Sustainability Report 2012

President's Message

At RTI, our mission of improving the human condition drives every aspect of our work—extending from our research and development efforts to our business practices and community involvement. As a leader in environmental research, we are committed to using our scientific knowledge and technical expertise to develop and implement sustainable practices and to ensure environmental responsibility across our operations.

At the organizational and individual level, we recognize the importance of protecting the environment and using resources responsibly.

Since 2010, our Sustainability Program has led several initiatives on RTI's North Carolina campus—from building a second LEED Gold-certified office building to incorporating neighborhood electric vehicles into our fleet, establishing a comprehensive composting program, and expanding our central utility plant to allow us to retire less efficient equipment.

Through these and other efforts outlined in our 2012 Sustainability Report, we have worked—and will continue to work—to reduce the environmental impact of our operations and to promote sustainability in the workplace.

I invite you to learn more about our program and accomplishments by reviewing this report and visiting www.rti.org/sustainability.

E. Wayne Holden
President and Chief Executive Officer

Our Sustainability Program

As a leader in science and technology, RTI International is committed to using our scientific knowledge, technical expertise, and business acumen to be a leader and a role model for implementing sustainability practices and ensuring environmental responsibility. In keeping with this commitment, we are taking steps to reduce our environmental impact and use of natural resources.

Our Sustainability Program continuously examines our operations to accurately measure and identify opportunities for reducing our environmental impact.

The program promotes sustainable practices throughout our organization—from energy consumption to procurement practices—as well as internal staff member engagement and external outreach activities. The program is also responsible for monitoring and public reporting of our resource use and provides training and information to staff members to promote sustainability in the workplace and in our homes and communities.

Focus on Our Headquarters Campus

The program focuses on facilities that are owned and operated by RTI on our headquarters campus in North Carolina. Since 2009, this has included our nearby (but off-campus) Advanced Technology Building, which houses several resource-intensive laboratories.

However, it is worth noting that our regional offices also engage in a number of programs and initiatives in support of sustainable operations—including extensive recycling programs, high rates of public transportation use, paperless office initiatives, and community outreach campaigns.

Employee and Community Outreach

RTI employees demonstrate a strong interest and individual commitment to sustainability at work and in their personal lives. Our Sustainability Program supports their efforts and works to increase awareness, understanding, and adoption of sustainable practices at work, at home, and in our communities. We hold staff member events on topics such as electric vehicles and composting, and we conduct presentations at local universities, professional societies, and local council meetings to demonstrate our program's activities.

In This Report

In this report, we review goals established in 2010 related to energy consumption, greenhouse gas emissions, water consumption, and waste management, and we discuss our progress toward these goals. We also present our goals and plans for 2013 and outline outreach and management activities that will support sustainability practices across our operations.

Staff members in our Waltham, MA, office and other regional offices lead local initiatives to reduce their environmental impact, including recycling, alternate commuting, and community outreach campaigns.

Energy Consumption

RTI's headquarters campus uses electricity and natural gas to heat, cool, and ventilate offices and laboratories, operate centralized data centers, and provide hot water. A typical laboratory building consumes four to five times as much energy as an equal-sized office building. To reduce our energy use, our Sustainability Program focuses on conserving energy and deploying increasingly efficient technology to support our operations.

In 2010 we established a primary goal related to energy use:

Conduct an audit of our current energy use and develop and implement an energy-use reduction plan

Program Accomplishments

We installed an electricity submetering system that provides real-time data on electricity usage in all 23 buildings on our headquarters campus. We also have submetering for natural gas in approximately half of the buildings. These real-time data are fed into a utility management system that enables us to monitor and optimize the energy use for all buildings.

RTI implemented several initiatives to improve energy efficiency, including

- Launching a campus-wide program known as "Reduce the Juice" to encourage staff members to consume less energy
- Exceeding requirements for LEED Gold certification of Building O9, including energy-efficiency features such as daylight harvesting and LED task lighting
- Expanding our Central Utility Plant, which has provided highly efficient heating and cooling to two laboratory buildings since 2006, to provide services for five additional laboratory buildings. By boosting the efficiency of our most energy-intensive buildings, we expect to generate significant reductions in natural gas and electricity use.

Electricity and natural gas consumption in 2011

38.5 million
Electricity in kilowatt-hours

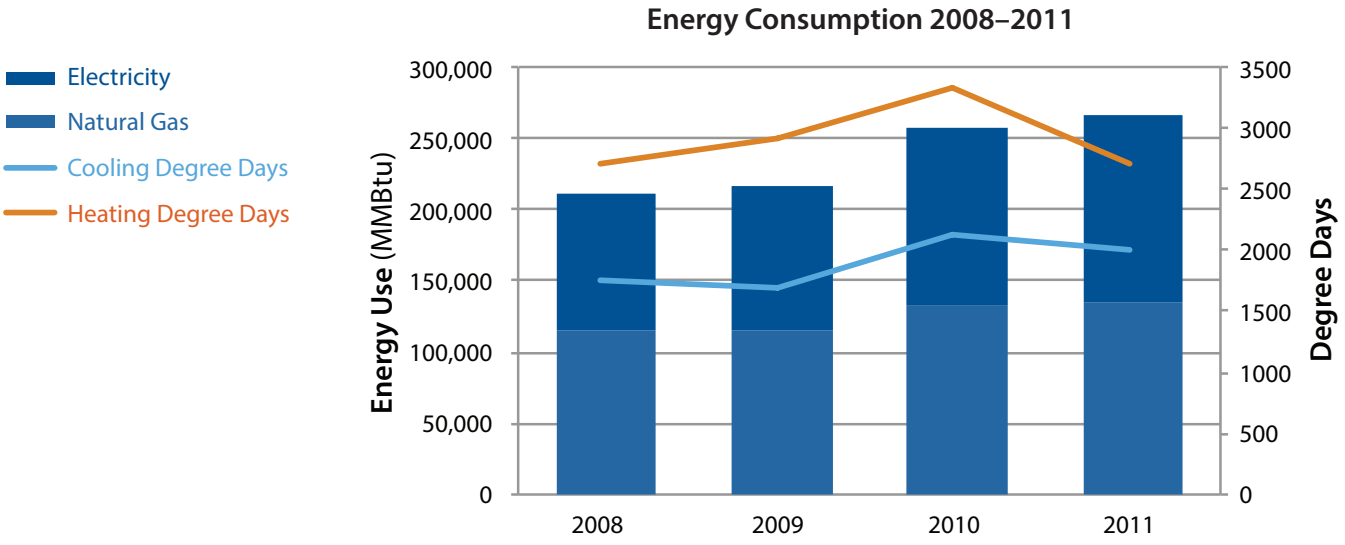
132 million
Natural gas in cubic feet

Our Central Utility Plant provides highly efficient heating and cooling to our most energy-intensive laboratory buildings.

To identify opportunities for reducing consumption, RTI conducted energy audits of three laboratory buildings and plans to conduct three more in 2012. Once these audits are completed, we will implement projects to reduce consumption based on costs and anticipated benefits, feasibility of implementation, and environmental impact. We are focusing on our laboratory buildings because these operations present the greatest demand on our energy use campus-wide.

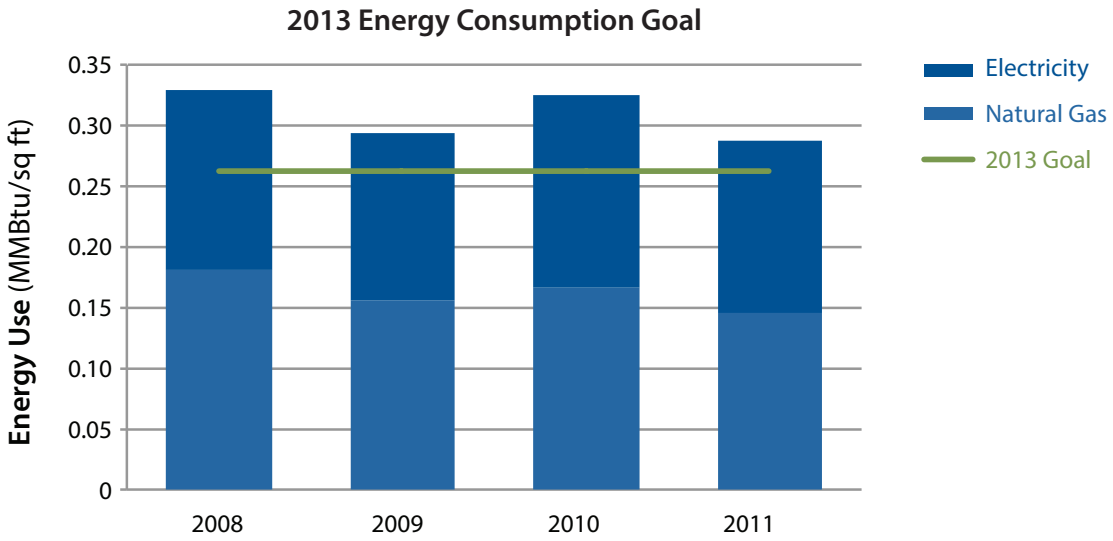
By the Numbers

The primary drivers for increases in energy usage on our headquarters campus from 2008 to 2011 were the purchase of the Advanced Technology Building in 2009 and the addition of a new office building (Building O9) in early 2011. An elevated number of heating and cooling degree days may have also contributed to our increased energy use in 2010.



2013 Goals and Initiatives

Our goal for 2013 is to achieve a 15% reduction in electricity use and a 25% reduction in natural gas use per square foot (using 2008 as a baseline). Because we use diesel only for emergency power, no specific reduction targets were set for this fuel.



To meet this goal, we plan to evaluate and implement several initiatives:

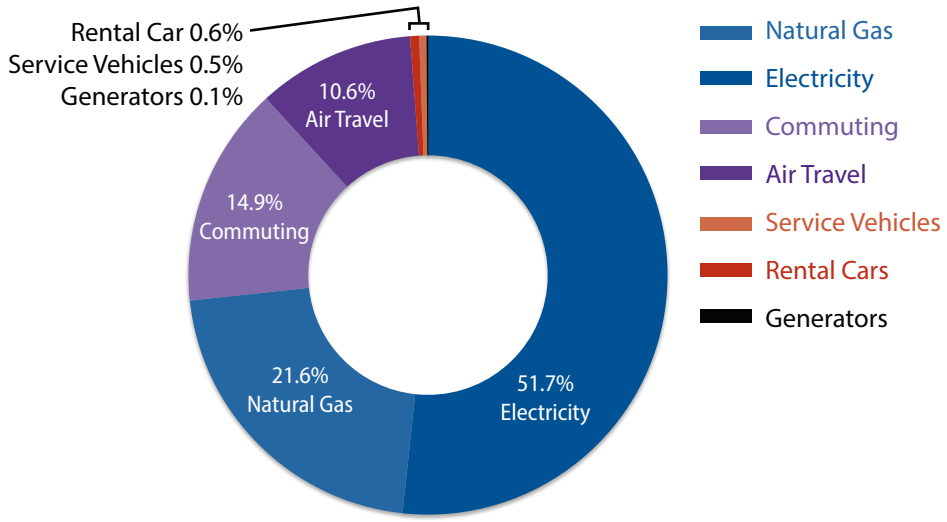
- Retire older, less-efficient air conditioning systems for all remaining laboratory buildings on our main campus as a result of the expansion of our Central Utility Plant
- Retro-commission building systems to ensure they are designed, installed, functionally tested, operated, and maintained to meet energy requirements
- Install variable air volume systems in the few buildings that do not currently employ these systems
- Investigate roof membrane upgrades on older buildings
- Conduct additional outreach events to encourage staff members to help further reduce our energy footprint.

As noted, our Sustainability Program is tasked with monitoring our use of energy and other resources. Over the next 5 years, RTI plans to expand building submetering to include gas usage, chilled water production, steam production, and irrigation/makeup water. We will analyze the submetering data to investigate ways to reduce overall energy consumption.

Greenhouse Gas Emissions

Our research and business operations generate greenhouse gas (GHG) emissions from several sources, including our use of electricity and natural gas, employee commuting and business travel, and campus vehicles used by security and facilities personnel. Electricity is the most significant contributor to RTI's GHG emissions, followed by natural gas, commuting, and air travel.

Average GHG Emissions Profile 2008–2011



In 2010 we established a primary goal with respect to GHG emissions:

Complete a comprehensive greenhouse gas emission inventory and develop short- and long-term GHG emissions reduction plans

Program Accomplishments

RTI completed a comprehensive inventory to understand the sources and trends of our GHG emissions and to establish a 9-year action plan to reduce them. This plan includes initiatives noted previously in this report to reduce our energy consumption.

Taken together, RTI's various transportation uses—commuting, business travel (air travel and rental cars), and service vehicle use—are a significant contributor to our carbon footprint. In February 2011, we added three neighborhood electric vehicles (NEVs) to our motor fleet for use by facilities, information technology, and mail delivery personnel. We also began replacing older vans in our fleet to Ford Transits, which are more fuel-efficient.

RTI continues to offer employees financial incentives to commute to work via public transportation, vanpool, bicycle, or other alternatives. We participate annually in regional campaigns and promotional events such as the Research Triangle Park's Smart Commute Challenge and Bike-to-Work Week.

To encourage the adoption of alternative commuting practices, we designate prime parking spaces on campus for vanpools and hybrid vehicles, and the parking deck for our newest LEED Gold-certified building houses two free recharging stations for electric vehicles.

GHG emissions in 2011

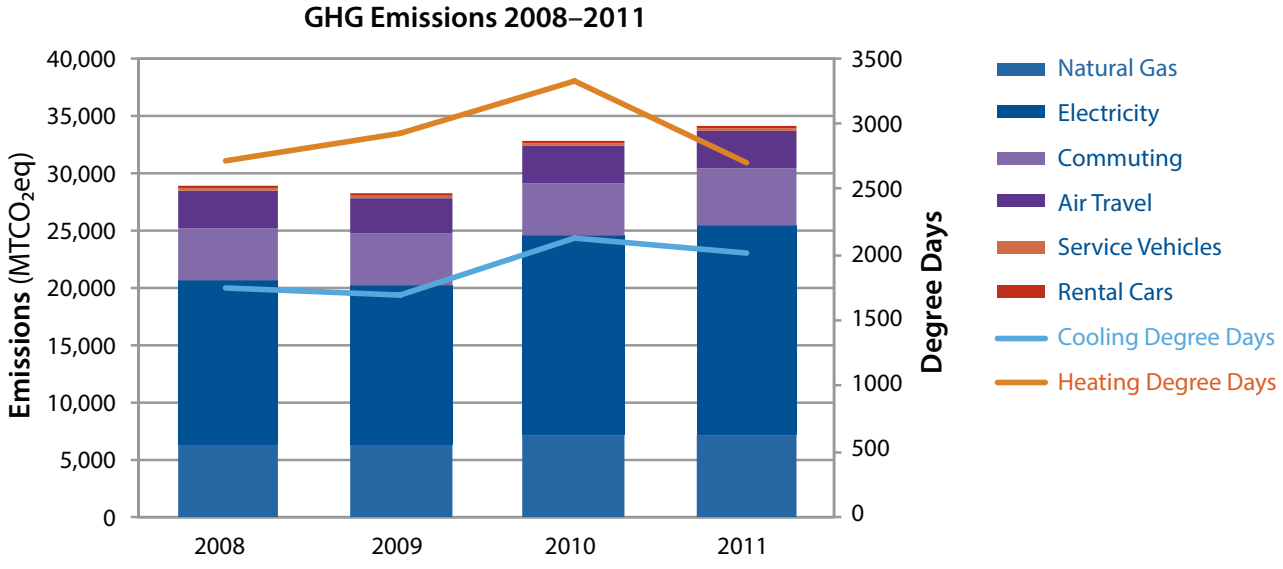
34,000

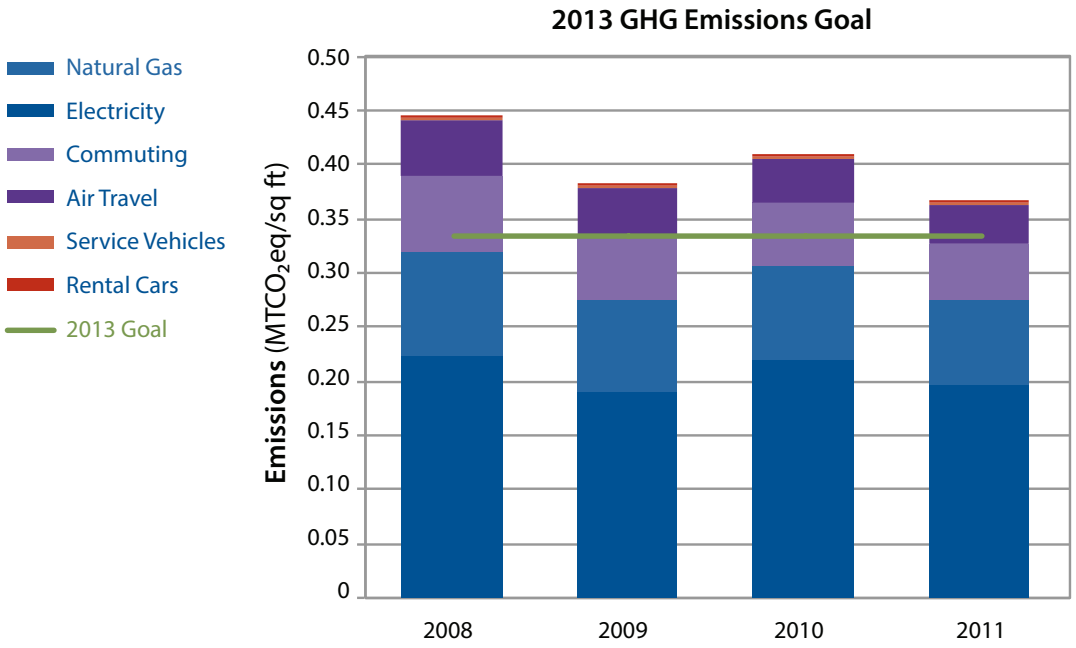
$MTCO_2eq$

By the Numbers

GHG emissions from RTI's main campus increased from approximately 28,600 metric tons of carbon dioxide equivalent ($MTCO_2eq$) in 2008 to 34,000 $MTCO_2eq$ in 2011. Both electricity and natural gas increased in 2010 and 2011, due in part to the purchase of the Advanced Technology Building and the completion of our second LEED Gold-certified building (Building O9). However, the increase in energy use is also due to annual differences in outside temperature. To understand the role of weather and building additions on our GHG emissions, we analyzed emissions against annual trends in the number of heating and cooling degree days per year.

The results of the analysis indicate that emissions per square foot were highest in 2010, as would be expected due to an elevated number of heating and cooling degree days and the acquisition of an energy-intensive laboratory building.





When heating and cooling degree days are relatively similar (as in 2008, 2009, and 2011), RTI's profile shows a per-square-foot decrease in GHG emissions, from approximately 44.5 kg CO_2eq/sq ft in 2008 to 36.8 kg CO_2eq/sq ft in 2011. This decrease is primarily due to the addition of office buildings, which consume four to five times less energy per square foot than a laboratory building.

2013 Goals and Initiatives

Our goal for 2013 is to reduce GHG emissions by 25% per square foot (using 2008 as a baseline).

Because our GHG emissions are heavily tied to energy use on campus, our energy and GHG emissions reduction plans are similar. The expansion of the Central Utility Plant, completed in late 2011, is anticipated to generate significant reductions in GHG emissions, both by reducing natural gas and electricity use on campus. In 2013 we will track the impact of these improvements to determine the precise reductions associated with the Central Utility Plant expansion.

As RTI continues to make capital improvements to our main campus, we will look at GHG projections. Future improvements to minimize our GHG footprint include

- Replacing older, inefficient heating and cooling systems in our laboratories by expanding our Central Utility Plant
- Evaluating and retro-commissioning our largest and most energy-intensive buildings and building management systems
- Continuing to participate in regional alternate commuting campaigns
- Conducting additional communication and outreach campaigns to encourage staff members to help reduce our GHG emissions and carbon footprint.

Water Consumption

RTI uses water for laboratory operations, heating and cooling, domestic uses in our office buildings, irrigation, and general maintenance activities such as vehicle washing and fire hydrant flushing. Our conservation efforts include low-flow fixtures, outreach and education on water conservation, and additional provisional measures in times of drought.

The key to reducing our water use footprint is to ensure maximum efficiency across all of these uses. In 2010 we established two primary goals related to water use:

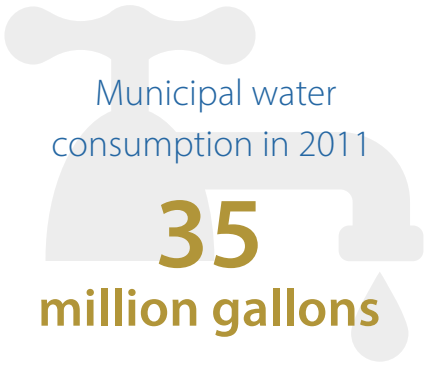
- *Develop a numerical water use target and optimization plan based on an audit of all of our water uses*
- *Investigate areas of our operations that can be altered to reduce our baseline and peak water use throughout the year*

Program Accomplishments

RTI developed a detailed baseline of water use on our headquarters campus, identifying where the water is used, how it is used, and how much of it is used per building and per activity. We also installed water meters in campus buildings and in the laboratories that did not previously have individual meters, in order to more specifically identify areas that may offer efficiency improvements.

Other water-related initiatives included

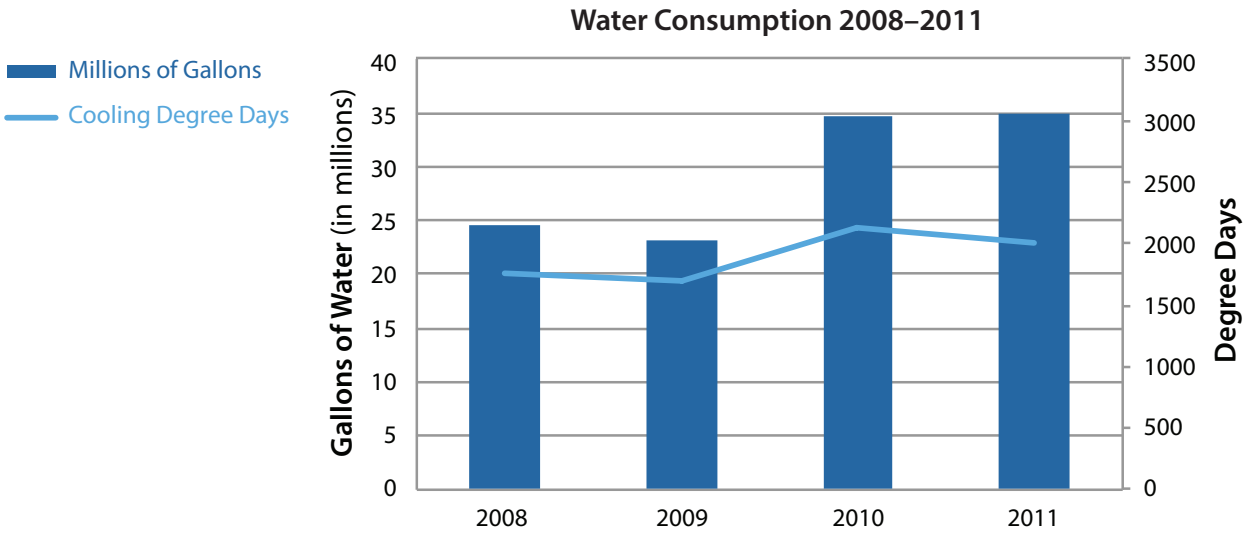
- Replacing three inefficient cooling units by connecting three of our laboratory buildings to our Central Utility Plant, which uses less water to meet cooling needs
- Expanding the use of native drought-tolerant plants with lower irrigation requirements
- Utilizing a wet pond for landscape irrigation, further reducing water consumption during the summer months.

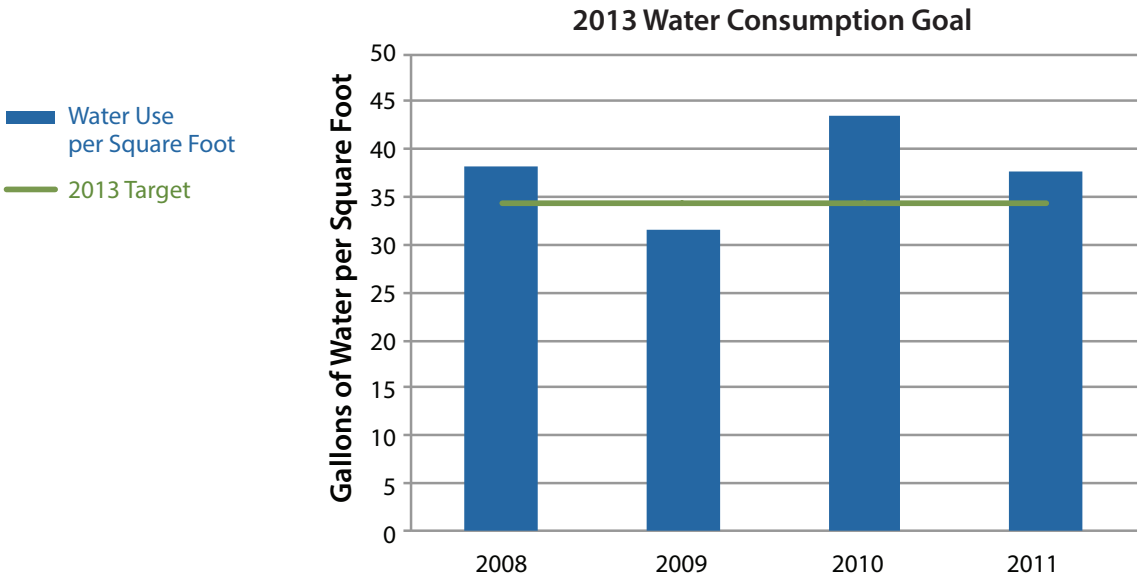


By the Numbers

The largest single use of potable water on RTI's headquarters campus is cooling tower evaporation at our Central Utility Plant and other buildings, which amounts to nearly 65 percent of water consumption on campus during summer months.

Increases in RTI's water consumption between 2008 and 2011 are primarily due to the acquisition of the Advanced Technology Building in 2009. This building houses projects with specific climate control needs as well as water-intensive laboratory operations that accounted for over 30% of our water use in 2010 and 2011. We are currently investigating ways to reduce water consumption in this building. Weather conditions that resulted in an elevated number of cooling degree days may also have contributed to increased water use in 2010.





2013 Goals and Initiatives

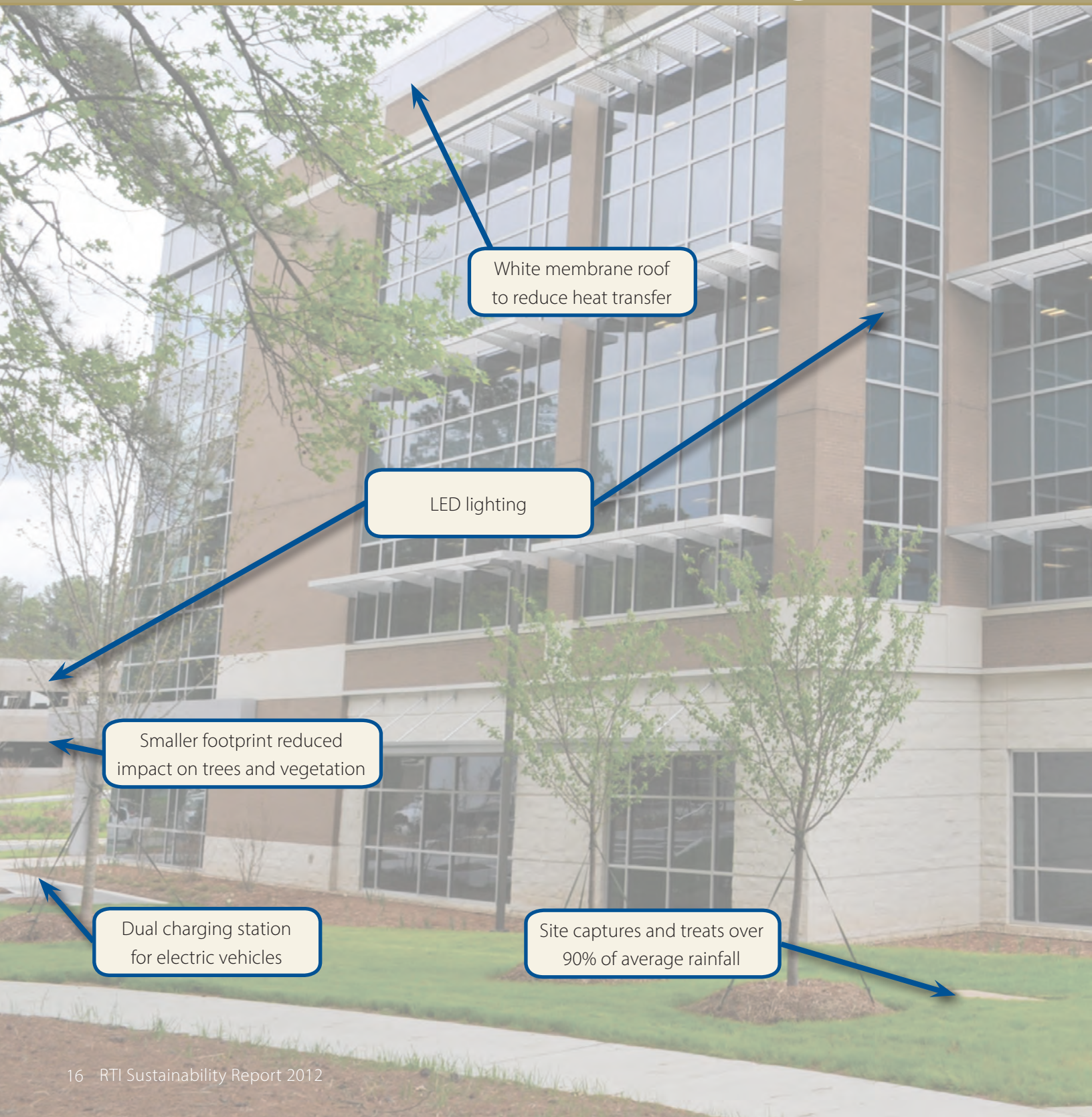
Our goal for 2013 is to reduce water consumption by 10% per square foot (using 2008 as baseline).

Although our water use is strongly influenced by the duration and intensity of seasonal fluctuations, our analysis identified the following opportunities to help meet this goal:

- Conduct a complete audit of water use at the Advanced Technology Building to investigate the potential for water savings.
- Complete the construction of condensate collection and recycling systems at the Central Utility Plant to supplement cooling tower makeup water demands.
- Evaluate the feasibility of using reclaimed water or groundwater for cooling and/or landscaping.
- Assess further options for vegetated landscaping plans that require less water.

We collect stormwater run-off in a retention pond and use it for irrigation instead of potable water.

Features of LEED Gold-Certified Building 09




Dual-flush water closets, low-flow urinals, and low-flow faucets in lavatories and kitchens
Use of daylighting and auto-adjusting interior lights reduces use of electric lighting
FSC-certified reclaimed and renewable wood and recycled materials used in construction and interior elements
Increased ventilation and low-VOC paints improve indoor air quality
Site contains over 20% open space with native vegetation

Waste Management

RTI research and business operations generate waste in a variety of forms, including laboratory chemicals and supplies, paper and other office materials, food waste from our employee cafeteria, and retired electronic equipment.

In 2010 we established a primary goal related to waste management:

Reduce or eliminate the use of hazardous and nonhazardous materials wherever possible without compromising product quality or employee safety

Program Accomplishments

RTI conducted a range of initiatives to reduce waste and encourage recycling at all our facilities, including the following:

- Using a chemical inventory management system to carefully track the purchase and use of chemicals and support the reuse and sharing of laboratory chemicals, thereby minimizing purchases and the subsequent need for disposal.
- Implementing a comprehensive composting program in 2011 that includes employee outreach to increase staff participation. As a result of the program, more than 1 ton of food waste and compostable dinnerware per month is diverted from landfills.
- Establishing a network of 35 employee sustainability coordinators. Sustainability coordinators serve as advocates for our recycling and sustainability program, participate in planning and development of our institutional efforts, support staff efforts within their work areas, and provide feedback on ways to improve the recycling and sustainability programs.
- Conducting reuse and recycle campaigns through which RTI donated over 15 tons of underutilized office supplies and electronics to local schools and organizations, as well as diverting 42 tons of waste from landfills.
- Implementing policy and process changes related to storing purchasing documentation electronically, eliminating paper catalogs, shredding documents, and purchasing 30% post-consumer recycled paper.
- Expanding our recycling program to enable and encourage employees to recycle paper-based products and materials, batteries, toner cartridges, and cell phones.

2013 Goals and Initiatives

Because waste is not a significant contributor to the environmental impact of RTI's operations, we have not established a specific target for waste diversion for 2013. We will continue to maintain existing programs—including recycling, cafeteria composting, paperless office initiatives, and diversion of retired equipment and supplies from landfills by donating them to local schools and charities. We will also audit these programs to identify opportunities for expansion.

In the spring, we donated seven tons of office equipment and supplies to local schools and United Way agencies in North Carolina's Triangle region.

RTI International is one of the world's leading research institutes, dedicated to improving the human condition by turning knowledge into practice. Our staff of more than 3,700 provides research and technical services to governments and businesses in more than 75 countries in the areas of health and pharmaceuticals, education and training, surveys and statistics, advanced technology, international development, economic and social policy, energy and the environment, and laboratory testing and chemical analysis. For more information, visit www.rti.org.

RTI International is a trade name of Research Triangle Institute.

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