



Susan Graff

PROFESSOR OF THE PRACTICE

MASTER OF SUSTAINABLE ENERGY AND ENVIRONMENTAL MANAGEMENT

SCHOOL OF PUBLIC POLICY

GEORGIA INSTITUTE OF TECHNOLOGY



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Professional Summary

Susan Graff is a Professor of the Practice in the Master of Sustainable Energy and Environmental Management program, a multi-disciplinary degree integrating Georgia Tech's nationally ranked public policy, engineering, and business schools to develop leaders in sustainability practice. A retired Partner at Resource Recycling Systems (RRS), Susan leads development of sustainability strategy and materials management solutions for numerous private and public sector clients. She led a team of scientists, business and financial experts to research and construct the Sustainability Scorecard®, an enterprise assessment that executive teams use to build sustainability core competencies and create sustainable products and service models. Susan has led R&D of sustainable products and developed circular supply chains for individual companies and multi-client collaborative projects, including Baxter Health Care IV bags, Materials Recovery for the Future flexible film packaging, the Beyond 34 national recycling initiative and the Circular Great Lakes program. She served on the RRS Board of Directors for 10 years, providing strategic counsel to successfully execute the company's growth strategy in corporate sustainability services. Prior to RRS, Susan founded ERS Global, a sustainability consultancy that served Fortune 200 clients with corporate strategy and stakeholder engagement programs, developing performance measures, environmental management systems and first ever sustainability reports for diverse consumer brand and commercial service leaders, including Delta Air Lines, KB Homes, Sara Lee and Mandarin Oriental Hotel Group. She served as Curriculum Director for the Metro Atlanta Chamber of Commerce ENFORM business forum and developed the Partners for Sustainable Georgia program on behalf of Georgia Department of Natural Resources. Susan began her career as an environmental scientist at the US EPA, serving in multiple roles at both the Southeast Regional and Headquarters offices. She served in policy roles as a Special Assistant to the Administrator to implement risk-based decision making, and operational roles in hazardous waste site assessment and stakeholder management. Susan was responsible for prioritizing cleanups for an inventory of over 2500 sites, initiating public/private performance partnerships, and helped to develop national environmental risk assessment policy and methods, for which she received the Administrator's Award for her role in capacity building. Her research catalyzed creation of the Integrated Risk Information system, which provides toxicity values for health effects resulting from chronic exposure to chemicals.

RRS Highlights

Founded in 1986, RRS is an expert recycling systems consulting firm, dedicated to creating circular economy and sustainable materials management solutions that serve businesses, communities, and our collective future (www.recycle.com). Susan served as a Partner and Principal of the Corporate Sustainability practice at RRS for 11 years.

FOUNDATION FOR CHEMISTRY RESEARCH AND INITIATIVES, AMERICAN CHEMISTRY COUNCIL

Materials Recovery for the Future; Research Director

Directed and facilitated a multi-stakeholder research program to collaboratively develop and pilot the first scalable flexible plastic packaging recycling system in the U.S. Flexible packaging is the fastest growing packaging category of modern consumer packaging with over 12 billion pounds placed in the U.S. marketplace every year. Working on behalf of Dow Chemical, launched the project to recruit over two dozen brand owners, packaging companies, retailers, and the recycling industry to conduct a proof-of-concept pilot at a large recycling facility. Oversaw research design, data analysis, technical and economic feasibility analysis, LCA, materials recovery facility (MRF) testing and RFID monitoring, end market development, educational collateral, and multi-stakeholder engagement. Authored three research reports to transparently share results with stakeholders. This program resulted in a groundbreaking new process for considering new material addition to single stream recycling.

BAXTER INTERNATIONAL INC.*Recycling Pilot; Project Director*

Led a multi-disciplinary team to design and launch an innovative post-consumer IV bag recycling pilot, the first in the U.S., at Northwestern Medicine in Chicago, IL. Qualified end markets and created business case for scaling the pilot. Developed data set of non-hazardous waste generation rates and composition, and a protocol for post-use consolidated collection.

MICHIGAN DEPARTMENT OF ENERGY, GREAT LAKES, AND ENVIRONMENT*NextCycle Partnership and Innovation Program; Project Team*

Support a state-wide, multi-year contract to create the NextCycle partnership to grow recycling in Michigan and develop challenge competitions to overcome barriers associated with the use of recycled materials. Work is attracting investment in Michigan recycling and business growth through building partnerships, data collection and analysis, innovating through economic development, relationship management, materials marketing, and best management practices dissemination. Several other states are evaluating or have already instituted the NextCycle model, including Colorado and Washington.

MITSUI PLASTICS INC.*Sustainable Supply Chain; Project Director*

Performed a stakeholder assessment to aid new facility siting and commercialization of a novel closed loop purification process for film-to-film recycling. Developed a stakeholder inventory, performed supply analysis, and designed a new commercial post-consumer film collection program for participating brand owners and grocery/retail.

COUNCIL OF THE GREAT LAKES REGION*Circular Great Lakes; Project Director*

Led a multi-stakeholder group of corporate partners, 8 States and 2 Provinces to perform a recycling infrastructure assessment and best practices gap analysis of the bi-national Great Lakes Region, the largest manufacturing economy in North America. Developed a five-year circular economy strategy and action plan to eliminate plastic waste and build recycling systems at the scale of local economies throughout the Region. Identified shovel-ready projects for public and private investments.

SOLID WASTE ASSOCIATION OF LAKE COUNTY*Circular Economy; Project Director*

Worked with leading Illinois multi-municipal authority to perform a recycling system gap analysis and identify recycling best practices across commercial and residential streams to achieve increased recycling rates. Facilitated a regional workshop of public and private sector leaders to understand the material flows and opportunities for increased plastic recovery as the prevalent format in today's evolving ton of consumer packaging. Analysis and education to assist SWALCO in rollout of their circular economy program.

US CHAMBER OF COMMERCE FOUNDATION*Beyond 34: Recycling and Recovery for a New Economy; Project Director*

Led national project to implement recycling best practices across commercial and residential streams to achieve increased recycling rates in the Orlando, FL city-region. Included a national recycling hot spot analysis to identify candidate communities, materials mapping of recyclable stream quantities and economics in the selected city-region, plus facilitation of the regional recycling planning process and stakeholder outreach to produce a local, circular economy model and best practices that can be scaled to other regions of the U.S.

J.M. HUBER & COMPANY; HUBER ENGINEERED MATERIALS*Sustainability Scorecard; Project Director*

Led assessment of materiality through the product lifecycle and organizational core competencies to develop strategy for new B2B go-to-market model via distributor and retail supply chain outlets. Characterized new sustainable product claims. Conducted cross-functional leadership workshop on findings and action plan to implement new strategy.

PROCTER & GAMBLE*Packaging End of Life Strategy; Senior Consultant*

Prepared investment summaries facilitated MRF-intermediary processor-end market meetings and assisted in negotiation of a suitable agreement to introduce recyclable material into a residential recycling system to the satisfaction of multiple stakeholders. Developed and delivered keynote presentations to trade associations and educational non-profits to assist in P&G's stakeholder outreach efforts.

MEDIMMUNE

Waste Audit and Baseline Performance Measurement; Senior Consultant

Conducted a waste audit to characterize the waste stream, establish baseline data, and increase diversion from landfill, with a focus on lab recyclables. Provided content and facilitated a regional circular economy roundtable of local bioscience and commercial businesses to address gaps in processing and collection to move toward achieving zero waste goals shared by businesses and the local community.

WALMART**Corporate Strategy; EMS Development and Implementation; Project Director**

Provided support to develop waste reduction strategy, infrastructure assessment, diversion modeling, and recommended actions based on local conditions. Developed the first environmental management system (EMS) for retail stores to assure compliance, reduce their environmental footprint, and support corporate sustainability goals consisting of zero waste, environmentally sustainable products, and 100% renewable energy. The EMS was implemented with the corporation's logistics division and designed to be transferrable throughout other divisions to establish a consistent approach to enterprise-wide environmental management.

BON SECOURS HEALTH SYSTEM, INC.**Waste Management Solution Development; Project Director**

Performed a strategic assessment of waste, costs, and current enterprise waste business model to design a new solution for this top quintile health care provider. Results were implemented throughout their system of health care facilities to optimize vendor performance, sustainable materials management, and recycling.

MANDARIN ORIENTAL HOTEL GROUP, HONG KONG**Sustainability Assessment, Benchmarking, Strategy Development and Implementation; Project Director**

Led a multi-year client engagement team to support the group executive champion and sustainability leadership team in corporate strategy development and global implementation, including a Sustainability Scorecard assessment, establishing a corporate-wide performance measurement and reporting process, publishing their first sustainability report, and developing new orientation training to engage all colleagues in their role to do more for a sustainable future.

Past Experience

ERS GLOBAL

Founded ERS Global, serving as CEO of a consultancy that focused on business sustainability and technology-enabled solutions. Provided global clients corporate strategy development, policy and procedure development, implementation of performance measurement systems, and execution of sustainability programs. For 13 years, led teams to work with leading companies from a variety of industries - Delta Airlines, Skanska construction, Southwire, The Coca-Cola Company, KB Homes, the Sara Lee Corporation, and many others. Developed the Sustainability Scorecard, an Industrial Ecology Toolkit, education programs, performance-based environmental management systems, and stakeholder reporting. Notable projects included:

INTERFACE, INC.**Interface RAISE Consulting Services; Education Director**

Selected by Interface executives to lead a multi-year partnership to launch and support Ray Anderson's executive education center, Interface RAISE. Developed content and provided sustainability education to dozens of leading consumer brand executive teams through a cultural immersion process that featured mini-lectures, customized work sessions, and peer learning at internationally benchmarked plant, FLOR. Conducted Sustainability Scorecard assessments to evaluate and comparatively benchmark each client company's performance to establish individual sustainability action plans.

CATERPILLAR, INC.**Sustainability Benchmarking and Strategy Development**

Led a comprehensive industry benchmarking study and corporate assessment to inform development of the corporation's social responsibility strategy and publish their first external sustainability report. A portion of this work was published for use by Caterpillar's peer companies and for presentation at The Conference Board.

UNILEVER HOME AND PERSONAL CARE**Lead Strategic Site - Environmental Management System and Employee Awareness Training**

Addressing Unilever's goal of meeting or exceeding international environmental standards and industry leadership, led a project team to perform a significant impact assessment, develop the company's environmental management system (EMS), and conduct sustainability awareness training for Unilever's HPC lead strategic site in North America. The EMS resulted in recycling wash water and captured rainfall runoff, reducing annual potable water consumption by 32 million gallons per year, and significantly reduced storm water sampling and monitoring requirements. Overall improvements in energy, water, air, and dust emissions resulted in reported cost savings of \$500,000 in the first year.

DEPARTMENT OF NATURAL RESOURCES, SUSTAINABILITY DIVISION, GEORGIA*Partners for a Sustainable Georgia Program; Industrial Ecology/Ecosystem Services Toolkits*

Directed a project team to design and implement Georgia's nationally recognized private-public sector partnership program that provides technical assistance and incentives to industries to achieve more efficient use of natural resources and pollution prevention, employing an industrial ecology framework. The project included a multi-stakeholder consultation process with industry and citizen representatives to establish program criteria and structure. The Industrial Ecology Toolkit and Ecosystem Services Framework provided multiple strategies and guidance documents on environmental management to industry partners.

US ENVIRONMENTAL PROTECTION AGENCY (EPA) | 1984 – 1997*Waste Management Technical Authority*

Regional subject matter expert for industry compliance assistance, environmental performance measurement, and public-private partnerships. Developed multi-media environmental audit approach.

Chief RCRA Permitting

Supervised facility audits and corrective action oversight at thousands of industrial facilities throughout the Southeast. Implemented Region 4 regulatory reinvention for the Waste Management Division, benchmarking industry success and teaching systems approach to corrective action project management.

Chief Superfund Site Assessment

Supervised site audits and public meetings at Superfund hazardous waste sites. Developed the Superfund Accelerated Cleanup Model for Integrated Assessments, with second year results of \$250,000 cost savings per site.

Special Assistant to the Regional Administrator

Served as National Risk Assessment Coordinator with lead Region responsibility to develop and implement policy and methods for conduct of site-specific risk assessment. Developed national program for implementing risk-based decision model in regional offices along with the Integrated Risk Information System (IRIS). Facilitated development of Administrator Lee Thomas EPA's Next 15 Years national strategy. Served as Course Instructor for the EPA Institute. Developed and delivered EPA's National Risk Assessment training program to employees, states, industry, and environmental groups.

SCIENCE TEACHER | 1978-1981

North Springs High School, Sandy Springs, Georgia – taught biology, physical science, physics
Deerfield High School, Deerfield, Illinois – taught physical science and coached competitive swim team

Education**GEORGIA INSTITUTE OF TECHNOLOGY, ATLANTA, GEORGIA***Master of Science, Technology and Science Policy*

Graduate Research Assistant
Graduate Teaching Assistant

WESTERN ILLINOIS UNIVERSITY, MACOMB, ILLINOIS*Bachelor of Science, Biology***INSTITUTE OF ENVIRONMENTAL MANAGEMENT AND ASSESSMENT (IEMA), LONDON, UK***ISO 14001 Environmental Management Certification***THE ENVIRONMENTAL AUDITORS REGISTRATION ASSOCIATION (EARA)***Environmental Auditor Certification***US EPA***Risk Assessment and Hazardous Materials Sampling Certifications*

EPA Institute International Facilitation Training
Selected for and completed Administrator William K. Reilly
Greater Leadership Opportunities Program

Speaking Engagements**PLASTIC WORLD EXPO**

November 2021
Circular economy and supply chain sustainability for plastics

PAPER & PLASTICS INTERNATIONAL

October 2020
Circular economy and domestic end market development

PLASTICS RECYCLING CONFERENCE

March 2019
Plastics Advances at the MRF Level

MATERIALS RECOVERY FOR THE FUTURE: HOW CAN WE CAPTURE MORE VALUE FROM RECYCLING?

Global Pouch Forum, June 2019
The Challenges of Creating a Closed-Loop Package Recycling System

WESTERN MICHIGAN UNIVERSITY

Fiber Recycling Course, July 2019
Material Recovery for the Future

NERC FLEXIBLE PACKAGING RECOVERY WEBINAR

November 2018
Adding New Materials to Curbside Recycling: MRF Pilot Program for Films, Bags, and Pouches (with Chris King)

SWANA WASTECON/ISRI MRF SUMMIT

August 2018
Deep Dive: Technology Innovations in the Waste Industry

THE TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY (TAPPI)

Keynote Speaker, Biennial Global Flexible Plastics and Extrusion Division Conference, April 2018
Material Choices & Customer Expectations for Flexibles: Perspectives from the Recovery Value Chain

SUSTAINABILITY IN PACKAGING

Annual Conference, March 2018
China Solid Waste Ban: Risk or Opportunity

UNITED STATES CHAMBER OF COMMERCE FOUNDATION

Annual Conference, November 2017
Regional Wasteshed Approaches to Manage Recycling and Attract End Market Development

Corporate Citizen Conference & Awards, November 2017
Building New to the World and Transformative Partnerships - Beyond 34: Increasing Recovery and Recycling

REFOCUS SUMMIT

June 2017
Implementing the Circular Economy Concepts and the New Plastics Economy Principles

AMERIPEN

May 2017
MRF of the Future

SOUTHEAST RECYCLING DEVELOPMENT COUNCIL (SERDC)

SERDC Recycling Summit, November 2016
Recycling Interventions and Solutions

FLEXIBLE PACKAGING ASSOCIATION (FPA)

Flexible Packaging Association Executive Conference, October 2016
Materials Recovery for the Future Research Program

UNITED STATES CHAMBER OF COMMERCE FOUNDATION

United States Chamber Sustainability Forum, May 2016

Applying Circular Economy Approaches to Plastic Packaging

PLASTICS INDUSTRY TRADE ASSOCIATION

ReFocus Recycling Summit, April 2016
Driving Industry-Led Material Recovery Solutions

INSTITUTE OF SCRAP RECYCLING INDUSTRIES (ISRI)

ISRI Annual Convention and Exposition, April 2016
Materials Recovery for the Future - Flexible Packaging and MRF Recovery

ENVIRONMENTAL, HEALTH, SAFETY & SUSTAINABILITY (EHSS)

EHSS Roundtable, March 2016
Materials Recovery for the Future

MICHIGAN RECYCLING COALITION (MRC)

MRC Annual Conference, May 2015
Collaboration is Key

THE CONFERENCE BOARD

The Conference Board's Annual Sustainability Summit, April 2015
Addressing the Gap in U.S. Materials Recovery

U.S. BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT (BCSD)

U.S. BCSD Council Meeting, March 2015
Scaling Up Materials Reuse

ENVIRONMENTAL, HEALTH, SAFETY & SUSTAINABILITY ROUNDTABLE

Sustainability Forum, November 2014
The Need for a Circular Economy & Key Requirements to Building It

THE CONFERENCE BOARD SUSTAINABILITY CONFERENCE

The Conference Board, May 2014
Sustainable Materials Management and Collaborative Stewardship Strategies

GLOBAL SUSTAIN

Sustainability Forum, July 2013
Moderator: Reporting on Sustainability Externally and Internally, Case Studies

THE CONFERENCE BOARD

Citizenship and Sustainability Conference, June 2012
Sustainability Performance Measurement and Reporting

Publications

AMERICAN CHEMISTRY COUNCIL

Materials Recovery for the Future Final Project Report 2023, www.americanchemistry.com/better-policy-regulation/plastics/resources/mrff-final-project-report

SUPPLY CHAIN EXECUTIVE MAGAZINE

Building Sustainable Supply Chains, December 2022

AUTHORITY MAGAZINE

Susan Graff On What We Must Do To Create Nationally Secure and Resilient Supply Chains, Sept 2022

FOUNDATION FOR CHEMISTRY RESEARCH & INITIATIVES

Flexible Packaging Recycling In Materials Recovery Facilities Pilot, May 2020

RECYCLING TODAY

Recycling Today's Packaging Calls for Change, December 2016

FOUNDATION FOR CHEMISTRY RESEARCH & INITIATIVES

Flexible Packaging Sortation at Materials Recovery Facilities, September 2016

GREENBIZ.COM

The Circular Economy: Theory to Practice, February 2016

ENVIRONMENTALLEADER.COM

How to Gain Value from Sustainability Reporting, August 2014

RRS SUSTAINABLY SUSTAINABLE BLOG

Ready to Respond to Emerging Sustainable Risks, May 2014

RRS WEBSITE RECYCLE.COM

Sustainability Practices: An Indicator of Risk, April 2014

GREENBIZ.COM

A 3-Step Sustainability Action Plan for Business Leaders, February 2014
Co-Author: Anne Johnson, RRS

RECYCLE.COM

Corporate Social Responsibility Benchmark Study, May 2005
Presented at The Conference Board: The Promise and Challenge of Sustainable Development Conferences with Caterpillar Inc. as Sponsor, June 2005

GREEN@WORK

Responsibility Strategies: Engaging a Vision for the Future, January/February 2003
Co-Author: John Gray, PE

U.S. ENVIRONMENTAL PROTECTION AGENCY

The Use of Risk Assessment in EPA Regional Operations, EPA 904/5-85 140, November 1985

Awards

Public Service Fellowship Award, Georgia Institute of Technology, 1982
National Honors Administrator's Award for outstanding contributions, Trudy A. Speciner, U.S. EPA, 1987
Certificate of Appreciation, U.S. EPA, 1987
Special Achievement Award, U.S. EPA, 1988, 1997
Accomplished Alumni Award, School of Public Policy, Georgia Institute of Technology, 2007
Distinguished Alumni Award, School of Public Policy, Georgia Institute of Technology, 2023
Top Women Leaders in Illinois, 2024

Associations/Volunteerism

GT CONNECT

2023- Present: Mentor

THE REMADE INSTITUTE, TECHNICAL ADVISORY COMMITTEE

2017 – 2020: Member

GREEN CHAMBER OF THE SOUTH

2016 – 2018: Member

ENVIRONMENTAL ENTREPRENEURS

2012 – 2015: Advisory Council Member

METRO ATLANTA CHAMBER OF COMMERCE ENFORM

1996 – 2006: Steering Committee Member for Sustainable Development; Content Director

GEORGIA INSTITUTE OF TECHNOLOGY, SCHOOL OF PUBLIC POLICY BOARD

2000 – 2004: Board of Directors