



CAMPUS SUSTAINABILITY PROGRESS REPORT

March 2016

Campus Sustainability Progress Report

This report provides updates to the Tufts community regarding notable initiatives from 2015 that contributed to the goals and objectives set forth in the May 2013 President's Campus Sustainability Council Report. Like the original report, the Sustainability Progress Report covers the areas of waste, water, energy and emissions, and cross-cutting issues. This year's report includes a special summary of Tufts' progress according to the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment and Rating System™ (STARS®). The STARS rating is completed approximately every three years. The 2015 STARS Report therefore includes data from fiscal years 2012-2014.



“ As we celebrate the 25th Anniversary of the Talloires Declaration, it is an important time to reflect upon our accomplishments and identify ways we can contribute to make Tufts a more sustainable institution.”

PRESIDENT ANTHONY P. MONACO



Talloires, France: Scott Tingley for Tufts University

STARS OVERVIEW

The Sustainability Tracking, Assessment and Rating System (STARS) is a self-reporting framework that colleges and universities use to benchmark their sustainability performance. STARS is designed to:

- Provide a framework for understanding sustainability in all sectors of higher education.
- Enable meaningful comparisons over time and across institutions using a common set of measurements developed with broad participation from the international campus sustainability community.
- Create incentives for continual improvement toward sustainability.
- Facilitate information sharing about higher education sustainability practices and performance.
- Build a stronger, more diverse campus sustainability community.

STARS participants pursue credits and earn points in order to achieve a STARS Bronze (score of 25-44), Silver (45-64), Gold (65-84) or Platinum (85+) rating or recognition as a STARS Reporter. The credits included in STARS span the breadth of higher education sustainability and include performance indicators and criteria organized into four categories: Academics, Engagement, Operations, and Planning & Administration.

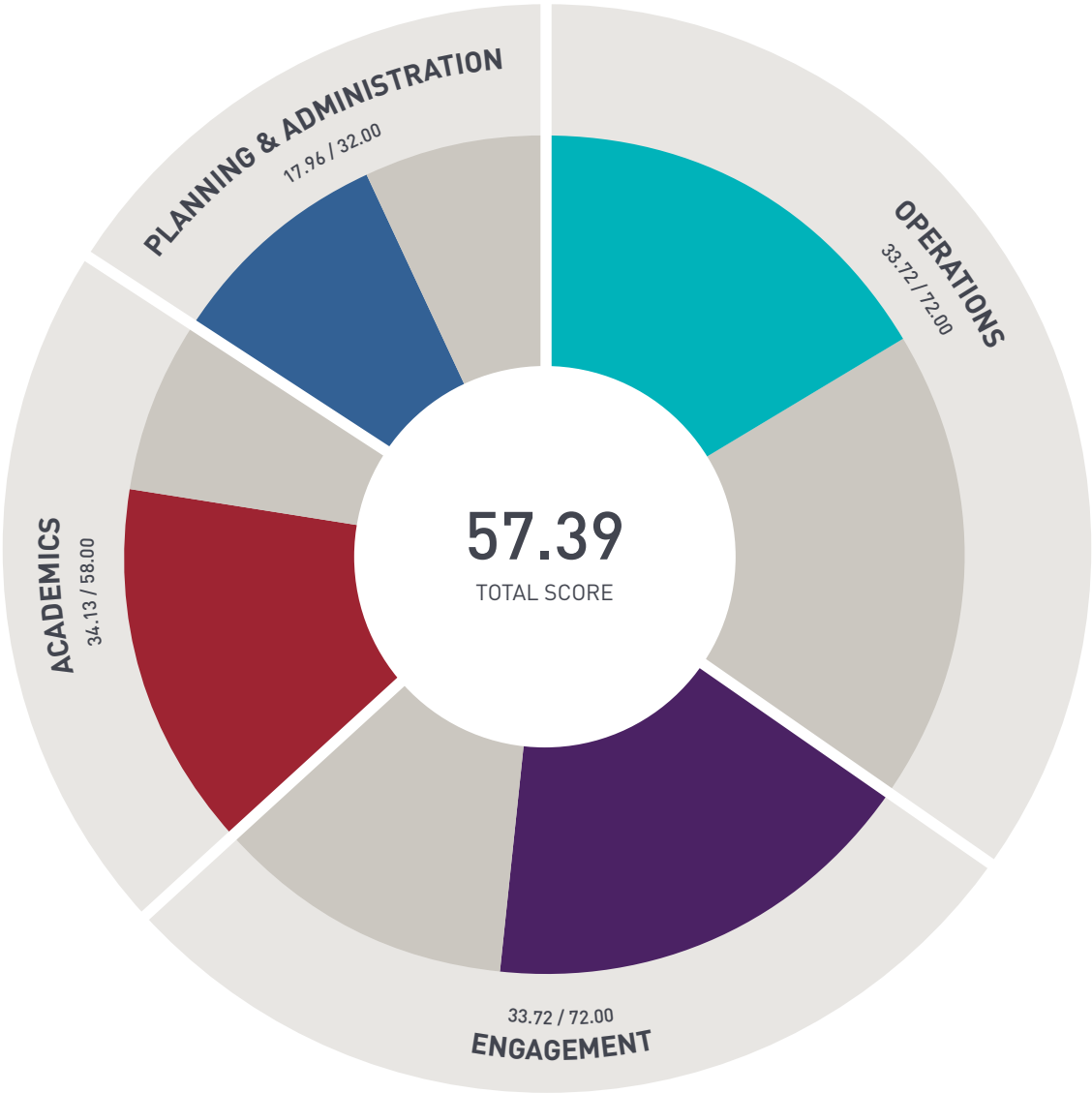
TUFTS' 2015 STARS REPORT

In 2011, Tufts received a Silver STARS rating for the Medford/Somerville campus. In 2015, the university reported on all of its Massachusetts campuses (Boston, Grafton, and Medford/Somerville) and also achieved a Silver rating. The university's 2015 STARS report includes information from fiscal years 2012, 2013, and 2014.

Tufts' 2013 Campus Sustainability Council Report emphasized the university's commitment to ongoing communications, data, feedback, and reporting around its sustainability efforts. The STARS report is an important way to provide comprehensive and transparent information about Tufts' progress to the community.

Scoring Summary

Tufts received a score of 57.39 on its STARS report, meaning that the university received 57.39% of available points. This equated to a Silver rating, which is valid for up to three years. Comprehensive information about the calculation of scores can be found in the STARS Technical Manual, available at stars.aashe.org.



- Academics Points Earned | Available
- Engagement Points Earned | Available
- Planning Points Earned | Available
- Operations Points Earned | Available

INNOVATION CREDITS

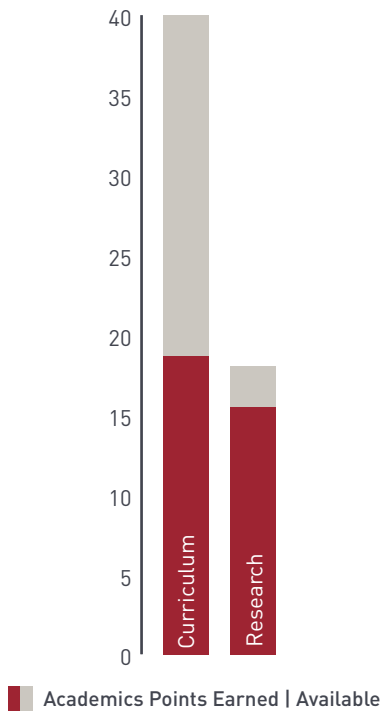
+ 1.00 bonus point

Colleges and universities can earn up to four bonus innovation credits for groundbreaking programs or initiatives that are not already captured in the other sections. Innovation credits can increase a school's total score by up to 4 points. Tufts earned 1 innovation credit for the Diversity Engagement Survey created by the School of Dental Medicine.

Read Tufts' full STARS report at stars.aashe.org.

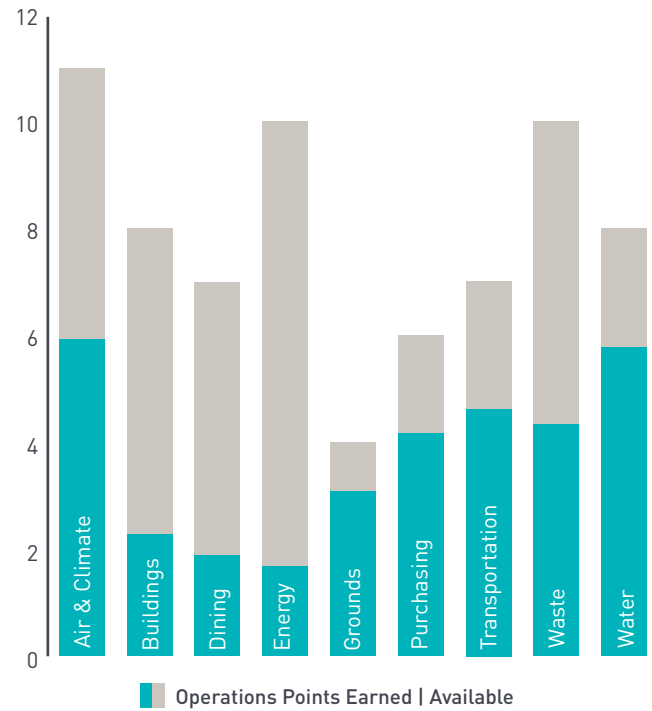
ACADEMICS

This section contains credits related to education. Tufts earned 59% of available points, which is slightly below the average score of 62% for similar schools who reported data to STARS.



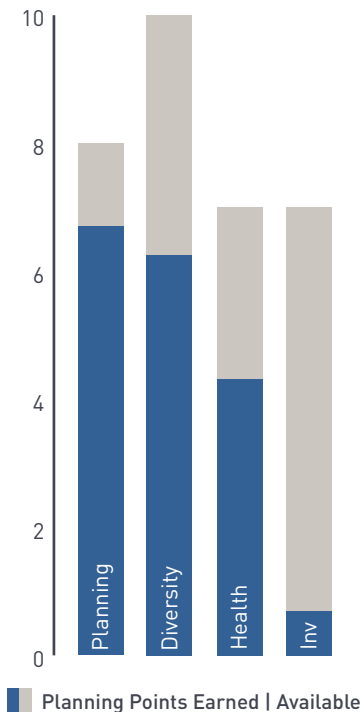
OPERATIONS

This section encompasses a wide variety of topics, ranging from greenhouse gas emissions to biodiversity. Tufts earned 47% of available points, ranking above the average score of 41%.



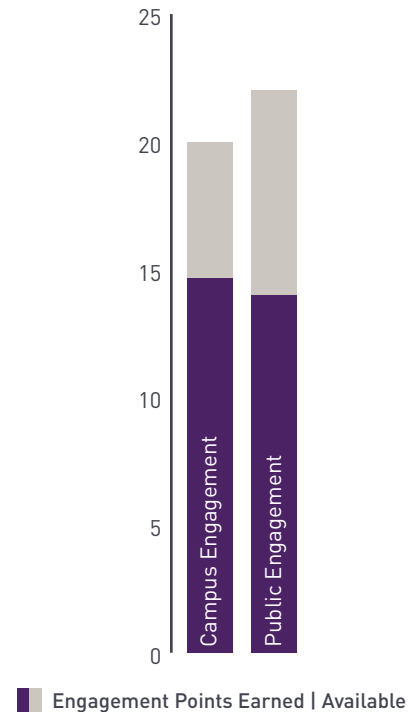
PLANNING & ADMINISTRATION

This section includes credits related to planning and governance, diversity, wellness, and investment (Inv). Tufts earned 56% of available points, which is slightly below the average score of 62%.



ENGAGEMENT

This section incorporates credits related to student, employee, and public engagement. Tufts earned 70% of available points, slightly below the average score of 73%.





Progress on Tufts Campus Sustainability Council Report Goals and Objectives

Students, faculty, and staff across the university continue working toward the sustainability vision outlined in the 2013 Council Report. The following section features a sampling of programs and projects that contributed to Tufts' sustainability progress in the areas of cross-cutting issues, waste, water, and energy & emissions during 2015, along with graphical representations of Tufts' footprint in each area.



Soccer game on the newly renovated Bello Field: Kelvin Ma\Tufts University



Representatives from CIERP accept the first Platinum Green Office Certification from President Monaco: Alonso Nichols/Tufts University

Cross-Cutting Issues



The 2013 Campus Sustainability Council Report identified several shared areas of opportunity for improvement across the topics of waste, water, and energy & emissions. Initiatives related to use of the campus as a learning lab, culture change, and recognition are highlighted below.

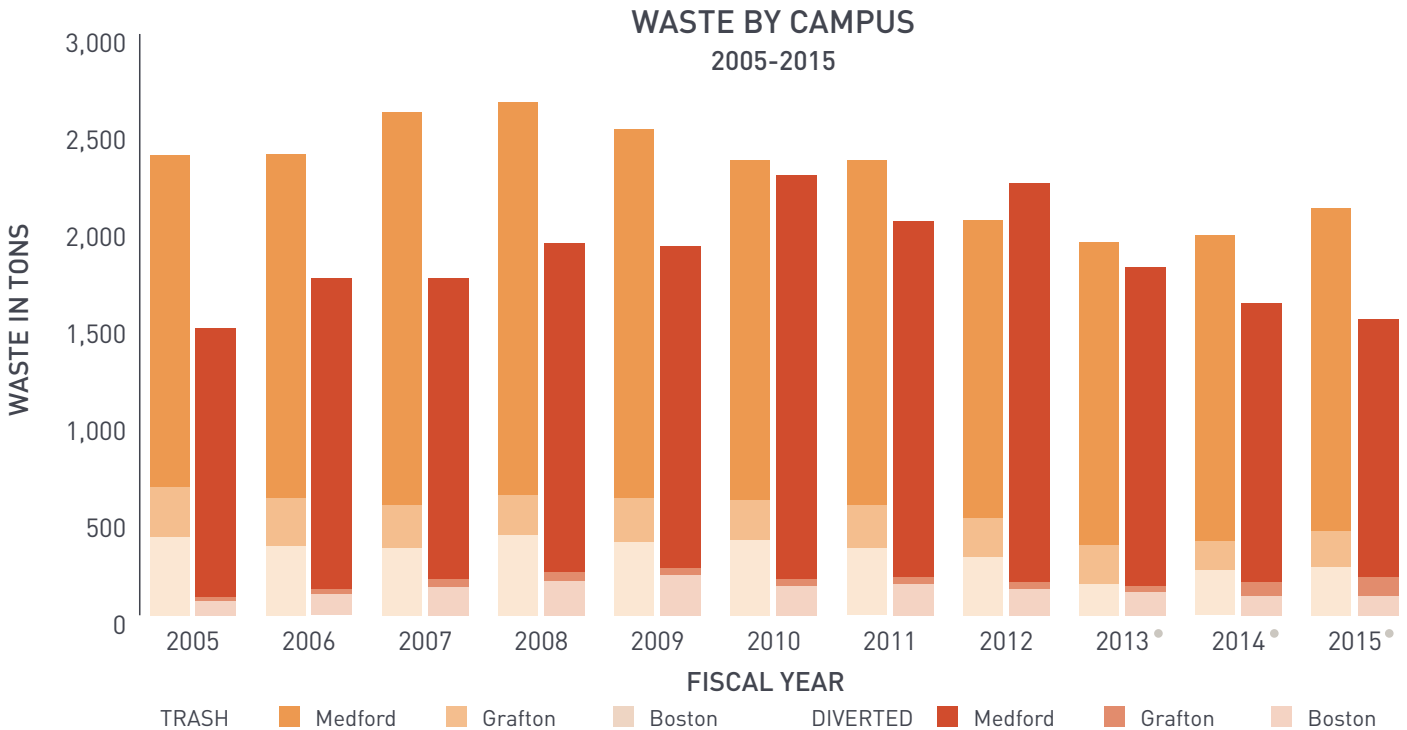
- An **audio tour and educational signs** were created for the Collaborative Learning and Innovation Complex (CLIC) at 574 Boston Avenue to educate visitors about the building's sustainable features. The building, which opened in the fall, is on track to receive **LEED Gold Certification**.
- Staff and faculty across the university learned about sustainability issues and behavior change during a full-year **Eco-Ambassador program** that met monthly from January to December. There are currently over 70 Eco-Ambassadors on Tufts' three campuses.
- 12 offices and departments earned **Green Office Certification**. There are now 24 certified green offices across the university.
- Over 50 undergraduate Orientation Leaders completed a new **online sustainability training**, which armed them with knowledge to pass along to the incoming freshmen in their fall orientation groups.
- The Eco-Reps planned and executed Community-Based Social Marketing **behavior change campaigns** in their dormitories, providing programming to residential students about how to reduce waste, recycle properly, and reduce energy use.
- Jumbos pledged to eat vegan or vegetarian for dinner 2,000 times in the dining halls as part of a **student-organized Meatless Monday campaign**.
- 287 students received **Green Dorm Room Certification** for following sustainable practices while living on campus.
- Over the past year, many **students worked on sustainability-related projects** including the following:
 - » Students in **ES-93, Climate Change Engineering**, spent the Fall semester researching opportunities to expand bike sharing and to conserve water and energy used by the therapy pools in the Steve Tisch Sports and Fitness Center.
 - » Students in **EM-51, Engineering Management**, researched sustainable technologies for the Medford/Somerville campus including a rain garden, an eco gym, and solar water heating tanks.
 - » Graduate students in **UEP-221, Climate Change Policy, Planning and Action**, described a process for developing a campus climate adaptation plan for the Medford/Somerville campus and researched ways to increase energy resilience at Tufts using solar photovoltaic and micro grids.
 - » As part of a senior thesis project, the Department of Drama and Dance presented "**Luminesce: A Biodramatic Fiction**," highlighting the intersections between theater, biology, and society. The play was followed by discussion with faculty from four Tufts schools.

Waste



VISION: The entire Tufts community plays an intentional role in fostering a cradle-to-cradle economy, a closed-cycle system that produces no waste or pollution.

- Tufts received a **New England Food Recovery Challenge Award** for waste reduction and diversion efforts from the Environmental Protection Agency.
- As part of a new waste reduction and **food rescue program**, the university started portioning and donating leftover dining hall food to Food for Free.
- Waste from the annual **Commencement Lunch** was drastically reduced by decreasing the number of individually packaged items provided to guests.
- Offices and organizations across the university hosted a number of **zero waste events** in Medford and Grafton, including the annual W.A.Z.E. Symposium.
- The student-run Rez Café launched a **“Bring Your Own Mug”** initiative in the fall, selling mugs with the café logo and providing discounts to patrons who bring reusable mugs. The café also started **composting its coffee grounds**.
- **On-campus composting** was expanded at the Cummings School through a collaboration between students and farm staff. Students from each class year are responsible for maintaining classroom compost bins.
- Students composting in their residence halls diverted approximately **860 gallons of organic material** from the waste stream.
- Tufts participated in the **GameDay Recycling Challenge** during Homecoming in October and achieved the 6th highest diversion rate among all participating schools and the top diversion rate (84%) in the NESAC division.
- **17.7 tons of material** were collected during residence hall move-out in May and donated to Goodwill. The university also recycled **444 tennis balls** and donated **54 computers** to community partners in Chinatown, Grafton, Medford, and Somerville.
- The **turf on Bello Field** was replaced over the summer. In addition to being technologically superior, the new surface is made of **post-consumer recycled material**.
- **18 hydration stations** were installed, providing an alternative to disposable water bottles.
- To encourage recycling, over **4,500 small, hanging wastebaskets** (“trash buddies”) replaced full-sized trash cans in offices across Tufts.
- The Dental School **drastically reduced the number of wasted materials in its teaching operatories** by adding dental assistants whose chief role is to dispense materials to students in a manner that better matches their needs.
- New students working in the Wildlife Clinic are **trained on recycling, composting, and waste reduction procedures** in the Green Office Certified building.



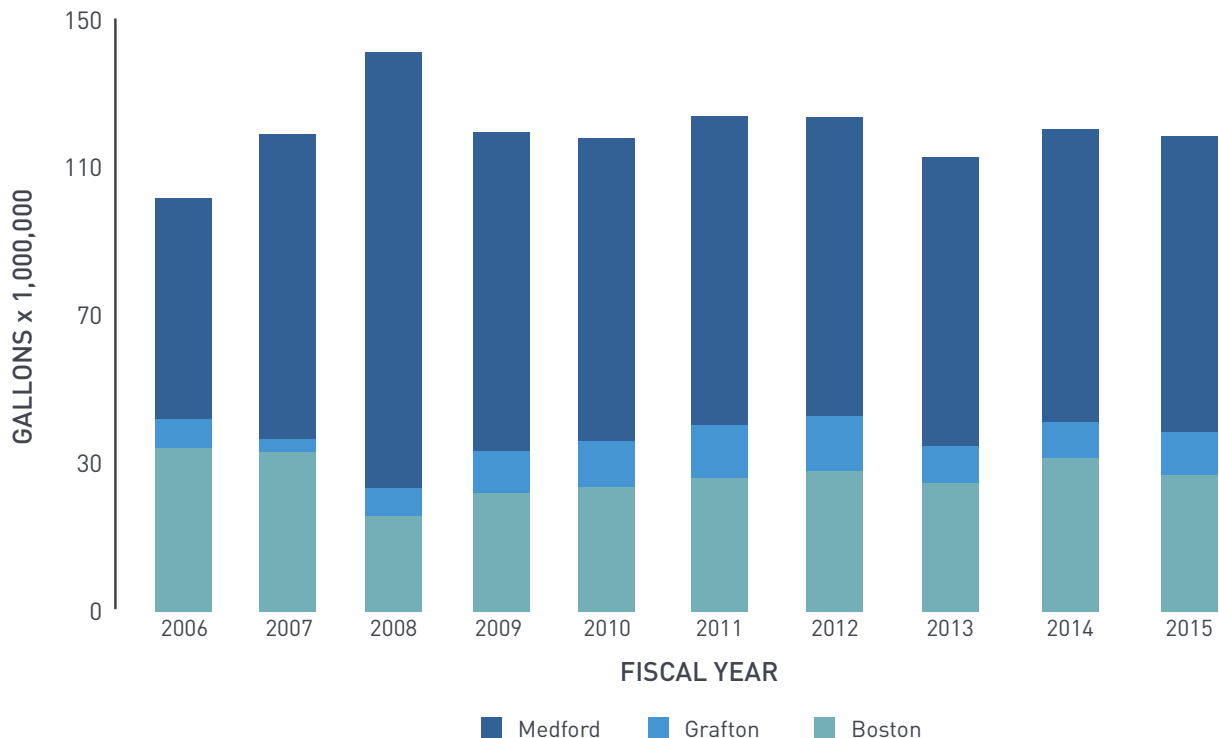
* With Tufts' switch in waste haulers in 2013 came a change in the volume to weight assumptions used to determine the university's output of trash and materials diverted to be reused, recycled or composted. The recent decrease in the amount (by weight) of diverted materials may be indicative of reductions in the university's use of recyclable materials, such as paper, and a trend in the beverage industry toward lighter weight plastics. In general, Tufts' total waste output has decreased since 2010.



VISION: Tufts employs an integrated water management approach that reduces consumption, promotes reuse, and minimizes impacts on the environment.

- High efficiency plumbing fixtures that use 33% less water than the baseline use of similar facilities were installed throughout the Collaborative Learning and Innovation Complex at 574 Boston Avenue. The building's **water conservation features** also include low-flow shower heads, faucets, and toilets.
- The landscaping at the Collaborative Learning and Innovation Complex was designed to **limit the use of potable water for irrigation**. Planting materials include native and drought-tolerant species, and the irrigation system uses automatic controllers that adjust for seasonal weather changes. The project is expected to reduce potable water usage by 66%.
- The Collaborative Learning and Innovation Complex features the Medford/Somerville campus' second **rain garden**, which captures and filters stormwater runoff from the building's roof. Along with two large subsurface infiltration chambers, it holds and filters a large volume of stormwater on-site, allowing the water time to infiltrate into the underlying soil. This helps restore and maintain the natural hydrologic system and decreases runoff to the storm sewer system, thus reducing downstream flooding and **improving water quality in the Mystic River watershed**.
- The Campus Sustainability Council Report identified **education around water issues** as one of the university's key goals. Some examples of this include the following:
 - » The 6th annual Water: Systems, Science & Society (WSSS) symposium, "**Fluid Boundaries: Integrated Solutions to Today's Water Challenges**," was held on the Boston campus and attended by experts from industry, government, and academia.
 - » WSSS students received **hands-on training in water resource management** by participating in practicum projects: constructing an aquaponics system at a high school in the Bahamas, investigating green infrastructure strategies to reduce nitrogen loading in Cape Cod estuarine environments, and researching public exposure to water and sediment in the Malden River and the impact of river restoration efforts on property values.
 - » In partnership with MIT, the Tufts Water Diplomacy Program hosted a workshop entitled "**Can Water Diplomacy Enable a New Future for the Urmia Lake?**" The workshop applied the Water Diplomacy Framework for joint decision-making using Urmia Lake in Iran as a case study, and a number of Iranian and international experts attended.

WATER USE BY CAMPUS
2006-2015



Energy & Emissions

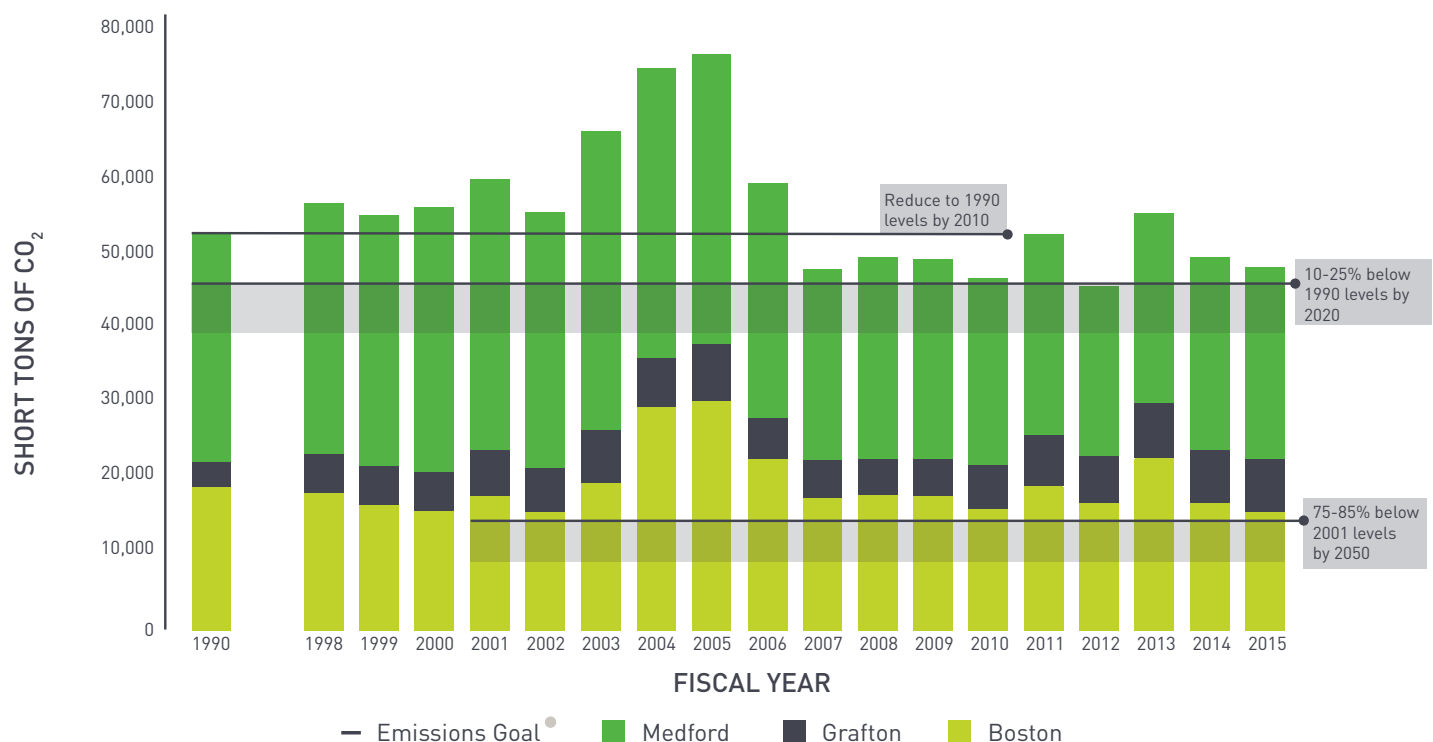


VISION: Tufts is a leader in responsible climate action through energy efficiency, emissions reduction, clean energy, and adaptation.

- Construction started in mid-April on the Central Energy Plant, and the building shell is 90% complete. This **cogeneration plant** will use the waste energy from electricity generation to heat and cool buildings on the Medford/Somerville campus, reducing Tufts' overall greenhouse gas emissions.
- A topping off ceremony was held to celebrate the completion of the steel framing on the **Science and Engineering Complex** on the Medford/Somerville campus in December. The building is on track to become **LEED Gold Certified**.
- The newly renovated Spicer Softball Field, which opened in the Spring semester, features a **solar powered scoreboard**.
- The **roof of Bush Hall was renovated** to include better insulation, which will **conserve energy** in the building. Through the project, the R-value of the roof assembly increased from R-9 to R-30. The R-value indicates the capacity of an insulating material to resist heat flow; the higher the R-value, the greater the insulating power.
- A **2-port electric vehicle charging station** was installed in the Cohen Parking Lot, and a new parking space in the lot was designated for low-emission vehicles.
- A **hybrid Prius V vehicle** was purchased for the daily mail run from the Medford campus to the Grafton campus.
- An **electric motorcycle** was added to the Tufts University Police Department's fleet. Housed on the Grafton campus, the electrically-powered two-wheeler will reduce both fuel and maintenance costs.
- Tufts contracted with a **new shuttle provider** that provided all new vehicles that are the most **fuel efficient** in their class. The shuttles are also programmed to have 30-minute breaks, during which the vehicles are shut off entirely.
- Two **one-way Zipcars** were added to the Medford/Somerville campus, allowing users to pick up a car at Tufts and reserve a drop-off spot across town, including near the Boston campus.
- Members of the Tufts community logged over 900 miles during **Bay State Bike Week**. Tufts was also one of the top participating workplaces in the state during the annual **Massachusetts Clean Air Challenge** in September.
- A **bike groove** was installed on the Memorial Stairs, improving transportation infrastructure for cyclists on the Medford/Somerville campus.

GREENHOUSE GAS EMISSIONS, EXCLUDING TRANSPORTATION

1990-2015



• For more information about Tufts' emissions goals, see the 2013 Campus Sustainability Council Report, p. 23.

Acknowledgments

PROGRESS REPORT

The initiatives and projects in this report are based on information available to the Office of Sustainability at the time of printing. It is by no means comprehensive or inclusive of all sustainability initiatives that took place at Tufts during 2015. The participation and contribution of all members of the Tufts community is incredibly valuable and greatly appreciated.

For inclusion in next year's report, email sustainabilityoffice@tufts.edu.

AASHE STARS REPORT

More than 60 people from over 30 university offices and departments contributed to Tufts' STARS report. For a full list of contributors, view the report online at sustainabilityprogresstufts.tumblr.com

DATA & FEEDBACK

The following individuals provided content for and feedback on this progress report:

Jennifer Braggin, Andrea Breault, Patricia Campbell, John Crow, Kate Doherty, Susan Fuller-DeAmato, Mary Jane Hanlon, Betsy Isenstein, Patti Klos, Su-san Lancon, Nolan Nicaise, Nancy Powers, Randy Preston, Jeanne Quealy, Ann Rappaport, Theresa Silver, Barb Stein, Whitney Stiehler.

DEPARTMENTS & PROGRAMS

The following departments and programs were responsible for the initiatives and projects included in this report:

- Athletics
- Community Relations
- Construction
- Cummings School Farm
- Department of Environmental Health and Safety
- Dining Services
- Facilities Services
- Graduate School of Arts and Sciences
- Office of Sustainability
- Office of Vice President Operations - Administration
- School of Arts, Sciences, and Engineering
- School of Dental Medicine
- Tufts Technology Services
- Tufts University Police Department
- Administrative Services
- Tufts Wildlife Clinic
- Water Diplomacy
- Water: Systems, Science & Society Program



Tufts



Front & Back Cover Photos: Collaborative Learning & Innovation Complex at 574 Boston Avenue, Alonso Nichols/Tufts University

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SUSTAINABILITY

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