

State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013



SUNY IT

SOLID WASTE & RECYCLING REVIEW

SUMMARY & RECOMMENDATIONS

ONEIDA-HERKIMER
SOLID WASTE AUTHORITY





**State University of New York Institute of Technology
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Facility Information:

The State University of New York Institute of Technology at Utica/Rome (SUNY IT) is New York's public institute of technology. Originally a graduate and upper-division institution, the college offered classes in temporary locations and at extension sites for several years until the first buildings were constructed on the permanent campus in Marcy, NY, in the 1980s.

As part of a substantial expansion in campus infrastructure, a \$13 million student center, a \$20 million field house and a \$23.5 million residence hall were completed in 2011-2012. The next major construction project planned is a technology complex including the Computer Chip Commercialization Center.

The SUNY IT campus includes the following buildings: Kunsela Hall, Facilities, Campus Center, Student Center, Donovan Hall, Field House and Cayan Library. There are residence complexes and athletic fields on campus.

This Report provides an analysis and recommendations for the current solid waste and recycling program at SUNY IT in Utica.

Solid Waste Haulers:

Waste Management, Inc.: Collects garbage and single stream recyclables

Empire Recycling: Collects white office paper for recycling

Solid Waste & Recycling Audit:

SUNY IT should be commended for addressing the solid waste management, waste reduction and recycling needs for the campus. With development of a comprehensive recycling program at SUNY IT, the volume of solid waste generated on campus will be reduced. Reducing the volume of solid waste generated at SUNY IT will result in a decrease in waste collection frequency by Waste Management, Inc. and in turn will save SUNY IT money on waste disposal costs.

With assistance from SUNY IT staff members Mark Bremer, Lecturer of Biology and Green Team Coordinator, Carson Sorrell, Director of Facilities and Edward Walker, Site Representative, the Oneida-Herkimer Solid Waste Authority conducted a solid waste & recycling audit of the SUNY IT campus on April 24, 2013. During the waste audit, various waste reduction and recycling opportunities were identified.

The waste audit focused on Kunsela Hall, which contains both offices and classrooms with a large volume of students and staff throughout the building.



**State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013**

Goal of the Waste Audit: to identify origins of waste, the types (paper, plastics, metal and glass), and the volume and how they are being handled. The audit results determine what items can be recycled, reused, reduced and eliminated and what strategies should be implemented for increased recycling and reuse.

Another goal is to increase awareness and engage the campus community about waste on campus and increase their focus on ways to reduce, reuse and recycle it.

Observations from Waste Audit of Kunsela Hall:

Custodial staff collected 2 days worth of garbage and recyclables from Kunsela Hall and stored it in a storage closet. On the day of the audit, we used that waste as our samples. There were three categories for the waste:

1. Garbage
2. Paper Recyclables
3. Container Recyclables

We brought the waste outside to begin our sorting. The waste samples were sorted individually, one at a time, and were sorted into the following categories:

Recyclables

- Paper (cardboard, white office paper, colored paper, newspaper, magazines, scrap paper)
- Containers (plastic bottles & containers, metal, aluminum, glass)

Current Non-Recyclables (garbage)

- Food waste, wrappers, Styrofoam, office supplies, bathroom waste

WEIGHTS BEFORE SORTING:

Trash: 133.5 pounds

Paper: 57.5 pounds

Containers: 5.5 pounds

RECYCLING RATE BEFORE SORTING: 32% (calculated by dividing the weight in recyclables by the weight of the sum of ALL waste)



**State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013**

Observation: Once sorting began, we noticed a great deal of recyclables that were placed in the trash.

14.5 pounds of paper recyclables were sorted out of the trash.

9.5 pounds of container recyclables were sorted out of the trash.

RECYCLING RATE AFTER SORTING: 44%

Observation: The recyclables from the recycling bins that were collected did not have much contamination.

2.5 pounds of garbage was sorted from the paper recyclables.

Less than ½ pound of garbage was sorted from the container recyclables.

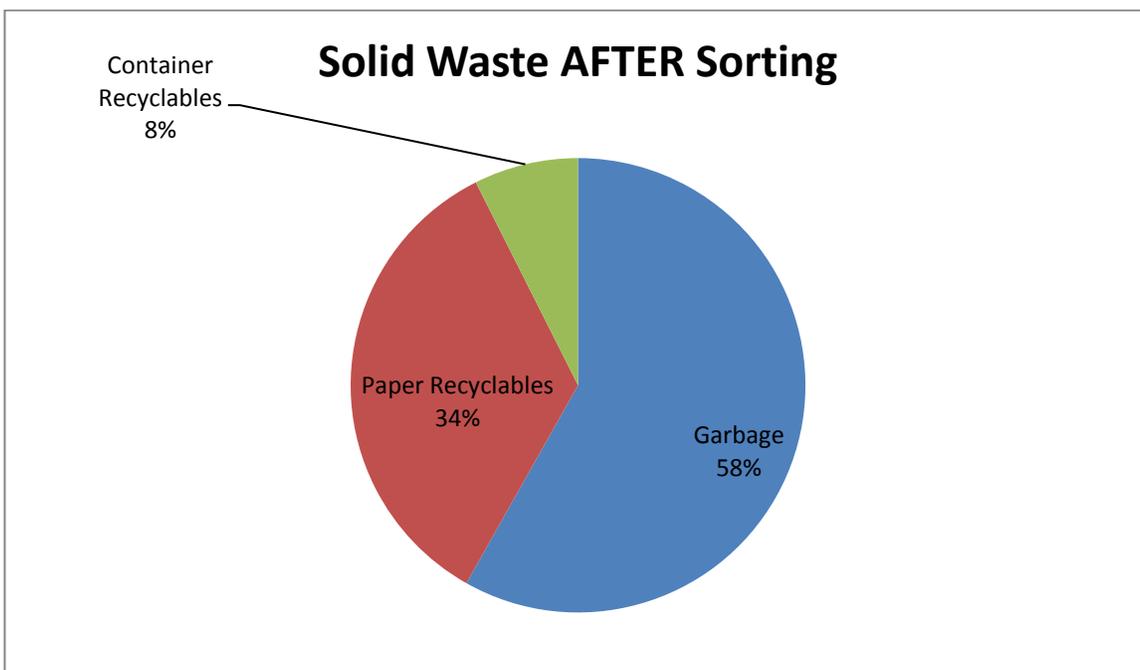
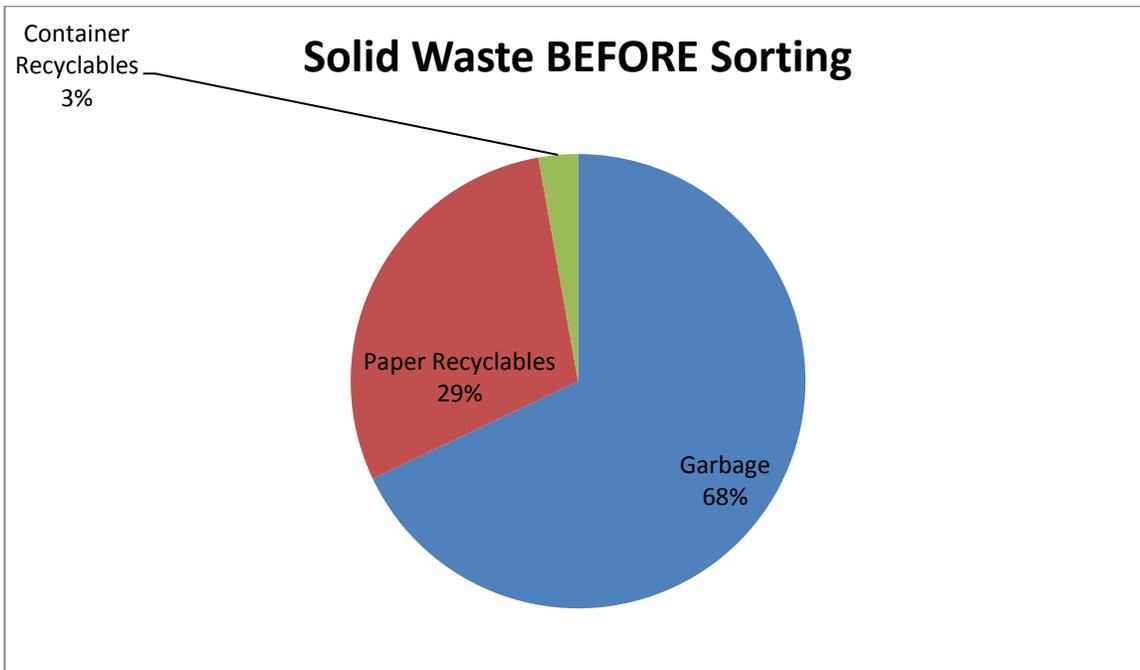
Overall Findings:

44% of the total waste generated in two days at Kunsela Hall was recyclable. 83% of the recyclables were paper and 17% were containers. 11% of the waste in the garbage was made up of paper recyclables. 4% of the waste in the garbage was container recyclables.

Out of the paper recyclables collected, only 4% was garbage (non-recyclable). Out of the container recyclables collected, less than 1% was garbage (non-recyclable).



State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013





State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013

Recommendations:

After sorting, we learned that only 4% of the paper recyclables collected was contaminated with garbage. However, 11% of the garbage collected was paper that could have been recycled.

- *Place a recycling bin next to every garbage can.* This includes outdoors, inside classrooms, around hallways, in the cafeteria and more. The purpose of this is to provide every person with the opportunity to recycle each time he/she disposes of a material.
 - **Utilize the regional RecycleOne—One and Done program.** Under the RecycleOne program, all recyclable items mix together in one bin for collection. This program makes recycling the easiest and most convenient it has ever been. Rather than needing 3 containers (garbage, paper recycling, container recycling) in the hallways, classrooms and offices, you only need 2! ONE for garbage and ONE for recyclables! The easier recycling is, the more people will participate.
 - All recyclable items—paper, plastic, metal and glass—can be mixed together loosely in one container.
 - Lids should be left on recyclable containers. Containers should be empty.
 - Do NOT place recyclables in plastic bags into the dumpster for collection. There is one exception to the NO BAG rule! Please place shredded paper in a large, clear bag and place in recycling dumpster.
- *Make sure garbage cans and recycling containers are clearly and visibly labeled.* The purpose of this is so that each person can easily tell which bin is for recyclables and which is for garbage.
- *Be consistent with your labeling/messaging.* Recycling containers should have the same labeling and messaging on them everywhere on campus. For example, placing the Authority's RecycleOne sticker on all recycling bins will make them easily recognizable for students and staff on campus. Using different labeling on recycling bins throughout campus will cause confusion.
- *Improve signage and outreach.* Limit confusion by providing clear signage of what is recyclable and what isn't by using pictures instead of words (Authority has posters available).
- *Educate the students and faculty.* Educating the campus on recycling guidelines and procedure is extremely important.
 - Meet with facilities and custodial staff to educate them about what we can recycle and what we cannot, but also to explain the recycling procedure and allow them to give their feedback, suggestions, concerns, and ask questions. If you implement the RecycleOne program, be sure that custodians are aware of the guidelines and that recyclables are placed loosely in the recycling dumpster with NO plastic bags.



**State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013**

- Reach out to other faculty and staff: This can be done through an email blast (Authority has great template available for your use), or speak during a staff meeting to address recycling procedures (even if you can only get 5 minutes).
- Increase student awareness:
 - Add a sentence about recycling in students' class syllabuses.
 - Add a section about recycling to the student handbook.
 - Leave notices to students who live on campuses in the dorms.
 - Send an email blast.
 - Display posters and signs throughout campus.
 - Participate in recycling challenges/initiatives to increase participation.
- *Implement central recycling stations in large offices.* This will save the custodians time by allowing them to empty more recycling bins elsewhere on campus, rather than spending time emptying each person's individual recycling bin. Every person empty his/her bin in a central area (into a larger container) when it gets full.
- *Contact Empire Recycling to discuss arrangements for paper recycling. Are you being paid for the paper they pick up?*
- *Contact Waste Management Inc. to discuss collection contract.* Once the new and improved program kicks-off in the fall, we can look for ways to achieve cost reduction. The more you recycle, the more money you can save: if you are producing less garbage, you can decrease the pickup frequency at SUNY IT. Another option is to decrease the size of your garbage dumpster, which will also save money.

Develop a Green Team Recommendation:

Mark Bremer has already begun development of a **Green Team**, which is an important step in your recycling program. The **Green Team** should consist of individuals from each department on campus. There should be members who are responsible for planning, directing, implementing and monitoring your program, as well as team members consisting of other employees interested in "going green" at SUNY IT. A notice should be given to inform all employees that a **Green Team** has been formed to address recycling and waste reduction on campus (if you haven't already done this).

The employees input is critical and should be included in the planning process. The major responsibility of the **Green Team** is to gather and organize information that will be used in publicizing, executing and monitoring the program.

The **Green Team** should discuss areas such as waste reduction, increased recycling, energy usage, transportation issues, community action, recycling education and program promotion. In order to gain support, you will need to make your recycling program work effectively. It is crucial to thoroughly explain how it will function, when and where the collections will occur, and what kind of progress is



**State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013**

being made. This information can be communicated through creative displays, posters and banners, information in newsletters, payroll inserts, email messages and media releases.

Green Team Development Tips:

- Empower the SUNY IT Green Team to spearhead environmental or waste reduction activities. Include staff members from each department or section of the college.
- Determine achievable, realistic environmental goals. Create an environmental policy statement and post it for all to see.
- Let people know—tell your employees, students and the public about your recycling program.
- Document and report to employees, students, and the public the totals of material from the campus. (You can contact Waste Management Inc. to see about tracking data.)
- Take a long-term view—some investments may take years to produce a financial return and others may pay off immediately.
- Develop a purchasing policy that includes environmental criteria and ask your suppliers to cooperate. If they refuse, consider switching suppliers.
- Refuse over-packaging and ask suppliers to minimize packaging. Ask suppliers to switch to recyclable/reusable/returnable shipping packages and skids.
- Invite speakers from environmental organizations to make presentations to your staff to educate and motivate them.
- Start a suggestion box and/or incentive program that encourages staff to submit waste reduction ideas. Emphasize that the connection of waste reduction to improved efficiency should be everyone's goal.
- Hold employee or student raffles and give environmentally friendly products as prizes (composter, energy-efficient light bulbs, etc.).

General Recycling and Waste Reduction Tips:

Below are general recycling and waste reduction tips that SUNY IT could follow to reduce solid waste, increase recycling and save energy. The business's dedication to increase waste reduction and recycling will result in saving cost on disposal while protecting and preserving the environment and our natural resources.

- Get staff involved in waste reduction efforts. Keep them informed of the goals of the program and set up a waste reduction committee.
- Encourage staff to bring "litter less" lunches in reusable containers and bags.
- Install water-saving devices in washrooms, air hand dryers, energy-efficient lights, timers, and a computerized thermostat to reduce energy costs.
- Install energy-efficient light sensors in storage rooms
- Turn off lights and equipment when not in use.



State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013

- Close the loop; support and encourage the purchase of materials, supplies, and packaging that contain recycled or refurbished content.
- Buy products in bulk to minimize packaging. Bulk products are generally less expensive than smaller and individually packaged items.
- Familiarize staff with the proper operation of office equipment to eliminate waste due to misuse and ensure that all office equipment is regularly serviced to prevent malfunctions.
- Install a computerized thermostat to control the heating and air conditioning system.
- Work with suppliers to ship materials with no, or reusable/recyclable containers and packaging.
- Make it policy to purchase products with recycled content, which are durable, refillable, reusable or recyclable.
- Purchase secondhand office furniture. Sell old office equipment to employees, or donate it to reuse centers or charitable organizations.
- Centrally post or circulate memos and other documents instead of providing each person with an individual copy. Use an electronic bulletin board for private memos.
- Circulate (rather than copy) memos, documents, periodicals, and reports.
- Eliminate unnecessary reports.
- Replace incandescent light bulbs with energy efficient halogen or fluorescent bulbs.
Ensure staff are aware of and familiar with all company waste reduction programs, policies, and objectives
- Make two-sided copies. If a single-sided machine is being used, reverse the pages and feed them through a second time.
- Use the reduction feature on the copier to fit more on one page.
- Use outdated letterhead for in-house memos.
- Use a fax stamp or reusable fax forms instead of a cover page to minimize paper waste.
- Use old paper (i.e., one side has been used) in the fax machine.
- Use single-sided sheets of paper as scrap paper for notes.
- Use computer disks to edit draft documents. Only print a hard copy of the final document.
- Single space the text of documents.
- Reuse scrap paper, envelopes, etc. for notes and drafts.
- Use refillable pens, pencils, and tape dispensers.
- Close the curtains or blinds in your office before you leave. This minimizes heat loss in the winter and keeps the office cool in the summer.
- Save and reuse old file folders, hanging files, etc.
- Reuse envelopes by placing a new address label over the original name. Plain labels with your office's address can be used to cover the original address.



State University of New York Institute of Technology
Solid Waste & Recycling Review
May 2013

Additional Suggestions & Resources:

Conduct Periodic Waste Audits: Now that we have a baseline, it would be a good idea to have an audit at least once annually, or even once per semester. This way we can monitor the program and even incorporate food waste next time so that we can see how much of the waste stream is made up of organics for composting.

Food Waste Composting: Composting is the “next step” in recycling. Once your recycling program is implemented and successful, a next step could be developing food waste composting program. There are various options, opportunities and styles to food waste composting and the Authority assists in developing, implementing and monitoring the programs.

NYSAR3 College Council – The College Council is a membership-based organization designed to provide a forum through which college students, environmental staff and faculty can share information about common environmental problems and best practices that have been developed to overcome these problems. They have also just announced a small grant program they will be offering and as a member of NYSAR3, I would be glad to help you apply this fall!

http://www.nysar3.org/index.php?option=com_content&view=article&id=26:nysar3-college-council&catid=8:homepage

Grant info: <http://www.nysar3.org/college/PressRelease.pdf>

For additional information or questions please feel free to contact me. I look forward to assisting SUNY IT with implementation of an improved recycling program.

Jamie Tuttle
Oneida-Herkimer Solid Waste Authority
Recycling Coordinator
1600 Genesee Street
Utica, NY 13502

Telephone Number: 733-1224 Ext. 2300
E-Mail Address: jamiet@ohswa.org
Authority Web Site Address: www.ohswa.org