

2022 Sustainability Plan

Status Update

September 2022

OVERVIEW

Colgate's *2022 Sustainability Plan* is Colgate's third formal sustainability and climate action strategic plan. The Sustainability Council and the Office of Sustainability commenced work on the *2022 Sustainability Plan* in 2019, and the Plan went into effect on January 1, 2022.

The *2022 Sustainability Plan* complements and bolsters Colgate's *Third-Century Plan* by attracting and supporting outstanding students and faculty, strengthening the university's academic enterprise, enriching the student experience, and improving the campus & the environment. Specific sustainability initiatives that relate to *Third-Century Plan* goals are identified throughout this status update.

This status update provides an overview of Colgate's progress toward achieving the goals and actions highlighted in the *2022 Sustainability Plan*.

SUSTAINABILITY PLAN STRATEGIC AREAS AND PROGRESS

- 1. CAMPUS CULTURE.** These programs and strategies promote behavior change and encourage decision-making with principles of sustainability in mind. By providing educational resources, generating excitement, and raising awareness around issues of sustainability in our living, learning, and working environment, we can promote a culture of sustainability on campus.

This core strategy directly supports the following fundamentals prioritized in Colgate's Third-Century Plan:

- Attracting and supporting truly outstanding students, faculty, and staff
- Strengthening Colgate's academic enterprise
- Enriching the student experience
- Improving the campus & the environment

Student Engagement

Progress:

Student Sustainability Council (SSC). The SSC is a voluntary student group, led by interns from the Office of Sustainability, that brings students together from across campus in an effort to raise awareness and promote sustainable behavior. The SSC promotes collaboration between Greek Life Organizations, Athletics, and the Student Government Association with the goals of incorporating additional environmental organizations, cultural clubs, and identity-based groups (i.e., LGBTQ+). Last year, SSC initiated a pilot composting program in collaboration with the Greek Life Organizations. Chefs and students in GLO housing collected food waste and brought them in composting bins placed in their yards. The Colgate Community Garden team collected the food scraps and brought them to the garden for composting. The compost is used in the garden to help augment the soil for the

continued production of fruits and vegetables. Over 900 lbs were collected and composted last year in the pilot program. This year we are looking to expand this program. Additionally, the SSC has played a pivotal role in the establishment of the new Athletics Student Sustainability group focused on increasing sustainable practices among athletic teams.

Orientation. Office of Sustainability interns made significant progress this year integrating sustainability into the first-year and transfer arrival program and student orientation. Interns created a sustainable packing list that was distributed digitally to all incoming students before their arrival. The intention was to raise awareness of sustainability at Colgate while reducing waste and consumerism on campus. Interns also participated in Orientation's *Colgate Connections* program by hosting a sustainability informational session and trivia. Interns also collaborated with commons directors and organized an event during the first night of orientation in which students could make reusable tote bags out of leftover t-shirts from the Commons. Interns also created and distributed a *Get Involved* pamphlet letting students know how they can participate and the programs they can benefit from that are offered by the Office of Sustainability.

Graduation Pledge. Students in the Office of Sustainability helped to create Colgate's Graduation Pledge and implemented it on a pilot basis for the Class of '22. Forty-four graduating students signed the pledge and received a green graduation cord. We expect this number to increase significantly in the coming years. Progress can be followed on our [Graduation Pledge website](#).

13 Days of Green Annual Event. Colgate's Office of Sustainability hosted its first in-person 13 Days of Green since 2019 last spring. Ten in-person events were organized and run by student interns reaching nearly every student on campus. Most notably, hundreds of students gathered on the academic quad during the kickoff event to learn about ways they can get involved with sustainability across campus. Other events included a Climate Resilience Workshop for Colgate's employees, a Seed Bomb making event, an afternoon of service at the Colgate Community Garden, a vegetarian dinner and cooking class at the Outdoor Education house, a brown bag event on "*The Wonders of Compost*", a film screening of Erin Brockovich, Sustainability Trivia at Donovan's Pub, and a clothing swap. The 13 Days of Green concluded with the Oak Awards, where the Office of Sustainability honors individuals and groups on campus that go above and beyond to make an impact on Colgate's sustainability efforts. This past year Colgate had an excellent group of nominees that modeled sustainability across campus and beyond.

Campus Events and Forums. In an effort to elevate the Colgate community's engagement and understanding of campus sustainability, Office of Sustainability staff and interns hosted 58 events last year reaching 1,968 faculty, staff, and students. These included formal classroom presentations, fall festivals, walking tours, guided nature walks through Colgate's hiking trails, Physical Education courses for Colgate credit, Sustainability Passport programs, and many others.

Student Engagement Next Steps / Ongoing Initiatives:

The amount of single-use plastics coming out of dining services and used during Orientation continues to be a major concern and a bad reflection on Colgate. We hope to further work with Chartwells and the Associate Dean for First and Second-Year Experience to find solutions and implement programs to reduce the amount of plastic pollution at Colgate and the disconcerting optics they create.

We also need to further integrate waste minimization and recycling programs into the residential commons.

Specific goals include:

- Eliminating single-use plastics at all orientation events in 2023.
- Educating all new students on waste minimization and recycling by working within the residential commons.
- Further incorporate sustainability into Link-staff training.
- Providing orientation materials through electronic means.

Employee Engagement

Progress:

Sustainability Passport Program. Established in 2015, the Sustainability Passport Program strives to advance a culture of sustainability at Colgate by offering and supporting dozens of engaging educational programs for employees. Participants earn points for each program they participate in and receive recognition for various levels of achievement. To date, 290 faculty and staff have participated in the Sustainability Passport Program. This past year, the Office of Sustainability released a new on-demand component to the program.

Colgate's [On-demand Passport Program](#) is a one-hour-long online course composed of short videos from LinkedIn Learning selected by the Office of Sustainability. The videos provide a general overview of sustainability concepts and practices and provide practical suggestions for how to incorporate sustainability at home and at work.

Oak Certified Events. The Colgate [Oak Event Certification](#) program is an initiative created by the Office of Sustainability to promote environment-friendly, socially responsible, and sustainable events on campus. Every year hundreds of events are hosted on Colgate's campus. The goal is to reduce or eliminate waste and source food and materials from socially and environmentally responsible suppliers. This program provides comprehensive consultation and resources aimed to assist event planners with actions that help reduce our ecological and carbon footprints.

Rideshare Program. Higher gasoline prices coupled with reduced parking on campus have increased the desire to carpool with colleagues. In response, the Office of Sustainability created an easy-to-use, Colgate-specific, [rideshare spreadsheet](#) for employees to share their information with other Colgate employees.

Employee Engagement Next Steps / Ongoing Initiatives:

- Expand the Sustainability Passport Program to include Green Office practices that encourage energy and resource efficiency and conservation in the workplace.
- Further integrate sustainability education into employee orientation, governance, and professional development opportunities.

Alumni Engagement

Progress:

Sustainability Walking Tour. This past year, the Office of Sustainability created a new walking tour of campus that highlights Colgate's sustainability features including green buildings, Bicentennial tree plantings, landscaping practices, commitment to carbon neutrality, heating plant, and Community Garden. Over 100 alumni joined the walking tour or classroom lecture during the 2022 Reunions. Additionally, local high school students and Colgate employees through the Wellness Program have all enjoyed the new walking tour as well.

Alumni Engagement Next Steps / Ongoing Initiatives:

- Strengthen connections with alumni by organizing an annual sustainability event with one or more of the Professional Networks or with the Alumni Council.

2. **CURRICULUM & LEARNING.** Colgate's curriculum and co-curriculum include many offerings that relate to sustainability including academic courses, co-curricular programming, internships, and diverse aspects of student life. In Academic Year 2019-20, 12.4 percent of Colgate's courses were either sustainability-focused or sustainability inclusive. The goal is to continue to expand the concept and pedagogy of sustainability and climate change into Colgate's formal curriculum and co-curricular experiences.

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Progress:

Sustainability in the Curriculum

Faculty Teaching Table. The Curriculum Subcommittee of the Sustainability Council serves as a bridge between faculty and students, as such the group works with both populations in different settings. To support faculty teaching sustainability within their curriculums, we host a yearly dinner for 1st and 2nd-year faculty at the beginning of the fall semester. In August 2022, the Curriculum Subcommittee hosted nine new members of the faculty at this dinner. We had representatives from History, Computer Science, Biology, Romance Languages, and Art and Art History at this dinner and had a rich discussion with a lot of detail as to how to incorporate sustainability within their classes.

ENST 390: Community-based Environmental Issues. This project-based, interdisciplinary course examines current environmental issues in the context of community-based learning. Topics for investigation are selected by faculty, usually in conjunction with the campus sustainability coordinator, the Upstate Institute, or directly with local and regional agencies or organizations. Students get practical experience working in interdisciplinary teams to examine environmental issues with the goal of developing relevant recommendations. Over the past year, 16 different semester-long research projects have been completed by student teams in

ENST 390. Projects range from water monitoring on campus and at Lake Moraine, to climate change adaptation on campus and in the Village of Hamilton, to planting an indigenous Three Sisters Garden at Colgate's Community Garden, among others.

Climate Conversations and Sustainability 101. Every student at Colgate is required to complete two Physical Education (PHED) credits by the end of their second year. The Office of Sustainability offers two ways to help students meet this requirement. Every semester, interns at the office run two sections of "*Climate Conversations*", a 5-week long, discussion-based course that aims to engage students with topics related to sustainability at and beyond Colgate. Completing this course fulfills one of your two required credits. Additionally, students can complete an on-demand course entitled "*Sustainability 101*", which fulfills one hour for the Wellness Passport (10 hours are required to obtain a credit from the Wellness Passports).

Classroom Support. Office of Sustainability staff provided lectures, research support, and mentorship for numerous Colgate courses including ENST 390, History of Toxics, FSEM, CORE, and others.

Article Published in the Journal of Environmental Studies and Sciences. Pattison, A., Henke, C.R. & Pumilio, J. Community-based climate action planning as an act of advocacy: a case study of liberal arts education in a rural community. *J Environ Stud Sci* 11, 183–193 (2021). <https://doi.org/10.1007/s13412-020-00655-0>

Co-Curriculum Programming

Panel Discussions. Furthermore, the Curriculum Subcommittee also works with each of the four commons to develop and host a series of discussion panels that incorporate sustainability topics. During the fall semester (2022), the Curriculum Subcommittee will host two of these panels. Each panel addresses a "big question," and the subcommittee works to recruit faculty across each division to address these big questions widely, and from varying points of view. We are currently scheduled to host in the Brown Commons a panel discussion titled "*How Does the New Climate Bill Matter?*" including panelists Andy Pattison (ENST), Gongfang Hu (Chemistry), and Danielle Lupton (Political Science). And, in the Hancock Commons, we will address "*How much meat should humans eat?*" featuring panelists Chris Henke (ENST), Ben Lennertz (Philosophy), and Rebecca Metzler (Physics).

Sustainability Interns. Each year, Colgate's Office of Sustainability hires a dozen or more paid interns. These interns receive first-hand professional experience developing and implementing sustainability projects and programming. The interns develop and hone professional skills, learn to work in teams, sharpen their communications skills, and learn to manage projects and time.

Sustainability Representatives (S-Reps). The S-Reps program is a unique sustainability program in higher education. First-year students are mentored by interns in the Office of Sustainability to implement sustainable practices and raise awareness in the Residential Commons. Additionally, first-year S-Reps work with existing interns and staff in Career Services to enhance and develop their professional skills. Students are trained in best practices and techniques on how they can serve as sustainability ambassadors around campus and beyond. The S-Reps also play a critical role in developing and implementing campus-wide sustainability efforts to reduce energy and water use while increasing recycling and reducing overall waste.

Summer Research. The Department of Geography, Facilities, and the Office of Sustainability worked with two summer research students in 2022 to digitize and analyze all of Colgate's landholdings using available tax maps. The goal of the project was to better inventory Colgate properties, both proximate and non-contiguous. Students were asked to conduct site visits and to calculate the number of forested acres, miles of roads/sidewalks/trails, acres of building footprints, acreage of parking lots, amount of mowed lawn, and other land use/land cover characteristics. The results of this work, are featured here. Such information will help guide: 1) resource allocation for Facilities, 2) long-term planning and design decisions, and 3) the integration of sustainability principles in ongoing management and construction projects. The results of this research can be found here:

<https://sites.google.com/colgate.edu/colgate-tree-and-forest/landholdings>.

Curriculum & Learning Next Steps / Ongoing Initiatives:

- Continue working towards the inclusion of sustainability in the new CORE.
- Increase faculty awareness of teaching sustainability and provide more opportunities for engagement.
- Enhance co-curricular education/experiential learning that foregrounds sustainability.

3. **CAMPUS OPERATIONS.** How the university manages energy, construction projects and renovations, landfill waste and recycling, water, transportation fuels, purchasing and contracts, and fleet management are a few key operational areas that have profound impacts on campus sustainability. The Operations Subcommittee of the Sustainability Council works to collect and track data and implement on-campus projects and practices that increase efficiencies, eliminate waste, and reduce Colgate's overall carbon footprint.

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Progress:

Energy Efficiency Projects

Lineberry Pool Steam Line. Colgate's Natatorium has the highest energy use per square-foot when compared to any other space on campus. This year, the steam line in the pool mechanical room was insulated to avoid energy leakage. This project will result in significant energy and carbon savings.

Lighting Upgrades. This past year, lighting controls and fixtures were upgraded in parts of Huntington Gym, the Townhouses, and Parker Apartments.

Olin Hall HVAC Renovation Project. Replacement of current mechanical systems and enhanced building envelope to increase energy efficiency and reduce leakage. This project is underway and will be completed before fall 2023.

Water Conservation

Campus water consumption has been reduced from 75.5 million gallons in 2011 (the year Colgate's first sustainability and climate action plan was implemented) down to 57.1 million gallons in Fiscal Year 2021. This represents a 25 percent overall reduction in water consumption despite adding five new buildings and nearly 200,000 square-feet. Over the past few years, Colgate has installed low-flow water fixtures, repaired water lines, and eliminated sources of water waste (e.g., crayfish tank in Olin Hall). We have also expanded our water metering and have a better handle on when and where water is being wasted.

Waste Management

Standardized Recycling Signage. In partnership with Communications and Colgate's Graphic Designer, the Office of Sustainability completed campus-wide standardized signage and prompts for recycling and waste stations. These posters and prompts will be distributed this fall and will help to add consistency to Colgate's recycling program.

Customized Recycling Stations. Twelve new Colgate recycling stations have been ordered and will be installed in Persson Hall, 100 Hamilton Street, and Gate House. This will further add consistency to Colgate's recycling program and reduce contamination.

Carry-in; Carry-out Classrooms. Removing trash and recycling bins from inside the classrooms saves the university money in trash and recycling bins, plastic bags, and labor. Most importantly, the single blue recycling bin in many classrooms does not align with Colgate's two-stream recycling program where we have to separate bottles and cans from paper waste. This confuses students and other community members and results in contaminated recycling bins that end up going to the landfill (even if there are recyclables in the bins). Now that COVID-19 is mostly behind us and we are resuming normal operations, the carry-in carry-out program has been reintroduced in Alumni, Lawrence, Lathrop, and McGregory Halls.

Zero-Waste Plan. This plan took over a year to pull together utilizing student research from Frank Frey's spring ENST 390 (2020) course with assistance from the Office of Sustainability, student leaders in Students for Environmental Action, members of the Sustainability Council, and an extensive literature review to explore best practices from peers across the country. The [Zero-Waste Plan](#) is an important step to draw down landfill waste and improve recycling practices on campus.

Transportation

University Vehicles. Facilities reduced their existing fleet this year by two vehicles. Facilities also ordered two all-electric vans to replace two gas-powered vans. Campus Safety has purchased two new hybrid patrol vehicles and is exploring electric bikes for campus patrols.

Electric Vehicle Charging Stations. In 2021, Colgate doubled the number of electric vehicle charging stations by installing a new dual-arm station in the Persson Hall parking lot. Since the first installation of an Electric Vehicle charging station in 2014, Colgate has avoided 15.125 kg of greenhouse gas emissions. Faculty and staff who own an electric vehicle can benefit by charging on campus. This incentive may help to encourage others to make the switch to electric

vehicles helping to reduce noise and air pollution while lowering our campus carbon footprint. Currently, another dual-arm charging station is being installed in the new Human Resources lot.

Green Bikes. This past year, the Office of Sustainability purchased five additional bicycles to add to our fleet of rental bicycles. We also secured some additional funds from campus partners to continue purchasing new bicycles. As we expand the program, we can serve more Colgate students in need of sustainable and carbon-free transportation on campus. More information can be found on our website:

<https://sites.google.com/colgate.edu/colgate-green-bikes/home>.

New Colgate Rideshare Program. Higher gasoline prices coupled with reduced parking on campus have increased the desire to carpool with colleagues. In response, the Office of Sustainability created an easy-to-use, Colgate-specific, [rideshare spreadsheet](#) for employees to share their commuting behaviors with other Colgate employees in the hopes of establishing new carpools.

Campus Operations Next Steps / Ongoing Initiatives:

- *Lighting Upgrades.* Lighting upgrades are planned for parts of Lawrence Hall, University Courts, and Wynn Hall for 2023.
- *Energy Master Plan Update.* Revise and improve the existing energy master plan by July 1, 2025.
- *Water Conservation Action Plan.* Now that Colgate has improved water monitoring, Facilities is developing a specific building-by-building plan to conserve water.
- *Carry-in Carry-out Expansion.* Expand the carry-in carry-out recycling program to Wynn Hall, Persson Hall, Ho Science Center, Hascall Hall, The Center for Women's Studies, and Olin Hall.
- *Green Labs.* The Curriculum Subcommittee is exploring options to incorporate new "green labs" initiative to reduce disposable plastic lab equipment within the new Olin renovation.
- *Seven Oaks Golf Cart Fleet.* Colgate currently operates over 60 gasoline golf carts at Seven Oaks. The entire fleet is scheduled for swap out to electric golf carts in 2023. A storage facility is being designed in preparation for construction.
- *Colgate Cruiser and Bus Service.* Reduce greenhouse gas emissions from the Cruiser, on-demand service, and charter service by 15 percent from FY 2020 levels by July 1, 2025.
- Participate and Advise in Colgate's Campus Parking Master Plan Study and Recommendations.

4. **PURCHASING.** The goods and services that Colgate purchases have lifecycle environmental and social impacts far beyond campus. Colgate University budget managers and buyers are entrusted with the fiduciary responsibility to be good stewards of university funds while also supporting Colgate's longstanding commitment to environmental sustainability and carbon neutrality.

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Progress:

Environmentally Preferable Purchasing. In March 2021, the Office of Sustainability in partnership with the Purchasing Office completed and distributed guidance for Environmentally Preferable Purchasing at Colgate. This guidance helps to ensure that the goods and services that Colgate buyers purchase balance cost and quality while exerting a positive influence on our environment and human health and well-being. The guidance can be reviewed [here](#).

Paper Consumption. Fiscal Year 2021 was the lowest volume of paper consumed at Colgate since we've been tracking data. Last year, 28,408 lbs of paper were purchased by departments and through the Print Shop compared to 72,457 lbs in 2020 and 130,064 in 2009 (our baseline year). Online reading and assignments, double-sided printing, and increased awareness of the environmental costs of printing are likely playing a role in the steady reduction of paper use at Colgate over the years.

Purchasing EPEAT Registered Electronic Equipment. For the second year in a row, Colgate received an award from the [Global Electronics Council](#). In Fiscal Year 2021, over 91 percent of all desktop computers, monitors, tablets, and printers purchased were EPEAT Gold certified.

Green Cleaning Program. The main goals and objectives of the Green Cleaning Program are to reduce exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants which can adversely impact air quality, health, building finish, building systems, and the environment. To advance Colgate's efforts in this area, Facilities is in the process of switching over to a new chemical dispensing system that will save on containers & delivery of supplies to buildings. Facilities is also assessing areas for entranceway matting and installing additional mats where needed. Finally, last year, Colgate purchased and applied the following green cleaning products:

- 3M Stone Floor Finish
- Bona Supercourt Athletic Floor Care
- Crew 44 Scale Remover
- Glance Glass Cleaner - RTD
- Neutralizer Packets - Floor Cleaning
- Stride RTD Floor Cleaner
- Stride Smart Dose Floor Cleaner

Purchasing Next Steps / Ongoing Initiatives:

- Continue to share and refine Colgate's Environmentally Preferable Purchasing guidelines.
- Complete and communicate Colgate's vendor code of conduct.
- All printer and copier paper purchased on campus will contain post-consumer recycled content or be from sustainably managed forests.

- 5. FOOD & DINING.** Colgate University community recognizes the significant environmental, health, labor, animal welfare, and climate change implications of food production and consumption. As a result, our university is committed to sourcing our food in a sustainable manner.

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Progress:

Food and Beverage Procurement. Chartwells provided Colgate's Office of Sustainability with a detailed product-by-product food spend for Fiscal Year 2021. Office of Sustainability staff were able to go through this data and separate out the total food spend for both plant-based foods (43 percent) and also for sustainably/ethically sourced foods (5 percent). Combined, approximately 48 percent of Colgate's food spend comes from plant-based or sustainably sourced foods.

Colgate Community Garden. After several successful years with the Colgate Community Garden located behind Good Nature Brewery, the Garden has a new, and permanent, home. The Colgate Community Garden now sits just south of Colgate's Townhouses on Rte 12B and had its first full growing season at the new spot in 2022. Some new projects at the garden include a free little library and a seed library, composting, and a pollinator garden. Old favorites such as the apiary, fruit trees, community plots, and production crops can still be enjoyed.

Three Sisters Garden Project. One of the most exciting projects of 2022 is the new Three Sisters Garden planted at Colgate's Community Garden. The project was started by students in Professor Henke's section of ENST 390. The project acknowledges the Oneida land that the garden is on while welcoming the local Haudenosaunee seeds back to the land. Besides a teaching space, the Three Sisters Garden aims to build partnerships with local Haudenoseanee communities by sharing of Indigenous knowledge of food systems. The three sisters (corn, beans, and squash) are considered by the Haudenosaunee to be special gifts from the Great Spirit. A dedication to this garden and a Seed Sovereignty Lecture with Angela Ferguson, the current supervisor of the Onondaga Nation Farm, was held on May 4th, 2022 to incorporate Indigenous principles and wisdom into the community garden. The 2022 Fall Festival was held on September 30th with a formal ribbon-cutting ceremony for the garden. The event included a welcome from the Oneida Nation and indigenous dancers and attracted over 150 faculty, staff, students, and community members.

Community Garden Composting Project. Last year, the Office of Sustainability initiated the Colgate Community Garden Compost Project Pilot Program with six on-campus Greek Letter Organizations and the Outdoor Education House (70 Broad Street). Each organization that participated was provided with backyard compost tumblers that members of the community garden came and collected every two weeks. Altogether, over 900 pounds of food waste was collected and composted at the Community Garden. This program reduced the need to collect and transport this waste to the county landfill, saving money and time in labor for the Grounds staff. The compost is used in the garden to help grow new food.

Utensil Kit Program. In the Spring of 2022, the Office of Sustainability launched a reusable utensil kit program to reduce plastic waste from the Coop and Chobani Cafe, which currently only have the infrastructure to offer single-use plastic utensils. Beyond reducing waste, the program encourages

students to engage in sustainable behavior and think consciously about waste on campus. Over 100 utensil kits were distributed and feedback forms were administered before and after the semester so we can improve the program going forward.

Food & Dining Next Steps / Ongoing Initiatives:

- Increase the purchase of sustainable food and beverage by 15% from our 2021 baseline by 2025.
- Determine a food waste tracking system and implement programs to reduce food waste by 15% by 2025.
- Eliminate one-time-use disposable plastics (including biodegradable plastics) in Dining Services and all catered events by August 2025 to align with plastic-free and zero-waste goals.
- Complete a sustainability audit of dining-related water and energy consumption and work to reduce water and energy usage by 5% by 2025.
- Complete the Relocation of Colgate's Community Garden. The Office of Sustainability hopes to work with Facilities and others to renovate the house on the property to use for year around programming. The garden also needs a greenhouse and shade pavilion to complete our move.

6. ECOSYSTEMS AND LAND STEWARDSHIP. Colgate owns 2,167 acres of land of which over 550 acres include the campus proper, 1,250 acres are forested, and 199 acres are on agricultural land. The campus proper includes Colgate's buildings on upper, middle, and lower campus, Taylor Lake, the Seven Oaks Golf Course, and 3,492 inventoried trees. The Chenango Valley provides a scenic backdrop for Colgate's beautiful campus and historic stone buildings. According to the 2010, 2014, and 2015 editions of the Princeton Review, Colgate was ranked #1 for having the most beautiful campus in the country. Being excellent stewards of this land continues to be a high priority for the Colgate community and Colgate's Office of Sustainability.

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Campus Tree Inventory. Colgate completed a comprehensive tree inventory of its campus trees by December 2021. As part of this inventory, each tree was identified, measured, and will be evaluated and monitored over time. The inventory revealed some interesting data about our campus trees:

- Colgate has 3,492 campus trees
- 132 species were identified
- The cumulative asset value of Colgate's trees is \$15.1 million
- The most common trees on campus are sugar maple (9 percent), Norway spruce (7.7 percent), and northern red oak (7 percent)

- 62 percent of campus trees are native to North America of which 52 percent are native to New York
- Campus trees produce 58 tons of oxygen each year and sequester 22 tons of CO₂ in new growth
- Campus trees mitigate over 82,000 cubic feet of water runoff annually helping to reduce flooding during heavy rain events.
- Campus trees remove 1,215 lbs of pollution each year

Grounds Maintenance Benchmarking and Tracking Tool. Facilities in partnership with the Office of Sustainability have begun the process of collecting data for the amount of fertilizers, herbicides, pesticides, and de-icing chemicals used on campus. Benchmarking and tracking these practices is a helpful first step to maintenance that balances labor, cost, safety, aesthetics, and environmental impacts.

Land and Forest Stewardship Website. In order to help communicate the value of Colgate's forests and trees, the Office of Sustainability created and compiled a new website highlighting the benefits and attributes of Colgate's landholdings.

<https://sites.google.com/colgate.edu/colgate-tree-and-forest/home>.

Ecosystems & Land Stewardship Next Steps / Ongoing Initiatives:

- Complete forest carbon inventory by July 1, 2024.
- Establish a Soil Testing and Tracking Program.
- Pursue Tree Campus Higher Education Certification Through the Arbor Day Foundation.
- Explore Opportunities to Remove an Additional Five (5) Acres Out of a Weekly Mowing Regime by July 1, 2024.

7. **FINANCING.** Achieving carbon neutrality in 2019 was a major accomplishment and milestone. Maintaining Colgate's commitment to carbon neutrality, however, requires ongoing investment. Colgate must continue to find creative and innovative solutions to finance campus projects that will reduce energy and resource consumption while lowering operating costs over time.

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Green Revolving Loan Fund. Over this past fiscal year, Colgate committed to investing in two new projects financed by the Green Revolving Loan Fund. The conversion of natural gas from fuel oil in 100 Hamilton Street and 88 Hamilton Street. This brings the total number of projects financed by the Green Revolving Loan Fund to six. At the end of Fiscal Year 2022, the cumulative savings amounted to \$912,530 and the ending balance was \$1,040,130. The amount of greenhouse gas emissions avoided to date is 2,332 MTeCO₂.

Recycling Bins from the Keep America Beautiful Campaign. Colgate received a grant from the Keep America Beautiful campaign to provide over 100 new recycling bins worth nearly \$70K for campus events.

Second Nature Climate Acceleration Fund. Colgate applied for and received a small grant worth \$5,000 to support the work of Andrew Pettit '13. Andrew worked with faculty, staff, students, and Hamilton officials to help complete a municipal climate action and climate resilience plan.

State and Local Financing. Colgate has also benefited from several opportunistic sustainability grants, rebates, and incentives available at the federal, state and local levels. For example, Colgate received rebates from the New York Municipal Power Authority (NYMPA) for lighting upgrades in Sanford Field House and Huntington Gymnasium, a grant to purchase custom-made Landmark recycling stations from the New York State Association for Reuse, Reduction, and Recycling (NYSAR3), as well as a New York State Energy, Research, and Development Authority (NYSERDA) grant that covered half the cost for the installation of the solar thermal array at 100 Broad Street and the installation of the electric vehicle charging station in the Persson Hall parking area.

Financing Next Steps / Ongoing Initiatives:

- Continue utilizing the Green Revolving Loan Fund (GRLF) to finance campus sustainability projects.
- Explore federal, state and local funding opportunities especially with the passage of the Infrastructure law and the Inflation Reduction Act.

- 8. CLIMATE RESILIENCE AND ADAPTATION.** Our climate of the future will be intensifying summer droughts punctuated by heavy rain events, flooding, heat waves, severe storms, and significant shifts in natural seasonal cycles. Our changing climate will impact life in Central New York and on-campus operations potentially disrupting our academic mission in profound ways. Staying focused and being prepared for climate impacts will help Colgate avoid disruption and reduce costs over time.

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Progress:

Second Nature's Climate Resilience Commitment. President Casey signed the Climate Resilience Commitment on April 22, 2021. The Commitment provides a solid framework, resources, and a strong network of collaborative leaders to support Colgate's journey to climate resiliency.

Climate Vulnerability Assessment. In the spring of 2019, students in Professor Ian Helfant's ENST 390 course completed an initial vulnerability and climate resilience assessment for Colgate University. Over the past year, the Climate Resilience Committee of the Sustainability Council organized and facilitated five focus group discussions throughout the academic year 2021-22. Subcommittee members reached out to dozens of individuals from each division and numerous

programs/offices. Between 6-10 individuals participated in each focus group. Altogether, 37 individual faculty and staff leaders attended one of the sessions. A summary report was produced and this will help inform Colgate's work in the months and years ahead.

Hamilton Climate Preparedness Working Group. The Hamilton Climate Preparedness Working Group (HCPWG) was formed in 2016 and aims to research, plan, and promote policies and programs in response to existing and future impacts of climate change. Both the Town and Village of Hamilton achieved New York State Department of Environmental Conservation's (NYSDEC) Climate Smart Certification with the help and guidance of Colgate faculty and students. The Town of Hamilton also initiated a Heat Smart Hamilton Campaign in the spring of 2022 to encourage residents to explore renewable heat pump (air-sourced or ground-sourced) technologies.

Climate Resilience and Adaptation Next Steps / Ongoing Initiatives:

- Complete a comprehensive climate adaptation plan by April 22, 2024.

9. **CARBON OFFSETS.** While implementing on-campus projects that reduce Colgate's gross emissions remains Colgate's top priority, the university must also invest in carbon offsets to maintain the university's commitment to carbon neutrality.

This core strategy directly supports the following fundamentals prioritized in Colgate's Third-Century Plan:

- Attracting and supporting truly outstanding students, faculty, and staff
- Strengthening Colgate's academic enterprise
- Enriching the student experience

Progress:

Carbon Offset Committee. The Carbon Offsets Committee organized and facilitated several focus groups with Colgate community members over the course of last year. The focus groups intended to receive feedback on what community members value in carbon offset projects. Based on this feedback, the Offsets Committee evaluated over 100 projects from nearly 20 different suppliers and made recommendations to invest in carbon offsets to maintain carbon neutrality at Colgate. The results of this work and the specific projects we invested in can be found on our website:

<https://sites.google.com/colgate.edu/colgate-carbon-offsets/home>.

Offsets Next Steps / Ongoing Initiatives:

- Carbon offsets should be purchased on an annual basis after Colgate's GHG inventory is finalized for the previous fiscal year.

Additional Noteworthy Areas of Progress

- *AASHE STARS.* In the fall of 2022, Colgate's Office of Sustainability completed and submitted its AASHE STARS report to AASHE. Colgate should receive its new rating in the coming weeks.
- *Greenhouse Gas Inventory.* Completed Fiscal Year 2021 Greenhouse Gas Inventory. Campus emissions dropped to their lowest level since we've been collecting data.
- *Assistant Director of Sustainability.* In February of 2022, after five and half years, the Office of Sustainability said goodbye to Assistant Director of Sustainability and Environmental Studies

Program Coordinator, Pamela Gramlich. On August 1, 2022, Julia Sparks took over this role and hit the ground running. Julia has been doing a tremendous job and has been a valuable new addition to the Colgate community.