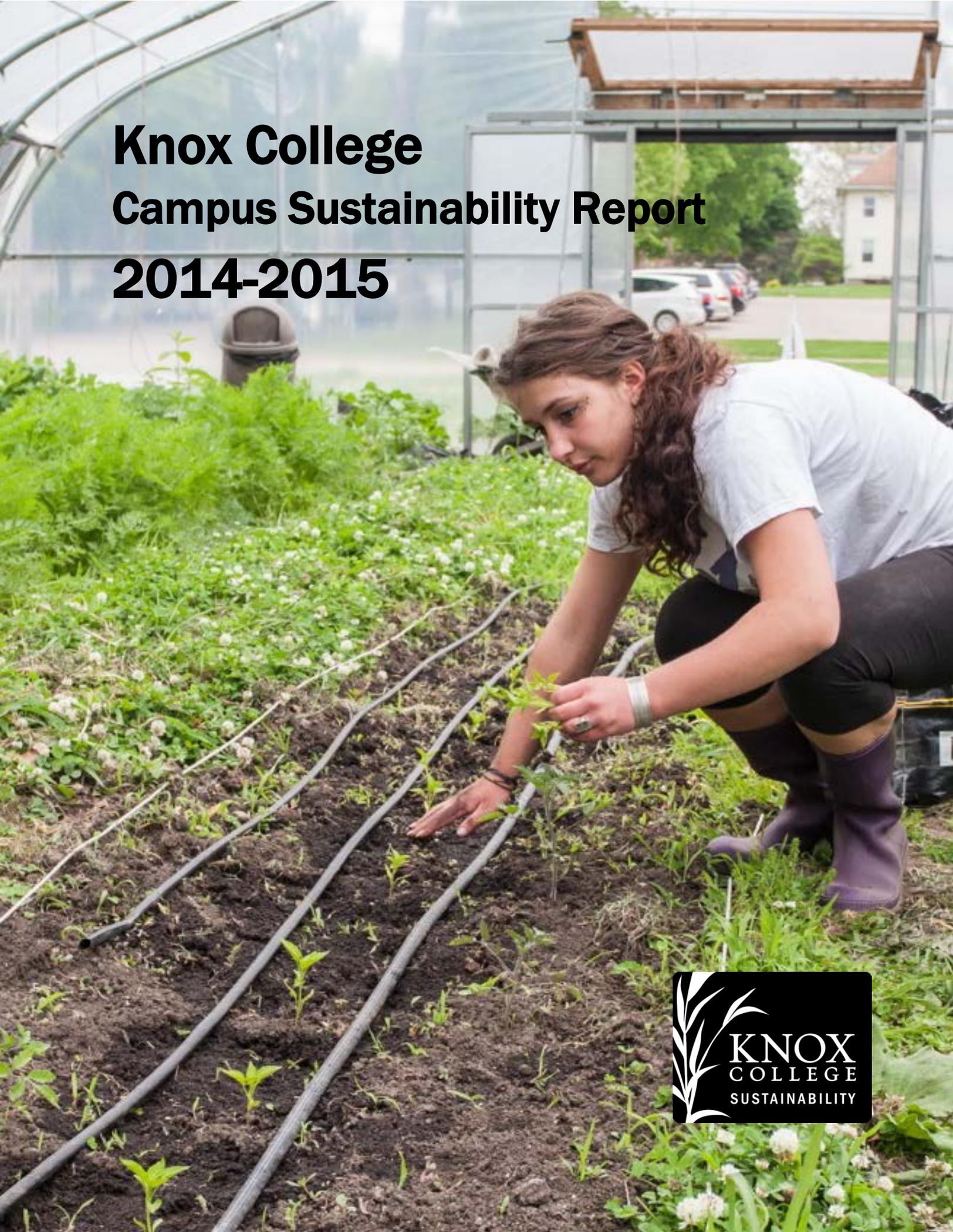


Knox College Campus Sustainability Report 2014-2015



Knox College Campus Sustainability Report
July 2014 - June 2015

Knox College Campus Sustainability Report

AY 2014-2015

"At Knox College, we believe a culture of sustainability includes:

- *Recognition that humans are part of nature and need to live in balance with Earth's ecosystems*
- *Reduced consumption of natural resources to a replenishable rate.*
- *Reduced generation of waste to a rate at which the environment can assimilate it*
- *Decision-making that gives equal weight to natural, social, and economic systems*
- *Commitment to place, including conservation and equity in distribution of local resources*

We believe that doing our part will ensure the well-being of future generations."

(This Knox College definition of sustainability was crafted in May of 2014, after a campus-wide survey aimed at understanding the priorities of students, staff, and faculty with regard to sustainability issues.

The 2014-2015 academic year was a landmark year for Knox College in the field of sustainability. The speed of progress was almost breathtaking. As always, our capacity for positive change can be attributed to flexible, creatively-minded campus offices and impressively engaged students. This year, the Office of Sustainability received constant visits, calls, and emails from members of the Knox Community, bringing new ideas to the table. In fact, all of our new programs this year can be traced back to the initiative of Knox family members outside the Office of Sustainability.

As before, the campus shows no signs of wearying in the enthusiastic pursuit of socially and environmentally sustainable progress. The number of projects already underway for the coming academic year is a clear indicator that the Knox community will continue to serve as an example of success in campus sustainability endeavors.

It is with a heavy heart that I take my leave of Knox College this winter, but I can't wait to see what the coming year holds for this incredible campus.

With gratitude for a rewarding time at Knox College,



~Froggi VanRiper
Director of Campus Sustainability Initiatives

Opening Notes

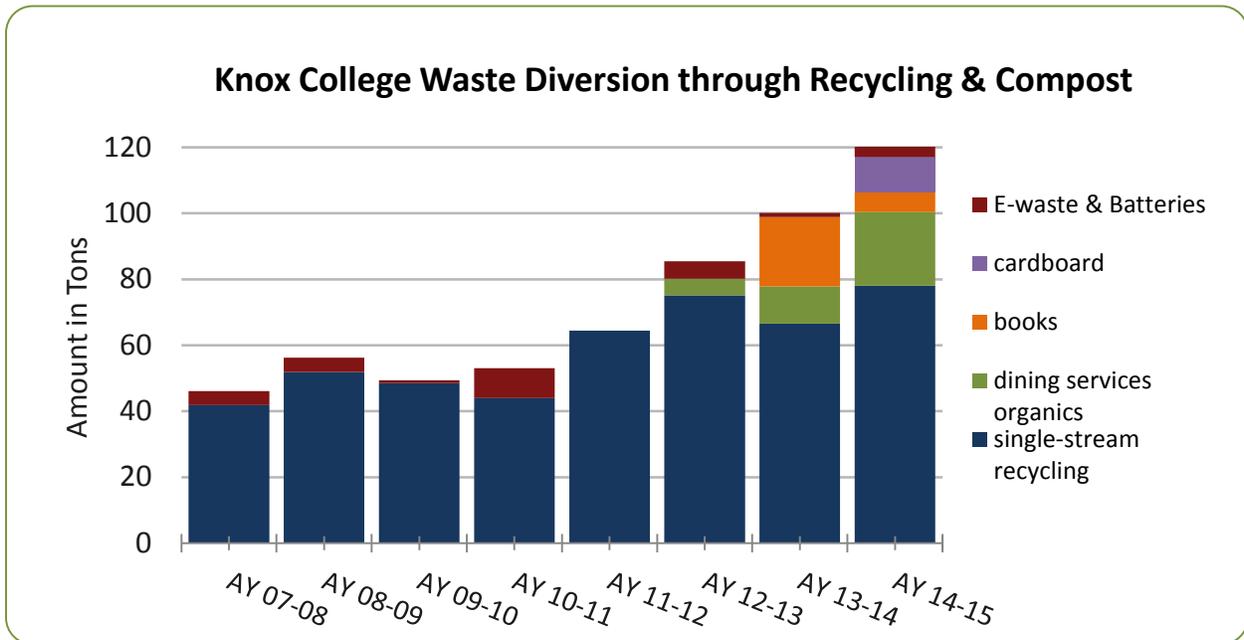
The significance and pace of the sustainability progress at Knox College this year was acknowledged well beyond the reaches of our campus, as can be seen by the many recognitions that we earned during this time. After submitting our third Sustainability Tracking, Assessment, and Rating System (STARS) report to the Association for Advancement of Sustainability in Higher Education (AASHE), we earned a STARS rating of Silver. AASHE later honored Knox with a feature (and cover photo) in their Annual Review of Campus Sustainability Ratings, Innovations, and Best Practices.

In October, Knox College earned Illinois Governor's Campus Sustainability Compact Recognition at the Gold Level. In November we were honored by the Great Lakes Association of College Housing Operations with their "Campus Commitment to Sustainability" award. In January, Knox College received one of five Radish Magazine Annual Awards for Excellence in Sustainability.

This report will describe the many programs that laid the foundations for these accolades. It will evaluate the successes and weaknesses in our programs, build upon last year's historical data, and provide a foundation for moving forward into a new year with plans for further progress in the important field of campus sustainability.

1. WASTE

The 2014-2015 school year represented our most successful year yet in waste reduction and recovery. Knox College improved diversion rates, community education about solid waste, and diversity of recovery options.



Recycling

The summer began with an assessment of outdoor recycling receptacles, and a careful re-labeling and arranging of receptacles to ensure that recycling bins accompanied trash cans across the entirety of campus grounds. In the early spring, we followed up on this commitment with the addition of new two-part waste stations, made from durable recycled plastic, for all of the outdoor athletic fields on campus.

As students returned for the fall, we introduced a new format for move-in cardboard collection, comprising well-marked outdoor pens for cardboard collection near dormitory entrances. This allowed for first-time visitors to the campus to recognize and participate in our campus goal of to 100% diversion of recyclable materials.



Move-in cardboard recycling pens helped first-time visitors learn and participate in our commitment to recycling diversion.

The year saw an increase in the variety of non-traditional recycling options available on campus, through a partnership with Terracycle. We also introduced white paper diversion to many campus

buildings. By keeping this valuable recyclable resource clean and separate, we are now able to sell it on the commodity market.

Compost

This year marked the highest rate of organic waste recovery in the three years since composting began at Knox College. Nearly 45,000 lbs of pre- and post-consumer food waste were diverted from the landfill, and composted for use on the Knox Farm. In October, we applied the first finished load of compost to the Knox Farm's growing areas, demonstrating the success of our composting operation.



The first finished load of compost was incorporated into the soil of the Knox Farm: an indicator that our program has been a success.

In the fall, we also began a pilot program for composting pizza boxes. The boxes were collected from select areas, shredded, and used to increase the carbon balance in our outdoor composting bays.

Reuse

In addition to further enhancing the Share Shop, this year the Office of Sustainability opened the Office Supply Share. The Office Supply Share enables Knox College employees to deposit unused office supplies, and “shop” for needed materials in an easily-accessible central location. By the end of the 2014-15 school year, the program was estimated to have saved the school as a whole several thousand dollars in office supply purchases, while diverting hundreds of pounds of useful items from the landfill.

Moving into Alumni Hall

- 8 Offices, 45 people
- 2,000 lbs materials reused
- 4,000 lbs materials recycled
- 2,000 lbs furnishings saved
- 0 dumpsters rented

The battery swap was another initiative implemented this year. A battery charging station and collection of rechargeable batteries were installed in the newly renovated Founders Lab. Members of the Knox community can now exchange their exhausted rechargeable batteries for freshly charged batteries, without having to wait for their batteries to charge.

Zero-waste initiatives

The pedagogical waste stations that made their debut during Commencement 2014 became a common sight on campus throughout this school year. Our ability to achieve a zero-waste event prompted community partner Sitka Salmon to reach out to the Knox College Office of Sustainability to advise and partner with them in planning and hosting their 3rd annual Sitka Salmon Bake. By coordinating with community partners to obtain durable dishes and flatware for the event, and supplying the help of the Knox basketball team and other volunteer students as bussers and waste station ambassadors, the event resulted in only 5.5 lbs of landfill waste after 2000 salmon tastings were served.



Knox shared our zero-waste event planning expertise with Sitka Salmon for their 3rd annual Salmon Bake

Our zero-waste commencement initiative expanded to incorporate more of the commencement weekend festivities, including the senior champagne toast, which for the first time in memory was conducted with non-disposable glassware. Our Sunday commencement ceremony, from décor to refreshments to 1000 lunches, generated only 4.6 lbs of landfill waste.

This was only the beginning for our zero-waste initiatives. During winter break 2015, eight offices, comprising 45 staff members, transitioned to the newly renovated Alumni Hall. Over the course of the month, a “moving cascade” ensued, in which over twenty more faculty and staff members progressively transitioned into vacated offices, and many of the newly opened spaces were re-appropriated for academic use.



Commencement 2015: Refreshments for 1500 attendees, lunch for 1000 people, and 4.6 total lbs of landfill waste.

In light of the waste reduction successes we began to demonstrate last year, and in keeping with the sustainability commitments characterizing the Alumni Hall renovation, President Teresa Amott challenged us to accomplish a waste-free move. With careful planning and active collaboration between the moving offices, the Facilities Department, and the Office of Sustainability, Knox transitioned the contents of seventy people’s office spaces and five storage rooms across campus into new spaces without renting a dumpster, OR increasing our regular trash pickup schedule.

In light of the waste reduction successes we began to demonstrate last year, and in keeping with the sustainability commitments characterizing the Alumni Hall renovation, President Teresa Amott challenged us to accomplish a waste-free move. With careful planning and active

Each office preparing for the move was provided with a waste-free moving guide, which listed all the materials they could set aside for recovery and recycling, and who to call for each class of material. In all, we conservatively estimate that the reuse and recycling efforts diverted three tons (6,000 lbs) of material from the landfill, not including the several tons of furnishings that were reused elsewhere on campus.

After the move to Alumni Hall, the waste-free moving guide was modified so that it will pertain to all future moves and office cleanouts, and can now be found [on the Knox website](#).

2. CONSUMPTION

Responsible consumption

This year, the Office of Sustainability began a series of discussions across campus offices about the external effects of our purchasing choices. We finalized the publication of our "[Sustainability and Special Events](#)" document which, in addition to addressing zero-waste planning, addresses decorations and promotional giveaways. A number of offices jumped on board with this initiative, and demonstrated impressive commitments to responsible purchasing. The Office of Community Service carefully selected a 100% recycled, reusable product for their annual "explore and engage" promotional giveaway. The Office of Student Life and Union Board club incorporated the principles of sustainable purchasing into Flunk Day 2015, replacing traditional "shwag" with a green-screen photo opportunity.



Reduced consumption



The use of durable decorations will eliminate our consumption of non-renewable helium gas.

In response to our responsible consumption initiative, the Office of Advancement eliminated helium balloons from their tradition, and invested in a beautiful set of purple and gold feather-flags, which have continued to appear at special events across campus since their debut at Homecoming 2014. As each department adopts the use of durable decorations like these, in place of balloons, Knox College will soon eliminate our consumption of non-renewable helium gas

In preparation for the move to Alumni Hall, Facilities' casual labor and sustainability staff stockpiled used boxes. As offices began packing, they were directed to staging zones where these used boxes were available. Through the month of December, over 1500 mid-sized boxes were diverted temporarily from the cardboard compactor. They were labeled with small, brightly colored tags for aid of sorting and transport, then collected, re-labeled and reused several times over.

Assuming a fraction of the used boxes would have been purchased specially for the move, Knox saved over \$3,000 and reduced its external environmental footprint by 2,300 lbs of CO₂e emissions, 17,700 gallons of water, and 2,250 lbs of raw tree fiber.

3. BUILT ENVIRONMENT



The new furnishings and carpet in Founders Lab and Alumni Hall are low-VOC, made from recycled or rapidly renewable resources, and designed for recycling at the end of their life. Some are even carbon-neutral!

certified as well, indicating that they contained very low levels of VOCs, in the interest of the long-term health of the users and makers of the furnishings. The carpet and furnishings are also designed for recovery at the end of their usable life.

Students entered Seymour Union in the fall to a freshly refurbished Founders computer lab and learning commons. As the College's first highly tangible demonstration of commitment to responsible product life cycles and indoor health, the lab was furnished entirely in carbon-neutral certified furnishings, produced from recycled and rapidly renewable materials. These furnishings, as well as the new carpeting throughout Seymour Union, were GreenSeal

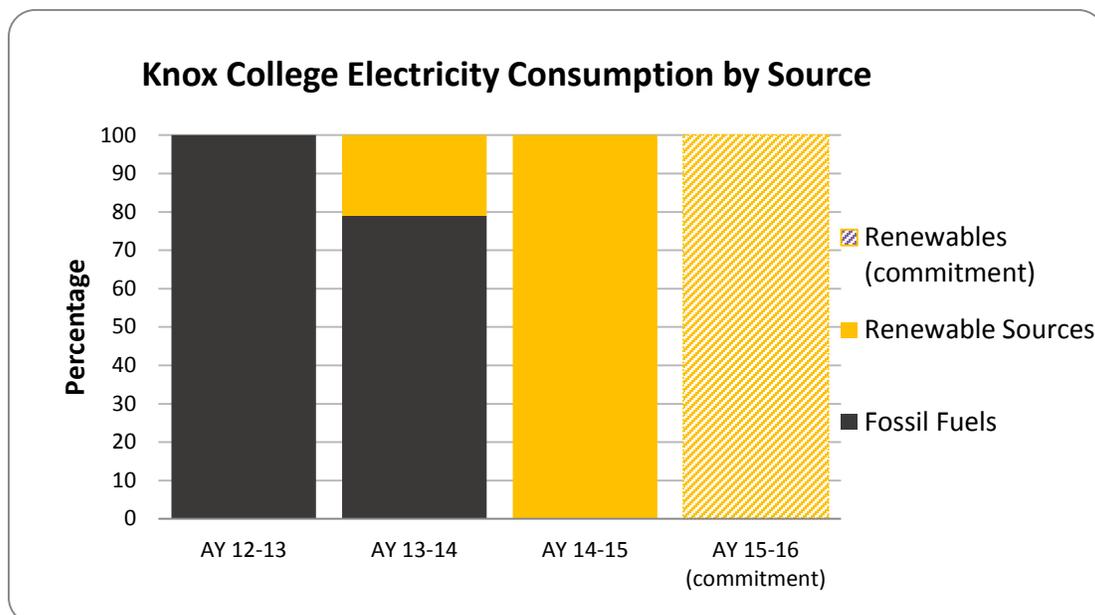
The autumn saw the most significant advance in sustainability in the Built Environment at Knox; the opening of the newly renovated Alumni Hall. The entire construction and furnishing process of this formerly derelict historical building was conducted according to the highest ecological and social standards practical to Knox. The building is seeking the highest possible LEED certification, and features glass interior walls to maximize natural daylight indoors; extra-thick walls for insulative value; high-efficiency LED lighting systems, zoned HVAC, and GreenSeal certified furnishings, among other features.

The unprecedentedly cold Galesburg winter inspired us to further improvements in our built environment. Seymour union saw the installation of vestibule doors on its west entrance, dramatically reducing heat loss from the building, and associated natural gas consumption.

4. ENERGY

Electricity

In May 2015, Knox renewed our institutional commitment to renewable electricity by again purchasing Green-E certified Renewable Energy Certificates. While efficiency measures continue to be implemented, and installation of onsite power generation has not been written off, we still have a long way to go in reducing the greenhouse gas footprint of our College operations. Therefore, as a show of our commitment to moving closer to a carbon-neutral campus each year, the Offices of Facilities and Sustainability collaborated on the purchase of RECs covering 125% of the school's electricity consumption.



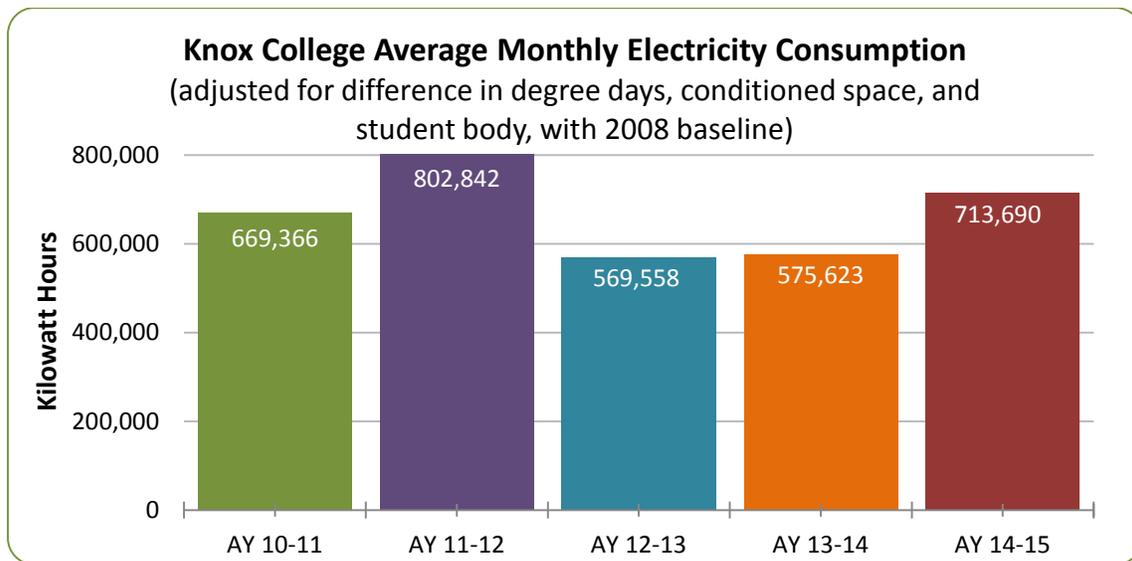
Since May of 2014, Knox has committed to purchase 100% renewable energy.

With this purchase, 100% of the coming year's electricity consumption will be attributed to renewable power sources, and the additional 25% of the purchase will push the national renewable electricity industry to further development. For this commitment, Knox was again recognized by the EPA as a "Green Power Partner."



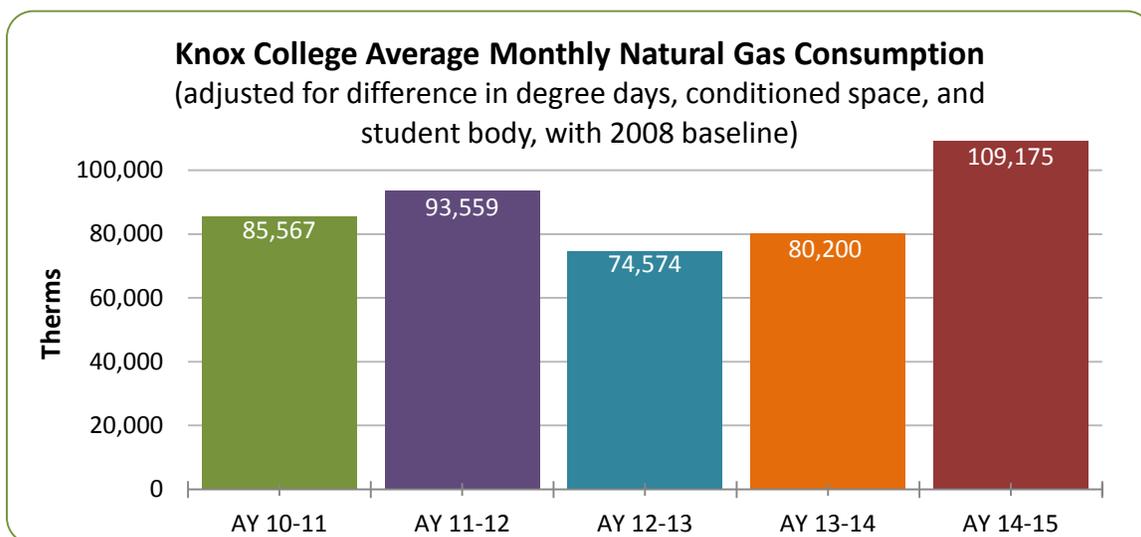
As seen by the graph below, overall electricity consumption at Knox increased this year compared to recent years. A few factors may have played into this number, including the construction on Alumni Hall and the national trend towards increased home energy consumption from personal electronic devices. While the Facilities department is regularly replacing lighting structures with

high-efficiency units, and improving electrical infrastructure wherever possible, it will clearly be necessary in the coming year to implement community awareness campaigns regarding responsible electricity consumption. User behavior will be a paramount factor in curbing electricity consumption in the coming years.



Natural Gas

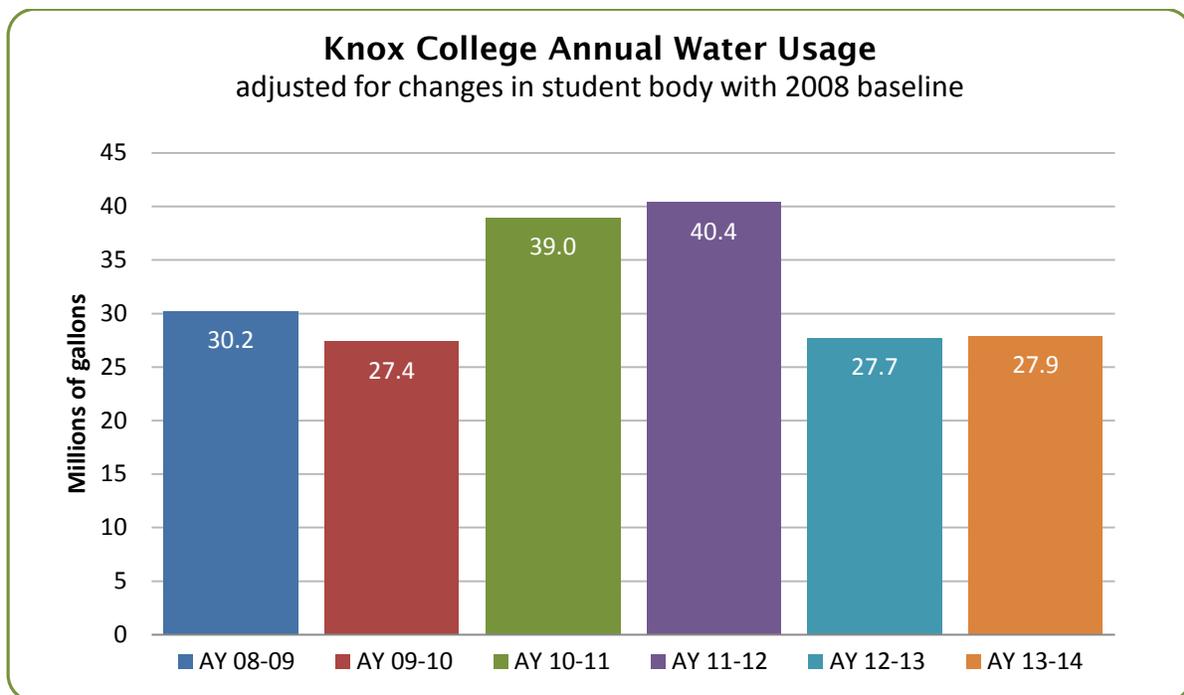
While the winter of 2014-15 was among the coldest in the last decade, our natural gas consumption figures for the 2014-2015 school year are sobering. In the coming year, it will be valuable to look into the factors contributing to this energy consumption, and further investigate potential opportunities for transitioning away from this fossil fuel dependency.



During the spring and summer, an anthropology class and a student independent study sought further information on the practical considerations of installing a food-waste-based anaerobic digester on campus to supplement our natural gas-fed boilers. Further investigation is underway. This project was complemented by the initial stages of crafting a campus climate action plan, which we hope to see finalized in the coming year.

5. WATER

This year's water consumption remained on par with last year's, despite the construction and opening of a new building, irrigation on the Knox Farm, and a relatively dry summer. As always, the Facilities and Grounds department have continued to invest in water-saving infrastructure, and implement responsible outdoor water use practices. We plan to continue this commitment to responsible water use practices, as well as investing in user behavior campaigns to further reduce our campus fresh water consumption.



6. FOOD

On-campus production

In December of 2014, The Association for Advancement of Sustainability in Higher Education (AASHE) published their Annual Review of Campus Sustainability Ratings, Innovations, and Best Practices. In this publication, Knox earned special recognition for our unique summer produce preservation program. Through the weekly efforts of campus kitchen staff, Knox preserved the entirety of our plentiful summer tomato harvest into marinara sauce – creatively combating the perpetual campus farm challenge of asymmetry between peak production season and student demand.



The 2014-15 school year represented the first complete growing season on the Knox Farm. By the end of the year, the farm had produced 2,200 pounds of artificial chemical-free food for student consumption. Volunteer labor increased as awareness of the farm grew, and the establishment of regular weekly volunteer days helped bring structure to the labor on the farm. Director of Dining Services Helmut Mayer creatively incorporated all of the Knox Farm's produce into dishes served in the campus cafeteria, and Knox's award-winning summer food preservation program continued after departure of the student body. As a final gift to the campus before his retirement, Chef Mayer preserved the final cabbage harvest into sauerkraut, for returning students to enjoy in a few months' time.



Over the course of our first full year with a functioning farm, Knox produced 2200 pounds of fresh vegetables.

Education

Just as the school year began, we completed construction on the second high tunnel on the Knox Farm. This tunnel, funded by a grant from the Galesburg Regional Economic Development Agency, is designed to function as an educational tool for the community. During fall and spring terms, students in Urban Agriculture class planted a variety of crops and experimented with different growing methods. Aided by the season extension capabilities of this structure, their production opportunities were richer than in previous years. The tunnel also served to educate community members. 4-H clubs, college for kids, and other youth groups were able to learn from tours and volunteer opportunities at the High Tunnel.

7. NATURAL ENVIRONMENT

Trees on Campus

Throughout the summer leading up to the start of school, the Knox College Grounds Department was busy planting trees. Following the removal of 21 ash trees that had succumbed to the emerald ash borer, 41 new trees, spanning a variety of species were added to campus. Among the arboreal additions we saw fruit trees near residence halls, flowering trees in campus commons, and long-living native hardwoods and ornamental cultivars in wooded and perimeter areas. Later in the year, a “living wall” of arborvitae was planted behind the baseball outfield, in place of the traditional backdrop.

New trees planted on campus this year:

- Apples, Plums, Cherries
- Dawn Redwoods
- Blackgums
- Kentucky Coffee Tree
- Balk Cypress
- Ginkgos
- Tricolor beech
- Maple varieties
- Magnolia varieties

Green Oaks

While this year was not a “Green Oaks Term” year, Knox’s biological field station remained active as a learning environment and place for environmental restoration. Students received training in prairie fire management, and the Knox Community was again invited to observe an annual prairie burn – a key element in preserving the unique Illinois prairie ecosystem on the Green Oaks land. Students worked at Green Oaks throughout the summer as land stewards, combating invasive species and studying the characteristics of the local flora and fauna.

8. LOCAL and GLOBAL ENGAGEMENT

The Knox Bike Share grew by over 30 bikes this year, due in part to a generous donation of 15 cycles from City of Galesburg prior to their annual police auction. The mechanics also brought their skills outside the bike shop, to offer free bike repairs to visitors of many Knox public events.

UHaul Car Share at Knox

- 691 reservations
- 2,766 miles
- 5,782 hours

In our second year of hosting a U-Haul Car Share vehicle, we saw dramatically increased use by the community. The vehicle was borrowed 691 times over the course of the year.

The Free Store, now re-named the Share Shop, increased its profile on campus and dramatically increased its availability to the Knox Community. The Office of Sustainability hosted the first “Staff open house” in December, inviting all Knox employees to avail themselves of the resources in the Share Shop, and to escape from the purchasing burdens of the holiday season.



Over 500 lbs of cafeteria food were donated to local family crisis centers by the newly formed Knox chapter of the Food Recovery Network

In the final weeks of school, Knox students established a campus chapter of the Food Recovery Network. Building relationships with local family crisis centers, they began transporting leftover hot food from the Knox Cafeteria to our local partners four times per week. By the end of the academic year, Knox had shared over 600 lbs of cafeteria food with local community aid organizations. Operating through the final meal of the year – graduation luncheon - they left a structure in place to resume the program at the start of the following school year.

As the day to celebrate their academic achievement drew near, over 90% of graduating seniors signed the Graduation Pledge of Social and Environmental Responsibility. This commitment, which was signified by a green ribbon on their commencement regalia, states: “I pledge to explore and take into account the social and

environmental consequences of any job I consider and will try to improve these aspects of any organizations for which I work.”



267 graduating seniors signed the Graduation Pledge of Social and Environmental Responsibility, signified by a green ribbon on their commencement regalia.

Closing notes

In February 2015, Knox College earned a Silver STARS rating from the Association for Advancement of Sustainability in Higher education. The STARS credentials were also used by the Sierra Club to establish their 2015 “Cool Schools” ranking. Only 153 schools earned the Cool Schools recognition, and Knox ranked 112th out of these schools.

As we prepare for the year to come, we are grateful to have in place a more permanent structure for planning and implementing sustainability practices as institutional priorities. The President’s Task force on Sustainability, formed in 2008, made the transition to a formal Council this year. With official Staff Liaisons from Athletics, Communications, Custodial, Dining, Facilities, Information Services, and Student Development, Student Liaisons from Student Senate, the Resident Assistants, and Eco-House, and two Faculty Liaisons, the team is well positioned to address cross-campus issues and to make sound choices for a more socially equitable and ecologically sustainable future, as outlined by Knox’s new strategic plan.



Knox College Timeline of Sustainability Achievements

July 2014

- * Bike share program grew by 30+ bikes, from donations and unclaimed long-term storage
- * Finished our second high tunnel on the Knox Farm, the "Education Tunnel"

August 2014

- * Carpeted Seymour Union and furnished Founders lab with GreenSeal certified products
- * Rearranged outside waste receptacles into recycling/landfill pairs - "waste stations"
- * Planted 41 new trees to replace 21 ash trees that succumbed to the emerald ash borer
- * New format for move-in cardboard recovery program

September 2014

- * Release of the Sustainable Event Planning document
- * Restructuring of the Sustainability Task Force to the President's Council on Sustainability
- * Invited to partner with Sitka Salmon to host waste-free Salmon Bake
- * Initiated battery swap program in Founders Lab
- * Earned a feature (and cover photo!) in AASHE's STARS annual review

October 2014

- * Waste-free events during homecoming
- * Pizza box composting pilot program
- * First complete load of Knox compost applied to Knox Farm
- * Illinois Governor's Campus Sustainability Compact, Recognition at the Gold Level
- * 4th Annual Prairie Fire Bioneers Conference

November 2014

- * Office supply share started
- * GLACUHO Campus Commitment to Sustainability Award

December 2014

- * Waste-free move to Alumni Hall
- * Introduced white paper diversion on campus
- * First Share Shop staff open-house

January 2015

- * Received one of five Radish Magazine Annual Awards for Excellence in Sustainability
- * Installed vestibule doors in Seymour Union

February 2015

- * Earned AASHE STARS rating of Silver
- * Finalized charge of the President's Council on Sustainability

March 2015

- * New recycling stations at all athletic fields

April 2015

- * EquiKnox speaker Beverly Wright
- * Installed 3 new water bottle fillers on campus

May 2015

- * Approved 3 compost tumblers for student quads
- * Created Food recovery network chapter, Delivered over 500 lbs of food by end of year

June 2015

- * 267 Student signatories of the Graduation Pledge for Social and Environmental Responsibility
- * Second solid waste-free commencement event (1500 lunches, 4.6 lbs landfill waste)
- * Expanded white paper recycling to more buildings



Knox College Office of Sustainability

knox.edu/sustainability

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