary System

Earth and Mineral Sciences

NO

Well, yes, but
not today!



Environmental Management System

A proven tool that is specifically designed to help any organization manage its activities and allow successful pursuit of that organization's environmental policies and goals.



What does an EMS do?

Provides a systematic way of managing an organization's environmental affairs

Ensures environmental considerations are a priority

Gives order and consistency for organizations to address environmental concerns through:

- allocation of resources,
- assignment of responsibility
- ongoing evaluation of practices, procedures and processes

Focuses on continual improvement of the system



Why Implement an EMS?

Helps to focus organization's priorities and avoid "flavor of the month syndrome"

Helps to prioritize and keep sustainability goals from competing with each other for resources and attention

Establish a framework to move beyond compliance

Vehicle for positive change; improved employee morale, enhanced public image

Helps to identify the root causes of environmental problems



What is ISO?

"ISO" is a word, derived from the Greek isos, meaning "equal."

ISO an acronym - International Organization for Standardization



www.iso.org



What is ISO 14001?

Developed by an NGO representing over 100 countries

ANSI is the US representative

Widely adopted

Some customers demand implementation, some even require certification

Auditable

Compatible and easily integrated with other ISO standards (ISO 9000, ISO 50000, etc.)



What ISO 14001 is NOT !

NOT Focused strictly on regulatory compliance
(regulatory is 1 of 3 focuses)

NOT A process wherein you immediately address
every single potential environmental impact

NOT A performance standard

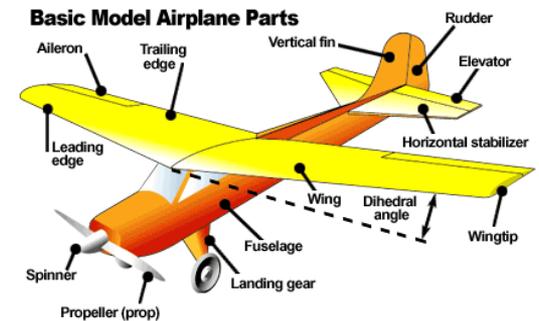
NOT An occupational health and safety standard



ISO 14001 is a Model

OTHER EMS MODELS

- E FEC by American Home Furnishings Alliance
- Responsible Care by American Chemistry Council (most chemical companies use RC-14001)
- Company Specific – ex. John Deere
- Others?





List reasons for getting registered



1. _____
2. _____
3. _____
4. _____
5. _____



Does an EMS have to be certified?

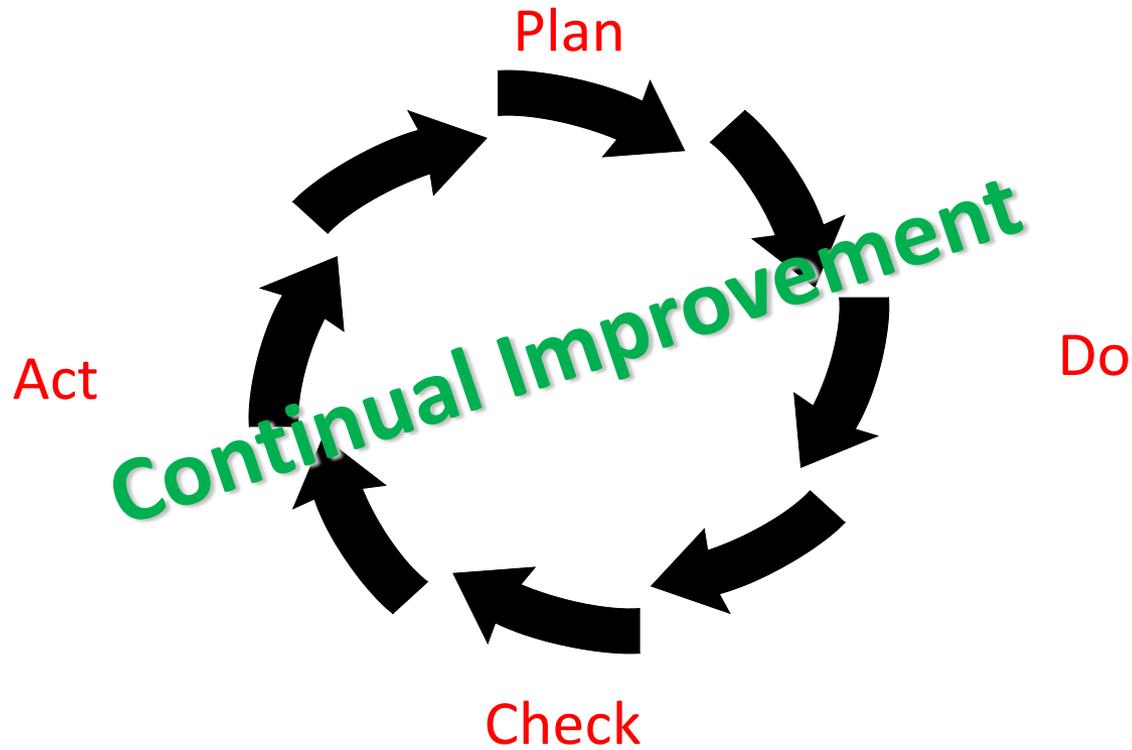
Unless you are required by a mandate, NO

3rd party certification is:

- A way to ensure your EMS isn't forgotten about
- A confidential outside set of eyes to assist with systemic improvements



P-D-C-A Model of Continual Improvement





Elements of ISO 14001:2015

6 Planning

- 6.1 Actions to address risks and opportunities
 - 6.1.1 General
 - 6.1.2 Environmental aspects
 - 6.1.3 Compliance obligations
 - 6.1.4 Planning action
- 6.2 Environmental objectives and planning to achieve them
 - 6.2.1 Environmental objectives
 - 6.2.2 Planning actions to achieve environmental objectives

Plan

5 Leadership

- 5.1 Leadership and commitment
- 5.2 Environmental policy
- 5.3 Organizational roles, responsibilities and authorities

7 Support

- 7.1 Resources
- 7.2 Competence
- 7.3 Awareness
- 7.4 Communication
 - 7.4.1 General
 - 7.4.2 Internal communication
 - 7.4.3 External communication
- 7.5 Documented information
 - 7.5.1 General
 - 7.5.2 Creating and updating
 - 7.5.3 Control of documented information

Do

Continual Improvement

10 Improvement

- 10.1 General
- 10.2 Nonconformity and corrective action
- 10.3 Continual improvement

Act

9 Performance evaluation

- 9.1 Monitoring, measurement, analysis and evaluation
 - 9.1.1 General
 - 9.1.2 Evaluation of compliance
- 9.2 Internal audit
 - 9.2.1 General
 - 9.2.2 Internal audit program
- 9.3 Management review

Check

8 Operation

- 8.1 Operational planning and control
- 8.2 Emergency preparedness and response

4 Context of Organization

- 4.1 Understanding the organization and its context
- 4.2 Understanding the needs & expectations of interested parties
- 4.3 Determining the scope of the EMS
- 4.4 Environmental management system



Contact Information

Angela Barger

919-707-8126

angela.barger@ncdenr.gov

www.ncesi.org

Department of Environmental Quality

Division of Environmental Assistance and Customer Service



NC
**Environmental
Stewardship
Initiative**

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