

Environmental Sustainability 2019

RTI International is an independent, nonprofit research institute dedicated to improving the human condition. Clients rely on us to answer questions that demand an objective and multidisciplinary approach—one that integrates expertise across the social and laboratory sciences, engineering, and international development. We believe in the promise of science, and we are inspired every day to deliver on that promise for the good of people, communities, and businesses around the world. For more information, visit www.rti.org.

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RTI Environmental Sustainability Program



Message from our President

As a leader in environmental research, RTI International is committed to addressing the world's most critical problems with science-based solutions in pursuit of a better future. In service of our mission to improve the human condition by turning knowledge into practice, we leverage our scientific and technical expertise to continually enhance our sustainability program. We do this not only for our own operations, but to help industries and communities across the globe reduce their impact on the environment.

Every day, RTI applies practices that promote sustainability and environmental responsibility, including

- Designing and maintaining facilities that minimize our use of natural resources and reduce our carbon footprint
- Promoting alternative transportation options to staff, including providing rideshare and public transportation incentives, bike racks, and electric vehicle (EV) chargers
- Reducing waste sent to landfills by using recycled paper and biodegradable products as well as through RTI's recycling and composting programs.

At RTI, we are driven by our mission to do the right thing—for people, for communities, for the environment, and for our planet. Join us as we celebrate our ongoing commitment to sustainability.

Our Sustainability Partnerships









RTI Environmental Sustainability Trends

We practice environmental sustainability in our everyday operations to maintain our facilities. We incorporate energy and water-efficient design practices into new construction and major renovations to reduce our impact on the environment.

Utility Consumption Trend (Main Campus)





From left to right: Bioretention ponds, the heat exchanger at the central utility plant, and an EV charging station

RTI's energy and water consumption has continued a downward trend over the past 10 years, even while the Institute has grown in staffing and building square footage. Major factors influencing these trends include:

- Removal of obsolete, inefficient buildings (while repurposing some of the construction material, such as steel and concrete) and optimizing space utilization
- Incorporating energy efficient design into new buildings and major renovations
- Staff awareness



RTI Environmental Sustainability Trends (continued)

Greenhouse Gas (GHG) Reduction (Main Campus)





TOTAL GHG (Scopes 1, 2, & 3)

What does each scope category in GHG calculations entail?

| Scope 1 | Scope 2 | Scope 3 |
|---------------------------|--------------------------------|------------------------------|
| Emissions result directly | Emissions occur through | Emissions result from RTI's |
| from RTI's operations | a demand created by RTI's | activities but occur outside |
| (e.g., natural gas) | operations (e.g., electricity) | of our direct control |
| | | (e.g., commuting) |

GHG Emissions by Category in 2017–2018



RTI provides incentives and amenities to our employees to encourage the reduction of carbon emissions related to commuting. These include the following:

- Incentive to employees who utilize rideshare vanpools or public transit through GoTriangle
- Installation of several new EV charging stations, in addition to the existing ones across the Research Triangle Park (RTP) main campus
- Support for telecommuting: approximately 12% of RTP employees telecommute
- Bike racks and showers for staff bicycling to work

RTI Environmental Sustainability Trends (continued)

We reduce landfill trash output through the following features and services offered throughout the RTP main campus. We also donate, recycle, repurpose, or resell most of our used furniture.

RTI leased offices support sustainability through recycling and promoting public transportation.



Waste Diversion Trends at Main Campus in 2017 and 2018

5.5 Plastic, aluminum, and glass containers collected/recycled Tons 12 Recycled discarded/outdated (ڈ 🎒 books, magazines, and newsprint Tons 35 Cafeteria compost collected ĆŽ Tons 40 Recycled corrugated cardboard Tons 48 Metal scraps, electronics, toners, and batteries recycled Tons 238 White paper collected/recycled Tons Recycled and donated retired ΓŴΤ 928 computer equipment

Cafeteria and Coffee Bar Waste Reduction Efforts

| \bigcirc | Providing reusable china plates in Café Horizon (main campus cafeteria) |
|-------------------|--|
| Ţ | Offering reusable mugs at Common Ground (main campus coffee bar) |
| | Providing biodegradable products: straws, coffee stirrers, coffee/water cups, food containers |
| $\langle \rangle$ | Composting food scraps, paper, and plant-based food containers from food preparation and tray return area |
| Ø | Reusing food products within guidelines—e.g., boiled eggs for breakfast, leftovers used for salad bar items at lunch |
| (Jan | Minimizing food waste with catering order proportions |

New Construction with Sustainability Features





Improved Air Quality

Low volatile organic compound materials and finishes



Energy Reduction

Energy-efficient design Low-emissivity glass White membrane roof LED lighting Daylight harvesting Condensing gas boilers



Water Consumption and Water Quality

Low-Flow Plumbing Fixtures— Reduce water consumption

Green Roof—Filters rainwater, and reduces runoff

Stormwater Bio-Garden—Filters rainwater, and reduces runoff

Bottle-Saver Water Fountains— Reduce plastic waste



CO₂ Emissions Reductions

Level 2 EV charging stations— Promote EV use, reduces CO₂ emissions

Bicycle Racks—Promote bicycle commuting, reduces traffic congestion and CO₂ emissions

Showers—Encourage bicycle commuting and exercise/fitness

Main Campus Sustainability Features



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How Is RTI's Research Contributing to a More Sustainable World?

RTI conducts research around the world that supports improved sustainability of our valuable natural resources, from renewable energy to cleaner water and improved air quality. Selected sustainability-oriented research projects are noted below. Visit <u>www.rti.org</u> to learn more about how our research is making a positive impact.



The Residential Energy Consumption Survey

www.rti.org/impact/residential-energyconsumption-survey

Creating a self-administered version of a key national energy survey



Guatemala Low-Emission Development Strategy (G-LEDS)

www.rti.org/impact/guatemala-lowemission-development-strategy-g-leds_

Spurring economic and social development by reducing greenhouse gas emissions



A New Method for the Destruction of Perfluorinated Contaminants Found in Water Supplies

www.rti.org/impact/new-methoddestruction-perfluorinatedcontaminants-found-water-supplies

Preventing harmful exposures from a widespread class of chemicals



Modernizing Climate, Weather, and Water Services for Nation's Largest Regional Planning Agency

https://www.rti.org/impact/technicalsupport-tennessee-valley-authority

Addressing challenges to meet sustainable water demand

Other Sustainability Initiatives in Development

RTI has both the conviction and the technical expertise to be a role model for sustainability and environmental responsibility. We strive to minimize our use of natural resources and encourage employees and partners to do the same. It's simply the right thing to do.





Offering **half-portion sizes** with entrée selections at lunch



Exploring options for transitioning to environmentally friendly **coffee pods**



Exploring food bank guidelines to **donate prepared food** from Café Horizon





Exploring options to expand compost material collection to satellite locations across main campus



Boosting **staff education** on sustainability practices at work and home

Implementing a new **Energy**

Management System to improve our energy consumption monitoring and fault detection





Partnering with Bee Downtown to maintain beehives on the main campus, helping to establish

a "bee highway" between Raleigh-Durham International Airport and Chapel Hill in collaboration with other organizations in RTP

Read the <u>WRAL TechWire</u> release about our partnership

Data and Trends



Natural Gas Use per Sq. Ft. and Sq. Ft. by Year







GHG Emissions by Year



For additional information, contact: sustainability@rti.org

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