Knox College Campus Sustainability Report
July 2013 – June 2014
This 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 definition, and the process by which it was formed, epitomize the Knox College environment - collaborative, creative, and conscientious.

The 2013-2014 academic year was one of rapid and measurable strides towards a more sustainable Knox. The buildings and grounds have a new feel, dramatic reductions in solid waste are apparent, and conversations around sustainability issues can be heard in all corners of the campus.

Looking back over the accomplishments of the year should fill us all with pride for Knox; the creative employees, enthusiastic students, forward-thinking management and nimble culture of this campus are all key factors in the progress we saw this year. And while it would be easy to rest on our laurels after such a momentous year, Knox shows no signs of flagging in the forward movement towards a culture of conscious, practical sustainability. The coming year holds plans for normalizing waste-free culture, drafting a campus climate action plan, and integrating innovative sustainability practices into new campus construction projects. We are eager for the future of Knox and the world.

With gratitude for an inspiring year,

~Froggi VanRiper
Director of Campus Sustainability Initiatives

"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."
Opening Notes

The 2013-14 academic year was a year of many “firsts” for Knox College in the sustainability realm. In early fall, with the departure of Sustainability Coordinator Shawn Tubb, the President’s Sustainability Task Force reevaluated this position, deciding that sustainability initiatives on campus were important enough to warrant a directorial position. The momentum of these initiatives was enthusiastically maintained by interim director Paul Skrade, and in February, Knox hired its first Sustainability Director, Froggi VanRiper.

This year, Knox earned its first STARS (Sustainability Tracking, Assessment, and Rating System) rating from the Association for Advancement of Sustainability in Higher Education (AASHE). This year heralded the first campus-grown produce in dining services, the first recycling program for obsolete books, and the first waste-free special event; and this is the first year that Knox has summarized the progress of the year in a Sustainability Report.

This report will evaluate Knox College’s progress in sustainability initiatives during the 2013-14 academic year. It will also take the first careful look at campus historical trends in waste diversion, energy & water consumption, and food production dating back at least four years. The results should give us reasons to celebrate, as well as a clear idea of where we should focus our efforts on improvement.
1. WASTE

Recycling

Recycling on campus expanded into new arenas this year. During spring term, the library purged nearly 30,000 pounds of bound volumes and books from its collection. All of these were collected and transported for de-binding and recycling. Collection of bound volume recycling then became a permanent feature of campus waste management. Additionally, we forged relationships with a textile recycler and a new electronics recycler.

By the end of the year, the college was successfully diverting corrugated cardboard from the waste stream at a rate of nearly 100%. Compacting the cardboard, instead of mixing it with the commingled recycling stream, reduced the frequency of recycling hauls, and increased the value of our recyclables, both saving money and yielding a small income.

Compost

Spring term opened up with a new major step in recovering the maximum amount of organic waste from Seymour Union’s dining venues: holistic waste stations in the Gizmo Snack Bar. For the first few weeks, student and community volunteers sat beside these educationally-labeled bins in the Gizmo, helping patrons to understand the recycling and composting system on campus. With the construction of two composting bays on the Knox Farm plot, the organic waste recovery system at Knox was complete, allowing the college to compost 220 pounds per day of pre- and post-consumer food scraps, as well as the majority of the single-use paperware from the Gizmo. This amounted to 95% of the organic waste from all three of Seymour’s sit-down dining venues.

![](Knox%20College%20Waste%20Diversion%20through%20Recycling%20and%20Compost.png)

The past few years have been characterized by improvement and increasing innovation in the diversion of recoverable waste.
Reuse

The Office of Sustainability, in concert with a motivated group of students, launched the There is No “Away” campaign during campus residence hall move-out week. With the help of student sustainability funds, well-labeled sets of collection bins were placed in each campus residence, for collection of reusable clothing and household items, food, cleaning solutions & personal care products, and even worn textiles and broken electronics for recycling.

Throughout the move-out weeks, a number of student employees and volunteers moved through the residences, collecting these items, then sorting and transporting them to local charities and the campus Free Store. The result was the diversion of 11 tons of materials from the landfill stream, a 75% reduction in landfill waste from 2009.

Solid Waste

Commencement 2014 was an inspiring day, as always. But this year, we had an additional reason to cheer. A multi-departmental collaborative planning effort aimed to make the entire commencement day ceremony and picnic a landfill-free event. Decorations were entirely reusable and compostable. Dining Services provided compostable dishware and washable utensils. The Office of Sustainability debuted new pedagogically-labeled waste stations, attended by waste station ambassadors. When everyone headed home after 1,200 lunches were served and dozens of bags of recycling and compostable materials had been collected, the sum total of landfill-bound waste measured only 6.5 pounds.

Knox’s landfill-bound solid waste is collected along with that of our neighbors, so weight data on this stream is unfortunately not available. All we can do is forge rough estimates. However, the notable upward trend in our diversion of recyclable and compostable materials is one indication of progress, and we plan to continue this momentum.
2. CONSUMPTION

In addition to the resource-use reductions affected by our waste-free commencement initiative, the campus saw several new approaches to resource use reduction during the 2013-2014 academic year. The Office of Student Life and the Office of Admissions transitioned some of their most paper-intensive activities to online forms. Now, all college admissions applications, as well as all student housing applications are processed in paperless form. More offices are following suit, and will soon demonstrate further paperless transitions.

3. ENERGY

Electricity

The school’s electricity contract terminated in May 2014, and as requested by the President’s Task Force on Sustainability, we researched sustainable power contract alternatives.

The result was the purchase of Green-E certified Renewable Energy Certificates to ensure that 100% of the coming year’s electricity consumption will be attributed to renewable power sources. For this commitment, Knox also earned recognition from the EPA as a “Green Power Partner.”
A look at the annual electricity and natural gas figures for the past four years indicates a slight trend towards improved efficiency. However, the relative stability of these graphs strongly indicates the need for further energy-efficiency campaigns; something we will pursue in the coming year.
Transportation

In September 2013, Knox purchased an electric car (a Nissan Leaf) for use by the KnoxCorps program. An electric vehicle charging station was installed, with an additional charging port for use by campus visitors.

In addition to KnoxCorp’s Leaf, the Knox Facilities department employs two electric Gators, and fuels its diesel-powered tractors, mowers, and other equipment with biodiesel, to the extent that weather and warranties permit.

4. WATER

After a campaign in 2008 to retrofit many buildings with water saving technologies, Knox has maintained a policy of equipping all buildings with low-usage toilets, low-flow shower heads, sink aerators, and high-efficiency instantaneous hot water heaters, and replacing expired appliances and equipment with water-saving alternatives to the greatest extent possible.

Water usage on campus appears to have remained relatively steady since the initial overhaul of water-saving fixtures. Academic years ‘11 and ‘12 reflect water losses that resulted from leaking condensate return lines. This data indicates that there is still potential to improve our water efficiency through educational campaigns. We have plans to address this in the coming year.
5. FOOD

On-campus production

As the snow melted in April 2014, student and community volunteers pulled together to finish the construction of the school’s first “high tunnel,” a growing structure on the Knox farm. A student manager was hired, who coordinated the planting of the first tomatoes, radishes, and spinach for school consumption. During the last few weeks of the term, the first produce from the Knox Farm began showing up in the cafeteria. Knox-grown radishes and spinach appeared on the salad bar several times before students left for the summer. By June, the Knox farm had just begun to produce tomatoes, which were transported to the kitchen and processed into marinara sauce, to be preserved for the fall. At the close of the month, 150 pounds of produce had already come from the Knox Farm.

Sustainable purchasing

In addition to growing our own food for the first time, Knox continued to make strides in sustainable food purchasing and advocacy. Purchases of local, Fair Trade, Marine Stewardship Council Certified, Certified Organic and other externally certified products increased by 5.7%. Once per term, dining services celebrated a Meatless Monday, on which all board-plan cafeteria outlets refrained from serving meat. A number of “local burger Fridays” were also hosted, in which all burger meat was sourced from local farms. On these special-menu days, Knox Advocates for Recycling and Environmental Sustainability (KARES) members distributed literature to educate the campus community about the environmental implications of conventional modern agricultural methods.
6. NATURAL ENVIRONMENT

Trees on Campus

As the trees began to leaf out in the spring, it became obvious that winter’s severe weather, following an infestation of invasive emerald ash borer insects, had devastated the ash trees on campus. Thirty-three of the 34 campus ash trees had succumbed so severely that they required removal. However, the end of this chapter heralded the beginning of a new campus approach to tree management. Knox formed a Tree Advisory Group (TAG), comprising members from Facilities, Art, Biology, Sustainability, and the student body, who met before the summer to draft a campus tree plan. The earliest form of this plan involved dividing the campus into zones appropriate for different types and arrangements of trees.

As planting and maintenance continue over the coming years, Knox will be characterized by small “forested” zones with representatives of native Illinois species; a wide variety of fruit trees accessible from residential buildings; ornamental plantings; and thoughtfully placed shade trees that will create more comfortable buildings, sports fields, and outdoor social areas.

Throughout the summer, several trees were planted, comprising a variety of native, fruiting, and ornamental species. In addition, President Amott committed to preserving the life of the healthiest ash tree on campus – this lovely tree by the Southeast entrance to Seymour Union will require annual treatments to stave off the effects of the Ash Borer.

Green Oaks

Green Oaks, Knox's 700-acre biological field station, comprises old growth forest, aquatic habitats, a restored Illinois tallgrass prairie ecosystem, and revegetated swaths of reclaimed strip mines. Reclamation efforts by Knox faculty, staff, and students date back to 1965. Today, the preserved forests at Green Oaks sequester approximately 1,100 Metric Tons of CO₂ equivalent per year.

Carbon sequestration at Green Oaks

- 1,100 Metric tons of CO₂ equivalent emissions per year

The ash trees Knox lost will be replaced by native species, fruit-bearing trees, shade trees, and more.
This spring, Green Oaks was home to twelve students and three faculty members. The “Green Oaks Term,” an immersive academic experience offered every other year, allowed students to study the ecology of the site in depth, while experiencing life in an intentional community. The Knox Community was also invited to learn about prairie ecosystems and celebrate the history of regeneration at Green Oaks, as faculty, staff and students conducted the annual controlled prairie burn.

7. LOCAL and GLOBAL ENGAGEMENT

At the start of the 2013-14 academic year, Knox added a Car Share program to the expanding list of community enrichment programs already available. The U-Haul Car Share vehicle, a Prius with a designated parking space by Seymour Library, can be rented by the hour by any licensed driver in the community. In its first five months of functionality, the vehicle was used by community members 252 times. The bike share program continued with a fleet of nearly 60 bicycles available for long-term loan and four short-term loan bikes. The Free Store continued to operate, with increased support from the Office of Sustainability.

To strengthen our relationship with sustainable businesses and organizations around Illinois, Knox became a founding member of the Illinois Green Business Association’s Green Business Ally Program in spring of 2014.

Commencement, as always, was an inspiring day on campus, with an exciting new addition to the program: over 90% of graduating seniors voluntarily signed the Graduation Pledge of Social and Environmental Responsibility, pledging to consider the social and environmental implications of any job they accept, and to endeavor to improve these aspects of any place they work. The Board of Trustees and many faculty members opted to wear a green ribbon among their commencement regalia, as a show of support for this pledge.
Closing notes

In May 2014, Knox College earned its first STARS rating from the Association for Advancement of Sustainability in Higher Education. Knox joined this voluntary Sustainability Tracking, Assessment, and Rating program in 2011, diligently reporting on campus operations, curriculum, and research. The self-evaluation led to many opportunities to strengthen existing practices and improve others. For the 2012-2013 reporting year, Knox achieved a high Bronze STARS rating. Key campus accomplishments in earning this rating included robust academic offerings and research in the sustainability field; excellent waste diversion and composting practices; active student engagement in campus sustainability initiatives; and a tangible commitment to student and faculty diversity. The STARS credentials were also used by the Sierra Club to establish their 2014 “Cool Schools” ranking. Only 173 schools earned the Cool Schools recognition, and Knox ranked 140th out of these schools.
### Knox College Timeline of Sustainability Achievements

**September 2013**
* First Move-In cardboard recycling program on campus
* Created and introduced recycling information signs for each residential living area.
* Installed an electric car charging station on campus

**October 2013**
* Redefined the job of Campus Sustainability Coordinator to Director of Campus Sustainability Initiatives; began search for a new Director of Sustainability
* Prairie Fire Bioneers Conference

**November 2013**
* Campus Life moved all break housing applications and new student applications from paper to electronic form. Admissions moved to a paperless application process, using SLATE technology.

**December 2013**
* Introduced UHaul Car Share (a per use car rental program)

**February 2014**
* Hired Director of Sustainability Initiatives Froggi VanRiper
* Began experimenting with new ways of recovering organic waste

**March 2014**
* Pedagogical waste stations, including composting, introduced in the Gizmo Snack Bar

**April 2014**
* Finished building compost bays and finalized campus composting system, resulting in the diversion of 220 lbs/day of organic waste from Seymour’s three sit-down dining venues
* Finalized construction on the first Knox Farm high tunnel; planted first seeds for Dining Services
* EquiKnox speaker Kelsey Timmerman: “Where am I Wearing?”

**May 2014**
* Earned first STARS rating: Bronze for the 2012-2013 academic year
* Joined the Illinois Green Business Association as a founding member of the Green Business Ally program
* Recycled approximately 30,000 lbs of bound volumes and books from the library purge
* Purchased contract for one year of 100% Green-E certified renewable electricity; received recognition from the EPA as a Green Power Partner
* Formed Tree Advisory Group, to advise tree planting and maintenance on campus
* President committed to treating and preserving the only remaining healthy ash tree on campus (Knox lost over 20 trees to the invasive Emerald Ash Borer)
* First radishes and spinach from the Knox Farm served in Dining Services
* New college definition of sustainability crafted, based on a campus-wide survey of students, staff, & faculty

**June 2014**
* Campus move-out waste reduction: 11 tons of materials diverted from the landfill: 2 tons recyclables, 9 tons reusable clothing & household goods, 300 lbs food, 500 lbs personal care and cleaning products
* >90% of graduating seniors signed the Grad Pledge of Social and Environmental Sustainability
* Solid-Waste-Free Commencement: From ceremony and 1200 lunches, 6.5 lbs of landfill waste
* First tomatoes produced on the Knox Farm; marinara sauce preservation began; Finished out the academic year with 150 lbs of produce from the Knox Farm, and much more on the vine
* Paired every outdoor trash can on campus with a can for recyclables