



Sustainability

BARNARD COLLEGE

Barnard College Sustainability & Climate Action End of Year Report: 2019-20

The close of the 2019-20 academic year marks the third year of operations for the Office of Sustainability and Climate Action at Barnard - a year of substantial growth and development, in the context of a challenging year for our community. Following two years of collective brainstorming and strategizing, Barnard College released a comprehensive Climate Action Vision in December 2019, outlining a 360 degree approach that prioritizes the role of women, people of color, and low income communities in defining new paradigms of climate leadership. The Vision is divided into three main areas of focus: Academics, Finance & Governance, and Campus Culture & Operations. The document includes progress to date and next steps, and will serve as a guide for our work moving forward.

During the 2019-20 academic year Barnard Sustainability strengthened partnerships with stakeholders across campus, including collaborations with the Athena Center, Beyond Barnard, the Digital Humanities Center, the Center for Engaged Pedagogy, and student groups. We saw increased engagement and activation on climate issues across campus, from student activism to faculty interest in developing new course materials to operational initiatives.

The difficult circumstances of the coronavirus pandemic and subsequent shutdown altered our spring activities, and will certainly shape our programming moving forward, but the demands for an equitable and resilient climate response are only made more evident as we face the increasing fragility of our global systems, and witness the twin impacts of the pandemic and climate change on the most vulnerable populations.



Academics

One central goal of the Climate Action Vision is to support interdisciplinary teaching on climate-related topics. To support this goal, we worked with Institutional Research to send out improved course and research surveys to faculty. In 2018, we had administered a survey which indicated that 5% of courses across the curriculum were “sustainability-focused” or

“sustainability-inclusive.” This year, with the support of Institutional Research, we were able to reach a wider segment of the faculty, and doubled that figure to 10% of courses. We are now able to offer students a comprehensive listing each semester of climate-related courses.

In spring of 2020, we collaborated with the Center for Engaged Pedagogy and faculty from the Education Department on a workshop series designed to support faculty in “infusing” sustainability and climate into new or existing courses. These workshops were attended by 13 faculty members across 10 academic departments, including Biology, History, English, and Environmental Science. In order to support student engagement with this kind of coursework across the curriculum, the Sustainable Practices Committee collaborated with CCIIS and several additional faculty partners on a proposal for an interdisciplinary minor in Environmental Humanities, which will be submitted to COI in the fall. This pedagogical training and growth strengthens Barnard’s leadership in interdisciplinary approaches to climate change, in the Columbia community and beyond.

Finance & Governance

In July 2019, Leslie Raucher transitioned into the role of Associate Director of Campus Sustainability and Climate Action, expanding her commitment to Barnard Sustainability from part-time to full-time. This new position has helped meet growing demands for programming across campus. Along with this new administrative position, this year we expanded our group of dedicated work-study students. Our office continues to research and apply for external funding opportunities, including grant proposals to support the development of a ‘Circular Campus,’ a unique initiative designed to reduce waste, support sustainable consumption, and student access to affordable class supplies.

We completed the Sustainability Tracking, Assessment, and Rating System (STARS), and achieved a Silver rating. All of the COFHE schools have registered with STARS, and 25.7% have achieved silver, while 54.25% have achieved silver or above. Reporting through STARS required collaboration with multiple administrative departments, in order to determine accurate data. Barnard can now proudly report our results alongside our peers.

STARS Credits by Percentage of Points Achieved

<20%	20-40%	40-60%	60-80%	>80%
<ul style="list-style-type: none"> ● Investment & Finance 	<ul style="list-style-type: none"> ● Buildings ● Grounds ● Waste ● Purchasing ● Coordination & Planning 	<ul style="list-style-type: none"> ● Curriculum ● Campus Engagement ● Public Engagement ● Diversity & Affordability ● Energy ● Water ● Transportation 	<ul style="list-style-type: none"> ● Research ● Air & Climate ● Food & Dining 	<ul style="list-style-type: none"> ● Wellbeing & Work ● Innovation & Leadership

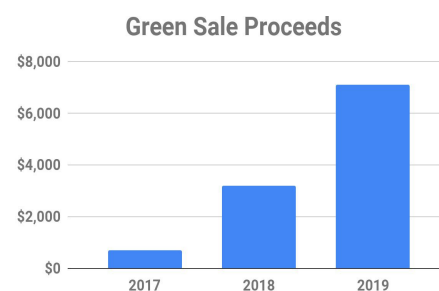
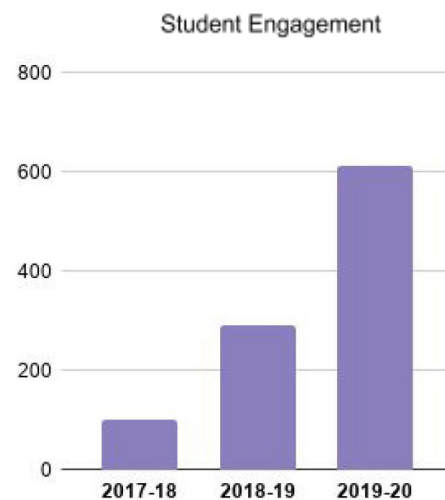
Campus Culture & Operations

This year, we strengthened partnerships across the campus. Our Sustainability Office outreach and training program, conducted in partnership with SGA Sustainability representatives, continued to work with offices across campus to improve waste sorting practices and help departments form mission-specific sustainability goals. In the fall semester we held outreach sessions with the Athena Center, Department of Urban Studies, The Digital Humanities Center, and the Office of the President. We expanded the Green Sale, more than doubling our revenue, increased our presence at NSOP to reach over 200 incoming freshmen, hosted the Second Annual Community Outing, and led a Careers in Climate Action discussion with Beyond Barnard with 8 guest speakers and over 60 student attendees. Our GradBag/Let's Get Ready programming in the fall provided free dorm supplies to low-income students throughout the NYC area, as well as bedding for 60 Barnard Students.

This year was also the first year we awarded [Student Climate Action Grants](#). We received ten applications and funded six, using the proceeds of our Green Sale. The following projects were funded (due to a shortened spring semester, only the projects in bold were completed).

- Emma Palmer '20, Grace Palmer '20 - Performance at Black Rock Forest
- Maggie Pahl '20, Isabel Ocampo '22, Linda Chen '23 (SGA) - Campus CSA Potluck
- **Natasha Reich '21, (Barnard Garden Club) - Planters on Milstein Garden Terrace**
- Isabel Kovacs '20, Molly Shapiro '20, Wanja Waweru CC'20 - Sprout Up Transportation
- Rachel Gates '20 and Anabella Barocas '23 - Zero Waste Talk by Jennie Romer
- **Rachel Gates '20 - Zero Waste Party Packs**

We had a full slate of programming lined up for the second half of the spring semester, including an Athena Center challenge, a design competition with the Design Center, our annual Rebear boutique, a [Circular Cities](#) event, and Give and Go Green. In light of Covid-19 and the shift to online learning, we have re-focused our attention to creating online opportunities for our students, launching the Barnard Sustainability Instagram account, while developing a pathway to carbon neutrality for the College. Our ongoing pilot with the Digital Humanities Center investigated a carbon pricing program and, working with members of Finance, BCIT, the DHC, and students, we evaluated top priorities to be rolled into the Workday transition. While we are unable to gather on campus, we are using our digital presence to distribute online resources, share news from the Barnard community, and provide a space for support during this difficult time.



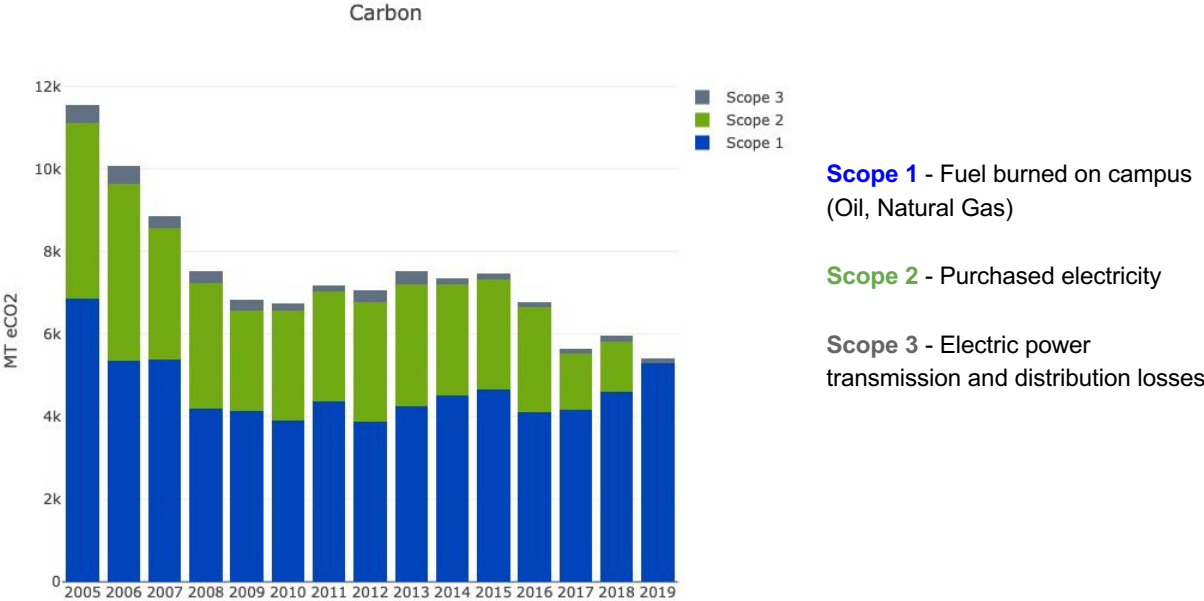
Buildings and Grounds

Emissions

In 2019, we saw the lowest net emissions from our buildings since 2005. While our electricity figures are better due to purchased renewable energy credits (RECS), our heating and cooling emissions are on the rise. RECS are not a carbon offset and do not avoid or reduce total GHG emissions. Rather, RECS represent the generation of renewable energy added to the grid. Using SIMAP, the Sustainability Indicator Management & Analysis Platform, we calculated that 5,409.45 metric tons of carbon dioxide equivalent were released in 2019. Through the purchase of RECS, which Barnard began to purchase in 2017, our net Scope 2 emissions were eliminated. In 2019, Barnard purchased 8,900 Megawatt hours of Green-e Certified Wind RECS. This is double the amount purchased in 2018.

In the near future, we will need to find ways to address the underlying baseline emissions. This is particularly true as we begin to prepare for the implementation of NYC’s Local Law 97 (LL97) - The Climate Mobilization Act. Starting in 2024, each building type will be assigned a limit or allowance of emissions per square foot. Each ton of emissions attributed to the building above the limit will be fined. Without a cutting-edge approach to decarbonization, New York City buildings, including several on the Barnard campus, will risk heavy fines.

Barnard has continued to participate in the Mayor’s Carbon Challenge where we have committed to a 50% carbon intensity reduction by 2025. Carbon intensity measures emissions per square foot. 2019 showed a carbon intensity reduction of 36.71% and an energy use reduction of 20.63% from our base year of 2005.



Carbon Footprint by Scope, 2005 - 2019.
 *2018 includes fertilizer applications to the grounds in scope 1 calculations
 *2018 and 2019 include refrigerants in scope 1 calculations

Campus Emission Reductions

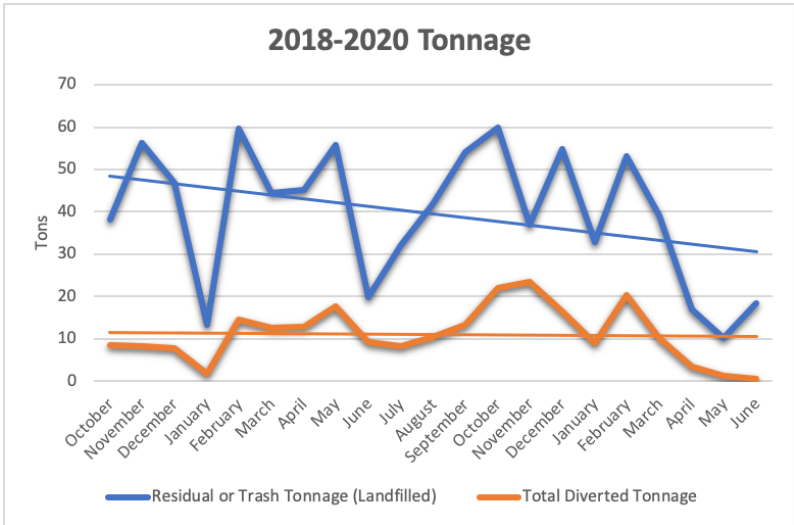
Through a New York State Energy Research and Development Authority (NYSERDA) cost share program, Barnard Facilities has been able to employ David Dafeldecker of EME Group as an On-Site Energy Manager (OsEM). This year, the OsEM completed five projects that resulted in an annual electricity savings of 225,126 KWh and a fossil fuel savings of 1,495 MMBtu. The projects included an installation of exterior door weather-stripping across campus, piping insulation repair and upgrades to the exterior lighting controls in the Quad, as well as damper replacements and installation of condenser water pump VFDs in Altschul Hall. Another five projects have been identified which would realize an additional annual electricity savings of 139.708 KWh and fossil fuel savings of 386 MMBtu.

Waste

The College contracts with Action Carting to remove waste from campus. Prior to October 2018, waste was removed in regular garbage trucks 6 days a week. No data was made available as the trucks also picked up waste from other locations. With the opening of the Milstein Center, a compactor room was made operational. Action Carting picks these compactors up once a week for sorting in their Bronx facility and returns them, with monthly tonnage data available to Barnard upon request.

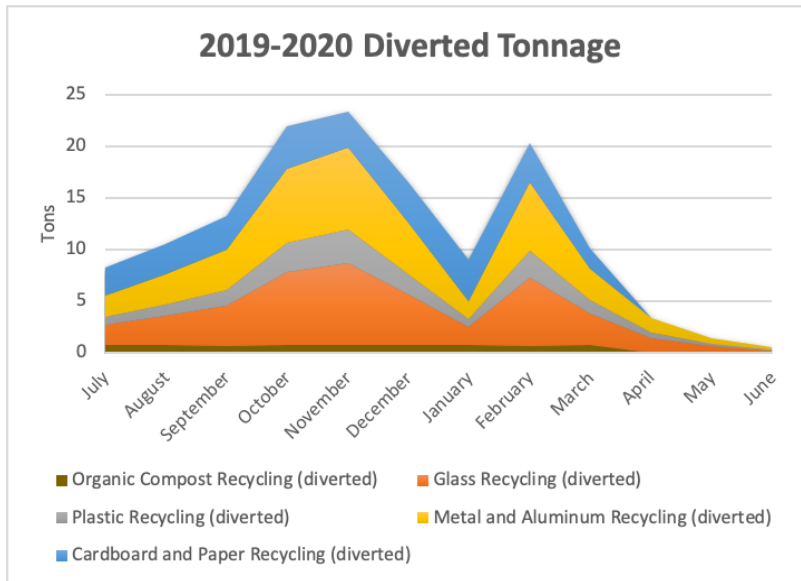
In 2019, Barnard generated 450.46 tons of trash and diverted 138.38 tons from landfill through our recycling and organics collection programs. Our annual diversion rate is 23.50%. Prior to the campus shutdown, our average diversion rate was 24.75%. Starting in April, when the campus was fully shut down, this rate plummeted to 10.24%.

In September 2020 Action Carting’s contract will be up for review and renewal by Campus Services. Barnard Sustainability recommends looking into new vendors, including DSNY and RTS, for cost savings and more consistent and accurate reporting.



2018 - 2020 Waste and Recycling (Diverted) Tonnage by Weight

*This data does not include hazardous waste, electronic waste, Cathedral Gardens waste, and donated goods.



2019 - 2020 Waste and Recycling (Diverted) Tonnage by Type of Waste

*This data does not include hazardous waste, electronic waste, Cathedral Gardens waste, and donated goods.

Grounds

This spring, Futter field, which accounts for over 50% of Barnard’s managed grounds, was transitioned to organic lawn care. Keith Gabora, our new Head Groundskeeper, also implemented a number of changes. He switched our lawn maintenance tools from gas to electric batteries which has reduced noise pollution experienced by many, especially in Milbank Hall, and allows for the possibility of making our lawn care 100% renewable with a future purchase of solar panels to charge the batteries. Keith also introduced two initiatives to connect the community to the grounds. The first was the adopt-a-plant program where offices could host and care for an elephant ear plant during the winter months before it was replanted outside in warmer weather. The second unfortunately never came to fruition due to COVID-19. Keith planned a campus-wide planting day where community members would plant perennials on campus and watch them flourish. The plants sprouted in the basement of Altschul for this event were all planted by the grounds team.



Keith Gabora, Head Groundskeeper, transplanting an Elephant Ear plant.

A Landscape Master Plan committee was established but has not been reconvened since the closing of the campus.

Two new community gardens were also established this year, one on the rooftop of Cathedral Gardens for the faculty residence and the other on the terrace of Milstein for the Garden Club.

Moving Forward

This spring, we distributed a Request for Qualifications for qualified firms to provide consulting services for the development of a detailed plan to reduce emissions across all three Scopes and develop a timeline for carbon neutrality. Over the summer and into the fall, we plan to begin work with the selected firm to define our emissions reduction pathway and begin implementation.

In Fall 2020 we are launching a one of a kind initiative to think about our consumption holistically, including how goods are sourced, used, and disposed of on our campus. This “Circular Campus” model is divided into three major areas of focus: reuse and access, waste stream diversion, and food and dining. A Circular Campus, which would be the first of its kind, will not only reduce emissions and create lasting behavior change in our community, but can also become a model for other institutions.

As the first stage of the Circular Campus, we are piloting a program with Rheaply, a platform to facilitate and track the exchange of materials across campus. To address our waste diversion rates, which currently sit at 20%, we propose in 2020-21 to conduct an assessment of our waste processes, from bins and signs to waste hauling contracts to dining hall practices.

Additional initiatives for 2020-21 include a program designed to address emissions from air travel, and the reconvening of the working group on Grounds, which met only once in 2020 due to the shutdown.

Covid-19 presents enormous challenges for the College, but we believe there are opportunities within the crisis to continue to work with campus colleagues to cut costs while reducing emissions, and build a healthier, more equitable, and more sustainable campus.

