



STEVENS
INSTITUTE *of* TECHNOLOGY
THE INNOVATION UNIVERSITY®

Residence Life

Sustainability Training





Stevens, ResLife, & Sustainability

Residence Life seeks to cultivate sustainable communities that are environmentally aware, socially conscious, and fiscally responsible.

Stevens has green initiatives that you, as an RA, should be the first to implement and begin to spread across campus.

Some initiatives include:

Recycling & RecycleMania

Water bottle refill stations

Sustainable Transportation

Renewable Energy

Involvement in Programs





Single Stream Recycling

On Stevens Campus:

Items Accepted in Recycling Bins

Items that go in Regular Trash

- Empty glass bottles
- Empty aluminum bottles and cans
- Paper (If it tears, recycle it)
- Cardboard
- Plastics #1-7

- Plastic Bags*
- Styrofoam
- Food Waste
- Un-numbered plastics
- Ceramics and Porcelain
- Mirrors

Items **Not** Accepted in **Recycling Bins OR Regular Trash**

- Electronics (E-Waste) – Bring to waste container behind Hayden Hall
- Lightbulbs – Bring it to Facilities in the Griffith Building

*Supermarkets and drug stores should have collection areas for plastic bags



Sustainable Initiatives on Campus

Solar Compactors

- Utilizes solar power to compact landfill waste
- Allows for 5 times the capacity storage
- Calls for 80% fewer collection trips that reduce fuel and labor costs, which translates to reduced carbon emissions.
- Locations: Outside the Howe Center, Outside Williams Library, outside River St apartments



Solar Compactor Outside Howe



Sustainable Initiatives on Campus

Water Bottle Refill Stations

- Funding for the stations was provided by Res Life
- Currently 16 have been installed throughout campus
- With a refillable water bottle, filtered water is a smart alternative to purchasing bottled water
- Each refill station shows how many plastic bottles have been saved from use
 - The count is above 300,000 bottles



Schaefer Gym 3rd Floor



RecycleMania

“RecycleMania is a friendly competition and benchmarking tool for college and university recycling programs to promote waste reduction activities to their campus communities.”

- RecycleMania 2019 runs from Feb 3 – Mar 30
- Stevens will compete in two categories:
 - **Diversion** - % recycled of total waste
 - **Per Capita Classic** – lbs of recycling per person
- Each week, data is reported through an online portal and results are released the following week
- In 2018 Stevens finished 10th in the Per Capita Classic
 - 2nd (to Drew University) out of NJ schools





Sustainable Initiatives on Campus

Renewable Energy

Photovoltaic solar panel arrays are installed in several locations on campus

- In the 8th Street parking lot
- Behind Davidson Labs
- On the roofs of the Schaefer Athletic Center, Samuel C. Williams Library, and Jonas

Every month, Stevens solar panels keep more than 10,000 pounds of CO₂ out of the atmosphere*



*According to the EPA Greenhouse Gas Calculator



Lighting Initiatives

Completed LED Projects

- Williams Library Re-lamping
- Babbio Garage Re-lamping with occupancy sensors
- Campus Site Lighting Re-lamping
- Schaefer Lobby Re-lamping
- All miscellaneous renovations



Future Projects

Lighting Master Plan

- Through an RFP (Request for Proposals) process, a vendor was selected to develop a master plan for campus-wide lighting audits and upgrades
- All campus buildings were audited and recommendations were made for relamping and occupancy/vacancy sensor incorporation
- Implementation of the findings is now in the planning stage
- Stevens will shorten the ROI by taking advantage of all NJ Clean Energy incentive programs



Building-level Sub-metering

- **43 new sub-meters** have been installed throughout campus, in a phased approach that began July 2017
- Sub-meter data is directly synced to the existing Building Management System (BMS) and will be presented in a web-accessible dashboard
- Data will be used
 - **By Facilities and Campus Operations...** to develop an energy plan, guide system upgrades decisions, and enhance participation in Demand Management programs
 - **By faculty and students...** for research projects, ICR reporting, and energy reduction competitions between dorms

Slide 9

RM14

See my comment next to the note below the slide...

Robert Maffia, 2/8/2018

KJ2

Bob we worked very closely with HCT on the hardware selection. The meter is the EMON 3400 "Smart Meter" series and it has multiple inputs that can measure gas in MMBtu and water in CCF as well as electricity (KVar, KW, and KWh).

Kearney-Herold, Jennifer, 2/8/2018

RM23

So, there are sensors in both the gas and water lines that monitor flow and send the signal through this meter? One meter for three utilities?

Robert Maffia, 2/8/2018



Electric Vehicle Charging

- Stevens is installing 7 electric vehicle (EV) charging stations;
 - 5 in the new Babbio Garage
 - 2 on north campus: Howe Center lot and Hoxie House
- Installation costs to be reimbursed under a \$20,000 grant from NJ DEP
- Charging will be free to registered users for at least the first year
- Usage data and time spent charging will be collected and made available for campus research





“Green” Fleet Vehicles

Stevens is showing dedication to the reduction of fossil fuel consumption by committing to having all new fleet vehicle purchase be hybrid or electric vehicles.

- In 2017 Stevens purchased an electric vehicle that is being used by the Facilities Department Locksmith Shop
- Stevens has purchased and will be receiving a 2019 Ford Police Responder Hybrid Sedan for use by Campus Police.
- If supplies can be moved to the Gate House, Facilities plans to purchase EV carts that are not required to be road-ready, reducing operating costs as well as our carbon footprint.



Sustainable Initiatives on Campus

Sustainable Transportation

- Campus shuttle
- Public transportation
 - PATH Train, NJ Transit, NY Waterway Hudson River Ferry, etc
- Bike racks across campus
- The Hoboken Bike share
 - Discounted registration available to members of the Stevens community
- ZipCars and Hertz Connect



Tips for “Greener” Living

- Use both sides of paper when printing
- Use reusable mugs and water bottles
- Dispose of recyclable materials in the proper bin
- Use natural light and/or turn lights off when not in the room
- Carpool, use public transportation, or bike to get to the campus
- Educate friends about how to be more sustainable
- Get involved in campus groups and beyond





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Q u e s t i o n s ?