



Yale Sustainability Strategic Plan

PROGRESS REPORT 2015

INTRODUCTION / Sustaining Our Future

Sustainability Strategic Plan 2013–2016

Responsibility for the enduring vitality of our long-standing academic institution is at the heart of the Sustainability Strategic Plan 2013–2016. We have committed to fulfilling this responsibility to sustainability through leading research and by improving operations and fostering innovation. Our Plan outlines twenty-five goals that focus on increasing the University's capacity to embed sustainability in everyday life so that sustainable behaviors are the rule and not the exception.

In our second year of implementation we have demonstrated increased collaboration among faculty, students, and staff on sustainability projects. From the creation of a rain garden to promote green infrastructure to an examination of what it would mean to implement a carbon charge on campus, the Yale community has taken an active role in nurturing the social and ecological systems on which we rely.

This report highlights our progress towards Yale University's sustainability goals as outlined in the 2013–2016 Strategic Plan.* As we enter the final year of plan implementation, we have the opportunity to let the past year's collaborations inspire us – we can incorporate sustainability not just in distinct projects, but in our every action, for the long term.

*This report reflects data that is available on a fiscal year basis.

“

We have a responsibility to future generations to ensure that sustainable practices are at the heart of our university.

”

– Peter Salovey
President of Yale University

25 Goals

OVERVIEW



Throughout the report you will find the following icons. These are visual representations of our progress toward achieving the goals set in the Yale Sustainability Strategic Plan 2013–2016.

 we have achieved our goal	 we are on track to meet our goal	 we can do better
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NATURAL & BUILT ENVIRONMENT



Develop and implement sustainable landscaping practices	↗
Set a stormwater reduction target	G
Reduce potable water use by 5%	G
Reduce single occupancy vehicle use to and from campus by 5%	G
Increase participation in the Federal Pre-Tax Commuter Benefits Program by 25%	G
Earn a minimum of LEED Gold Certification in all new construction	↗
Implement the Sustainability Supplement to the Framework for Campus Planning	✓

ENERGY & GHG EMISSIONS



Reduce energy consumption and GHG emissions by 5%	G
Increase renewable energy produced onsite to 1%	↗
Reduce fleet GHG emissions by 80 MTCO ₂ e per year	✓

FOOD & WELL-BEING



Ensure that 37% of dining purchases meets sustainability criteria	✓
Increase plant-based foods served in dining halls by 15%	✓
Reduce sodium content in on-campus food	↗
Reduce the use of cleaning chemicals by 30%	↗
Promote human well-being and ecosystem vitality	↗

MATERIALS MANAGEMENT



Reduce paper and office supply purchases by 10%	✓
Establish sustainable procurement standards	↗
Develop sustainable IT purchasing and disposal practices	↗
Achieve a 50% waste diversion rate	G
Set a target for total volume waste reduction	G

LEADERSHIP & CAPACITY BUILDING



Establish departmental and professional school Sustainability Action Plans	↗
Promote sustainability as a core business value	↗
Create a regional food alliance	↗
Create sustainability-focused ITS training	↗
Expand green certification programs	G



ENERGY & GHG EMISSIONS

“Yale is dependent upon energy to heat and cool campus buildings, and power its lights, appliances, equipment, electronics, and vehicles...Recognizing that our reliance on fossil fuels contributes to global climate change, the University set a target in 2005 to reduce greenhouse gas emissions from its two power plants and purchased electricity 43% below 2005 levels by 2020.”

— Sustainability Strategic Plan, 2013–2016

Yale has reduced annual greenhouse gas emissions 11.8% below 2005 levels. However, annual emissions have increased over the past two years compared to 2013 levels. We will need to work hard to meet our interim goal of 5% reduction by June 2016 and stay on track towards our 2020 target. The Carbon Charge Project (carbon.yale.edu) is one exciting way the University will further promote its commitment to emissions reduction, by engaging various departments across campus to reduce energy use and emissions.

More detailed information about Yale’s progress towards its 2020 reduction target can be found in the annual GHG Emissions Reduction Progress Report.

HIGHLIGHTS

1 MW



The new solar array at West Campus provides 1 megawatt of installed capacity.

\$7 Million



was invested in energy conservation measures across campus.

DID YOU KNOW?



We recently completed a comprehensive GHG inventory with The Climate Registry. The inventory confirmed that our process of collecting emissions data has been accurate to date.

GOALS

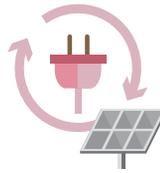
Reduce Energy and GHG emissions by 5% below 2013 levels

CURRENT PROGRESS

In 2015, GHG emissions increased 5.4% from 2013 levels. This represents an 11.8% decrease from our 2005 baseline year.



Increase renewable energy produced onsite to 1%



During fiscal year 2015, approximately 0.1% of the electricity generated was from renewable sources. We are poised to meet our 2016 goal as a result of the installation of the West Campus photovoltaic solar array.



Reduce fleet GHG emissions by 80 MTCO₂e per year

Last year we reduced our fleet GHG emissions by 85 metric tons of carbon dioxide equivalent (MTCO₂e). Most of this reduction was due to a shift to unleaded and compressed natural gas, which is 20-40% cleaner than diesel and biodiesel.



LEARN MORE

Special attention to department-level scheduling of heating and cooling is one way to ensure energy conservation. Time of year and whether or not a space is occupied help determine Yale's requirements for heating and cooling. For example, the standard temperature for occupied spaces in the winter is 68 degrees.

Save energy!



- Make use of natural light.
- Use advanced power strips to prevent "vampire" draw.
- Turn off A/V equipment and lights when not in use!
- Learn more at sustainability.yale.edu under "Monthly Campaigns"



MATERIALS MANAGEMENT

“There are complex ecological and health consequences associated with the selection, procurement, use, and disposal of the materials that we use every day. Applying a materials management approach to our purchasing and waste management practices recognizes the direct influence of these two systems on each other.”

— Sustainability Strategic Plan, 2013–2016

We continue to improve data collection so that observing our disposal patterns can more effectively inform our purchasing practices. The Yale community can help contribute by using materials wisely: reducing the volume of materials that come onto campus, choosing reusable over single-use items, and ensuring proper disposal once a material reaches the end of its life. We have an opportunity to convey these practices broadly, so that even those who may only be passing through understand the importance of sustainability at Yale.

HIGHLIGHTS

SPRING SALVAGE 2015



Through the Spring Salvage Program the university collects unwanted goods from undergraduates moving out of the residential colleges each year.



31.06
TONS OF MATERIAL
DIVERTED

Now celebrating its 11th year, the 2015 Spring Salvage diverted a remarkable 31.06 tons of material out of the waste stream and into the reuse market. Through streamlined operations, a partnership with Goodwill Industries, and a team of both student and contracted staff, the event resulted in a 2.28% increase in donations over 2014.



GOALS

CURRENT PROGRESS



Reduce paper and office supply purchases by 10% from 2013 levels

Since 2013, paper purchases have decreased by 26.4% and office supply purchases have decreased by 15.7%.

Resulting savings:



35,038
Reams of paper



3,850,205
kWh of energy



672,766
Gallons of water



36,520
Gallons of Oil



Establish sustainable procurement standards

Sustainable procurement standards are continuing to develop in partnership with W.B. Mason, Yale's primary office supply vendor. Whenever possible, the W.B. Mason online ordering system prompts buyers to consider green product options. If the item being ordered isn't already a sustainable choice, a green alternative is offered, helping the user to choose wisely.



Develop sustainable IT purchasing and disposal practices

All IT vendors are required to share information about the sustainable aspects of their products, as well as their in-house practices.



Achieve a 50% waste diversion rate

8.9%
more to go!



Yale achieved a 41.1% diversion rate, which bested our 2014 rate by more than 1.5%. However, this is still well below the 2016 goal of 50%.



Set a target for total volume waste reduction

As the University continues to grow, so too does the challenge of setting a quantitative waste reduction goal. Fortunately, Yale's ability to track material flows is getting better, which will help inform how best to set benchmarks for improvement.



WHAT WE'VE LEARNED

We failed to meet the paper reduction target of our first Sustainability Strategic Plan because we did not fully appreciate the time it would take to adjust systems. This Plan is now benefiting from much of the work that was done between 2010 and 2013.

Reduce, Reuse, Recycle!



- Think before buying new! The item you need may already be in your department, or on Eli Surplus Exchange.
- Familiarize yourself with what goes into our single-stream recycling and composting bins.
- Learn more at sustainability.yale.edu under "Materials + Waste"



NATURAL & BUILT ENVIRONMENT

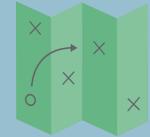
“By remaining mindful of the value of the ecological context of the campus, Yale is better able to plan, develop, and manage its campus in a way that improves the quality of these natural resources and ensures a healthy and vibrant community for its members. The recognition that all systems are linked and thus influenced and affected by one another is necessary to the development and management of a sustainable campus.”

– Sustainability Strategic Plan, 2013–2016

Myriad decisions made by members of the Yale community have impacts both within and beyond Yale’s physical boundaries. Our daily routines allow us choices which range from modes of transportation to choosing natural light. Importantly, these choices can affect both local and global systems. When considering the linkages across these systems, we can envision the possibilities of positive change, such as the connectivities of a greener campus with more trees to better walkability and decreased traffic congestion.

HIGHLIGHTS

We have met our goal of implementing the Sustainability Supplement to the Framework for Campus Planning!



All Yale Planners now use the Supplement to integrate sustainability into all campus planning and development.



This past spring, West Campus hosted **MAPLE FEST 2015: LUX ET SYRUPAS**

which featured syrup from sap tapped from the Yale West Woods’ very own trees!

DID YOU KNOW?

We have implemented our Sustainable Stormwater and Water Management Plans.



Learn more at sustainability.yale.edu under “**Stormwater + Water Use**”

GOALS

CURRENT PROGRESS



Develop and implement sustainable landscaping practices

In addition to continuing our efforts with sustainable landscaping through the creation of urban meadows, Yale is exploring best practices for use on its athletic fields. As a result of a recent Yale study, we are currently reviewing and considering the possibilities of reduced-risk pest control products, organic turf care, pesticide-free fields, and converting certain fields to eco-friendly artificial turf.



Set a stormwater reduction target

Yale is working to align its stormwater reduction target with regional goals and plans which are still in development.



Increase participation in the Federal Pre-Tax Commuter Benefits Program by 25% above 2013 levels

Participation in the Federal Pre-Tax Commuter Benefits Program has increased by only 6% since 2013.



Earn a minimum of LEED Gold Certification in all new construction

LEED scoreboard to date:



MOVING FORWARD



- The Yale Divinity School is exploring the feasibility of applying Living Building Challenge™ performance standards to its new housing development on campus.

Stay informed!



- View the **Building Occupancy Training Module** to learn how you can help maximize building performance.
- Learn more at sustainability.yale.edu/occupancy



FOOD & WELL-BEING

“The University has an opportunity to maintain and enhance the excellence of its campus and surroundings in ways that make Yale and New Haven a more livable city – walkable, bikeable, and community-oriented. Strategic efforts to promote well-being will enhance Yale’s ecological footprint while ensuring a top-quality experience for employees and students.”

– Sustainability Strategic Plan, 2013–2016

Breakthroughs in research, efficient operations, and opportunities for innovation all rely on a healthy university community. The sustainable food purchases made by Yale Dining, the reduction in exposure to toxic cleaning chemicals, and community engagement initiatives all facilitate dialogue around well-being.

HIGHLIGHTS



Yale Dining participates in the **HEALTHY MEAL COLLABORATIVE**, a national program to double the volume of plant-based foods served by 2020.

DID YOU KNOW?



Being Well at Yale offers programs for staff members to help keep physical activity and food routines interesting! Connect to others participating in the same challenges to stay accountable.

Learn more at
beingwellatyale.shapeup.com

GOALS

CURRENT PROGRESS



Ensure that 37% of dining purchases meet sustainability criteria

Last year, 39% of Yale's total food purchases met at least one of the four sustainability criteria: local, eco-sensitive, humane, or fair.

TOTAL SUSTAINABLE FOOD PURCHASES

17%
LOCAL



Increase plant-based foods served in dining halls by 15% over 2013 levels

Yale Dining has increased plant-based food purchases by 15% over 2013 levels.



Reduce sodium content in on-campus food

Yale Dining has continued to increase the number of products produced in-house in place of purchasing processed items with high sodium levels, which helps to determine the daily average sodium intake in residential dining meals.



Reduce the use of cleaning chemicals by 30% from 2013 levels



Yale Facilities has implemented new technology for green cleaning on campus. The new system creates a chemical-free cleaning solution that is both safe and effective.



Promote human well-being and ecosystem vitality

The Office of Sustainability and Being Well at Yale have collaborated on an increasing number of initiatives over the past year, from *Celebrate Sustainability* activities to *It's Your Yale: Thrive*. The University's Wellness Leadership Group incorporated sustainability across its 2014–2015 Strategic Plan.



WHAT'S NEXT



- Yale Dining is transitioning to 100% grass-fed Australian beef and lamb. The benefits are two-fold: our carbon footprint does not increase, and our meat will be more heart-healthy.

Be mindful!

- Use it up, don't throw it out—be mindful of food purchases so that nothing goes to waste. Keep this in mind when placing catering orders by ordering only what you'll need.
- Participate in **goNewHavengo** and use active transportation options throughout the city! *Learn more at gonhgo.org*



LEADERSHIP & CAPACITY BUILDING

“A university that strives to be a sustainability leader must demonstrate an ability to make informed decisions in the face of uncertainty, take risks and assess new technologies, commit to reduced ecological and human health impacts despite growth, and inspire innovation and efficiency from staff, students, and faculty alike.”

— Sustainability Strategic Plan, 2013–2016

The opportunity for continued progress does not end once infrastructure changes are made. In fact, the success of these endeavors is contingent upon the community using the University’s places and spaces properly. As an academic institution, we also have the opportunity to explore new ideas to advance sustainability to the next level—whether it be through department-level programming or through engineering innovations.

HIGHLIGHTS



In partnership with the Office of Sustainability, the Yale Peabody Museum of Natural History has grown its **Citizen Science** program. Participants collect data on bird and plant growth patterns, while enjoying time in the great outdoors!

Log your bird sightings on the YUBio Data Portal:
peabody.research.yale.edu/yubio



In a class held in the fall of 2014, students provided recommendations for how Yale’s sustainability planning efforts could be more ambitious.

Recommendations included broader stakeholder engagement, which will be incorporated into our forthcoming Sustainability Strategic Plan.

GOALS

CURRENT PROGRESS



Promote sustainability as a core business value

As referenced in its sustainability action plan, the division of Finance and Business Operations made deep commitments to sustainability. Highlights include the transition to paperless for many business processes and green certification for all procurement staff members. While that division was recently restructured, the commitment of its units remains strong.



Create a regional food alliance

Yale Dining partners with local businesses to initiate the production of healthier, less processed foods. A collaboration with Hummel Bros, a local meat processor, has led to the development of nitrate-free hot dogs, which are available at Yale and will soon be distributed regionally. Lamberti Sausage, a long-time partner, has collaborated with Yale Dining's Master Chef to develop several new signature sausages for Yale.



Create sustainability-focused ITS training

The Office of Sustainability is partnering with ITS to develop a series of learning modules that will be available to all staff members.



Expand campus green certification programs

Participation in Green Event and Green Workplace certification has decreased in the past year compared with previous years, as many choose not to recertify their spaces. We are currently reevaluating metrics to assess whether or not there are more effective ways of measuring sustainability literacy on campus.



THINKING AHEAD

- Planning for the next Sustainability Strategic Plan has begun! In the new Plan leadership and capacity building efforts will extend across all systems to underscore Yale's commitment to being a leader in sustainability.

Get on board



- Host sustainability events, such as Meatless Mondays or home goods exchanges, to get to know others in the Yale community.
- Certify your workplace as "green." *Learn more at sustainability.yale.edu under "Certifications."*
- Encourage your colleagues to become Sustainability Leaders. *Learn more at sustainability.yale.edu under "Participate."*





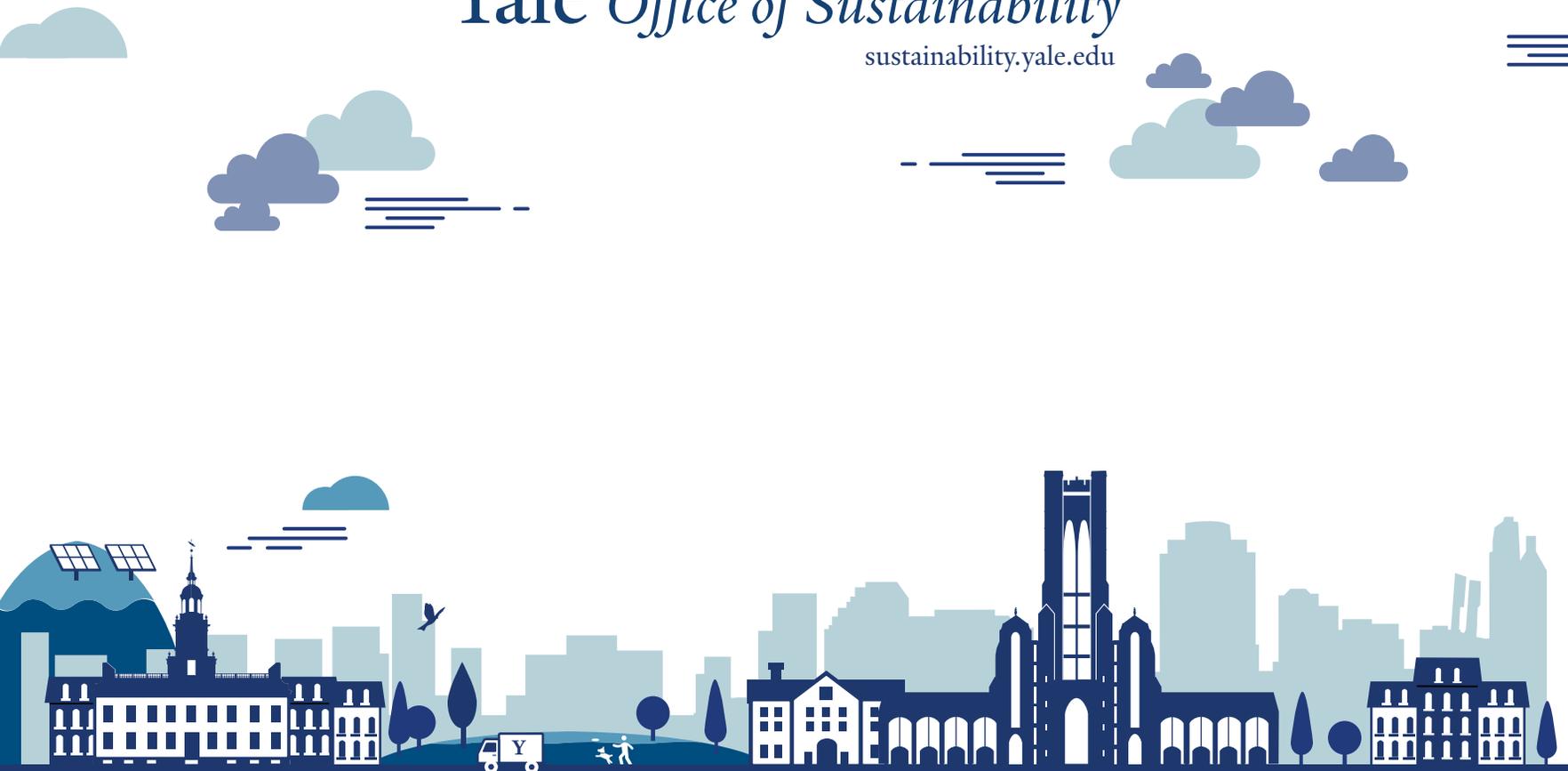
IT TAKES A VILLAGE...

In no particular order: Eric Uscinski, James Shelton, Daryl Brereton, James Slattery, Richard Boardman, Thomas Downing, Lisa D'Angelo, Kristina Chmelar, Matthew Garrett, Dana Courtney, Carmine Amento, Stuart DeCew, Stephen Murphy, Bradford Gentry, Nona D'Onofrio, Rafi Taherian, Maxwell Knapp, Cynthia Walker, Keri Enright-Kato, Brenda Armstrong, Linda Lorimer, Sarah Jane Compton, Mark Ashton, Robert Saidi, Russell Sharp, Sophie Janaskie, Timothy O'Connor, Julie Paquette, Julie Grant, Famatta Gibson, Mark Pagani, Betty Soosai, Elizabeth Stauderman, Holly Parker, Susan Castaldi, Harley Pretty, Ronald Gitelman, Mark Bomford, Susan McDonald, David Salerno, Peter Glazer, Sandra Lynch, Roger Goode, Claudine Alexandre, Susan Cascio, Len Peters, Lindsay Toland, Bruce McCann, John Bollier, William Nordhaus, Ryan Laemel, Deborah Armitage, Robin Canavan, George Zdru, Laurie Ongley, Amber Garrard, Lisa LeMontangue, Lisa Kimmel, Edward Wittenstein, Jennifer Milikowsky, Rebecca Sender, Barbara Chesler, Donna Harris, Robert Ferretti, Katherine Burgueno, Sara Smiley Smith, Julie Newman, Sharon Oster, James Sirch, Joseph Signore, Dean Takahashi, Joyce Ippolito, Melanie Quigley, Edward Snyder, Mary Hu, Samuel Messer, Colleen Murphy-Dunning, Susan Wells, Jane Lee, David Gallaer, Bethany Zemba, Jason England, Michelle Addington, Peter Reinhardt, Christopher Farmer, John Mayes, Daniel Esty, Suzanne Stringer, Abigail Rider, Cynthia Breault, Steven Percival, Janet Lindner, Joseph Mastracchio, Joann DelVecchio, Virginia Chapman, Philip Rinehart, Donald Relihan, Geraldine Remer, Gail Cameron, Justin Freiberg, Michael Schrier, Vincent Wilczynski, Melissa Goodall, Richard Bascom, Sean Dunn, Valerie Warhall, Heidi Richard, Lisa Fernandez, Daniel Flynn, Anthony Kosior, Colin Brown, Stacey Gemmill, Diane Palmer, Stephanie Perry, Cathy Van Dyke, Jessica Labbe, Walter Debboli, Winny Tan, Annie Harper, Louis Tiseo, Karen Polhemus, Isabella Quagliato, Joanna Esposito, Carol DeNatale, Brenda Naegel, Marcia Schels, Frances Rosenbluth, Deborah Chung, Jan Hewett, Monika Lau, Michael Yaffe, David Heiser, Christopher Mihok, Lori Rasile, Samuel Olmstead, Ann-Marie Piscitelli, John Jacobson, George Longyear, Edward Mockus, William Peabody, Timothy White, Lisa Maloney, Sharon Rose, Lauren Zucker, Ed Frey, Andrea Hart, Martha Highsmith, and many others that have continued to keep Yale sustainable.



Yale Office of Sustainability

sustainability.yale.edu



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