



# Concord Academy Sustainability Plan

SPRING 2019





**Main Gate**



# TOWARD A MORE JUST & SUSTAINABLE WORLD

Last spring, Concord Academy students and adults joined the youth-led Sunrise Movement in calling for action on the climate crisis. They stood on the quad and on the main school steps, holding hand-made signs. One of these signs read, "There is No Planet B." Another read, "What is your plan?"

We hope that this document might serve as Concord Academy's answer -- one piece of a much larger picture, but nonetheless an important step.

The curriculum and culture here at CA have long been steeped in these same values. Numerous courses have been taught on the subject, from Advanced Environmental Science to the Environmental Consortium, as well as student-led institutional studies undertaken, including projects in hydroponic greenhouses, electric cars, and traditional farming. The school, too, has implemented initiatives from building to LEED equivalents, to lighting efficiencies and holistic sustainability reviews. Through the efforts of many adults and students alike, we have been a school that is green not just in branding, but in ethos as well.

This document represents our efforts to set meaningful goals for leadership, for change, and for education. Our hope is that this plan will make this school better here and, in doing so, might educate kids to lead on this issue as we contribute to a more just and sustainable world.

Fay Lampert Shutzer '65

President, Board of Trustees

Rick Hardy

Head of School, Dresden Endowed Chair

# SUSTAINABILITY DECLARATION

As we look ahead to Concord Academy's centennial and to the decades beyond, we see great opportunities — opportunities for education, for leadership, and for reaffirming CA's core values. Perhaps nowhere is this opportunity greater, and the challenge more pressing, than in the area of environmental sustainability.

Today, the global consensus on climate change and environmental degradation is clear. There is no doubt that, in the decades to come, sustainability will be one of the defining challenges that Concord Academy and our global community face together. Already here in Concord, where the flood waters often lap at the back steps of the Chapel, we are witnessing the effects of a rapidly changing world.

The Concord Academy Sustainability Plan, developed in partnership with a wide range of academy stakeholders, commits CA to becoming a leading secondary school in sustainability through a coordinated set of academic and operational goals. We seek to build on historic progress by equipping our people with the skills, knowledge, and infrastructure they need. This plan considers CA's role within the context of its constituents, as a global education community, and within the rich intellectual environmental histories of Concord and New England. It was here, after all, that Thoreau and Emerson penned works that have inspired generations of environmentalists.

Through the conversations that comprised our process, one thing became clear: Our community believes that incorporating sustainability more fully into our culture is vitally important for our future. The community also believes that this work is core to our mission. Common Trust, the animating value of so much of our work here, calls upon us to look after each other with care. As science teacher Max Hall framed it this year in his chapel, citing the example of closing windows during the winter to save

heat and fuel, “Common Trust is about understanding your participation in a much bigger story. Common Trust is about realizing that your behavior, and your very existence, has consequences and connections to everybody and everything.” Common Trust is a call to comprehensive stewardship — a call we, as a community, stand poised to answer.

In this deeply connected and currently unsustainable world, this plan sets ambitious yet achievable phased goals — goals whose fulfillment we must commit ourselves to, individually and collectively. By investing in a set of ambitious carbon, built environment, and food systems goals, CA will cultivate both innovators and leaders in sustainability, and also significantly reduce our negative impact on the world.

The success of this plan will depend upon all of us to committing our unique skills, passions, and perspectives. We are confident in our ability to do this and excited by the possibilities this plan presents. Each member of our community has a role to play. We hope that you will share our excitement in realizing these goals over the coming years.

Sincerely,

**DON KINGMAN**

Director of Campus Planning and Construction

**BEN CARMICHAEL '01**

Director of Marketing and Communications





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# PLAN SUMMARY

With this sustainability plan, Concord Academy is committed to becoming a leading secondary school in sustainability through a coordinated set of integrated and operational goals. By investing in a set of ambitious carbon reduction, facilities and supply chain, and food systems goals, CA will cultivate both innovators and leaders in sustainability, and also significantly reduce our negative impact on the world.

This plan sets ambitious yet achievable phased goals. The goals articulated in this plan are split into two time frames: the first being four years goals, which we hope to have accomplished by our centennial; the second comprise another set of longer-term goals that we hope will be achieved by 2042, the schools 120th anniversary. Interim targets are set to help us realize incremental achievements between now and these two time frames.

We believe that our centennial presents a once-in a generation opportunity to deliver on sustainability initiatives. These values were set forth in the Concord @ 100 working group in anticipation of our Centennial, whose constituent members set forth sustainability as a core value we as a community would like to see achieved by our centennial. In fulfillment of those values, and in honoring that work, we have set forth goals to be realized by our 100th anniversary.

Also to emerge from these working groups was the consensus that the core values of sustainability — fundamentally, one of looking after one another, and our world, with care and respect — dovetail perfectly with our core values. There is a strong shared conviction that these values can and should be more deeply integrated into the fabric of CA's academic and social culture. This integration would aim to arm our students not only with a literacy on the issues relevant to sustainability, but also with greater skills that enable them to address the world with compassion and understanding. Surely, this is a worthy goal.

The goals are divided into three main working groups: greenhouse gas reduction (known simply as "GHG"), sustainable food, and materials and operations management. Within each of these working groups, consideration was given for both how to integrate these goals into the curriculum, and how to communicate about their progress.

## DEFINITION OF SUSTAINABILITY AT CONCORD ACADEMY:

Sustainability at Concord Academy is when the school's community, operations, and resources function in balance with the natural world. This balance requires CA to act in accordance with our responsibility to make the world a better place for all beings to thrive now and in the future, and to recognize the past and the current harm we have inflicted on earth. We cannot simply refrain from impeding on nature's survival; we must support our world, and teach others how to, in order for it to flourish.



## VISION STATEMENT FOR SUSTAINABILITY AT CONCORD ACADEMY

Concord Academy has long recognized its role to help shape our shared future. Given both the overwhelming body of evidence regarding environmental degradation and climate change, and our global community, CA commits to becoming a leading secondary school in sustainability through a coordinated set of academic and operational goals.

By investing in a set of ambitious carbon reduction, built environment, and food systems goals, CA will cultivate both innovators and leaders in sustainability, and also significantly reduce our negative impact on the world. Our sustainability work will advance our mission — a mission that calls upon us to look after one another with care, respect, and inclusivity. CA will model the institutional path to sustainability, while we call upon the members of our community to reach personal sustainability goals. Each member of our community has a role to play; fulfilling these goals will be our common purpose and our shared obligation.

Both the working groups and the goals were themselves defined by a broadly representative and large group from the CA community; the entire current community was asked to articulate goals at the start, goals that were then refined by a small group of about 50 students, faculty, staff, administrators, and alumnae/i, who, over almost 10 months, defined the working groups and articulated a set of goals within each working group.

We hope that these goals will help CA through its centennial and in the decades beyond. We hope that the creation of Concord Academy's Sustainability Plan will be much more than a strategic plan; it is an invitation for everyone in our community to step forward and participate in creating our shared future.

# CURRENT STATE: A REMARKABLE OPPORTUNITY

This plan builds on the years of consideration that CA has given to sustainability. From energy retrofits to prior sustainability plans, the spirit of environmentalism, both in fulfillment of fiscal responsibility and in service to a long-term vision of conservation, has been strong on campus and in the town of Concord which has a long intellectual history of environmentalism.

However, from student-led efforts to retrofits, CA sustainability efforts have been pursued on an ad-hoc basis. Energy consultant GreenerU's independent audit of Concord's sustainability work yielded a simple conclusion: that these efforts would benefit greatly from consistent coordination and institutional investment.

Prior work on this issue has perhaps most clearly come in the form of two reports and associated recommendations. The first came in 2007 from an Argosy Foundation grant. This lengthy report outlined numerous energy saving initiatives. (The full report can be found here in Appendix B.) The other report came in 2010 in a presentation given to the board by Assistant Head and Academic Dean John Drew and Director of Campus Planning and Construction Don Kingman. It is our assessment that these reports were fulfilled only in part.

It is our sincere hope that this report and its recommendations will not suffer the same fate as the prior two. As articulated by the Concord @ 100 working group, this goal is important; its values align with our community, and the time to act is now.

Beyond the above reports, much of the progress we have made on energy efficiency and waste is hidden behind walls and roofs, the progress on that front has been steady if quiet. Prior work has included, but not limited to the initiatives on the next page.

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“My definition is this: Common Trust is a local application of the understanding that you are connected to everything and everyone, and making the best of that interconnection... Common Trust is about realizing that your behavior, and your very existence, has consequences and connections to everybody and everything. Literally, actually.”

— **MAX HALL**, science teacher

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## INITIATIVES UNDERTAKEN IN THE LAST TEN YEARS



The use of organic fertilizer to maintain our grounds



The use of low VOC paint products



Energy retrofitting in certain buildings



Recycling and composting efforts from students and the school



Conversion from oil to gas heating plants



New building construction to low-water and energy demands, including stormwater capture and electric heat source pumps



The use of green cleaning products in certain applications



The installation of low flow water fixtures



A widespread replacement of incandescent bulbs with LEDs across campus

## CURRICULUM

Inside the classroom, a number of courses over the last 15 years have focused on environmentalism. These classes have included Advanced environmental science classes, science courses on water conflicts, English classes on Thoreau that ran in conjunction with science classes, collaborative environmental history classes on both the national and the local scale, interdepartmental green architecture senior projects, and a course on sustainability at CA, amongst others. In addition CA was part of the Concord Environmental Consortium with CCHS (Concord Carlisle High School), Middlesex and the Concord Land and Conservation Trust, in which CA partnered to increase awareness throughout Concord. This effort is now the Environmental Symposium which continues to invite the entire CA community and the public etc. to the speaker series.

These classes have been compelling, but planned on an ad-hoc basis. More historically, while we are certain environmentally-related classes were taught we don't have the full details.

## STUDENT EFFORTS

Recent years has seen a groundswell of student-led interest in these issues. Students have traveled to DC and NYC to participate in climate protests, and have led demonstrations here on campus. They have undertaken

senior projects to investigate the feasibility of hydroponics to supplement our dining hall offerings, to develop educational programs to help people understand where their food comes from and how to reduce waste by composting, as well as a number of other projects. They have asked powerful questions that have engaged the board and school leadership in conversations around divestment and the role of institutional finances in managing a sustainable future. And, they have asked for more sustainable food options (as have the parent body). For over ten years, there have been student leadership positions focused on environmental issues — positions that have helped create a culture of responsibility and awareness.

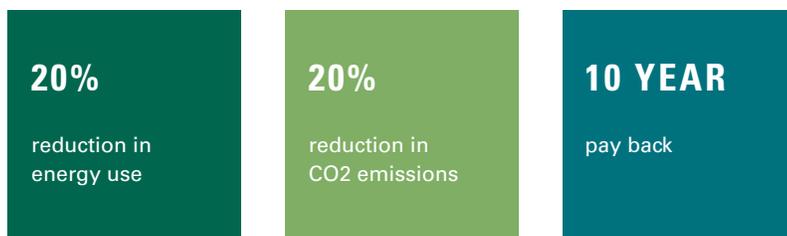
We are proud of the student body for these efforts. They are in keeping with our longstanding tradition of progressive action, and initiatives from which we have benefited greatly. This process, too, was one to which students contributed a tremendous amount — and for that we are grateful.

## GREENHOUSE GAS REDUCTION:

A 2018 study completed by GreenerU found that while the school has implemented some beneficial energy reduction programs, there is a large opportunity in unrealized energy savings. These potential energy efficiency opportunities total \$750,000 — a significant sum for a nonprofit school the size of ours.

The GreenerU study went on to identify that the implementation of all identified energy efficiency work would reduce campus energy use by 20% of 2017 campus energy consumption, and reduce campus greenhouse gas (GHG) emissions by 20% from its 2017 annual emission of 1,200 of metric tons of CO<sub>2</sub> equivalent (MTCO<sub>2e</sub>). It is estimated that these projects would cost \$753,000 to implement and have a pay back of 10 years, with generating \$78,000 in annual energy cost savings, see Concord Academy's 2018 Energy Efficiency Report.

## POTENTIAL ENERGY AND GHG REDUCTION AND SAVINGS

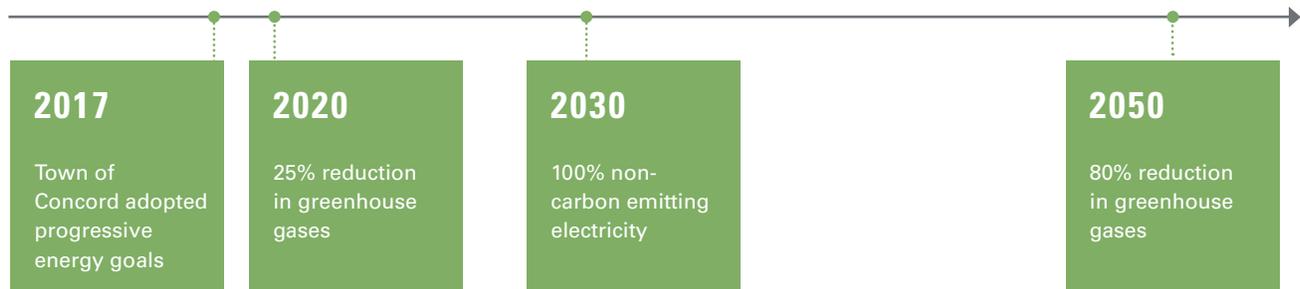


# TOWN AND STATE: CA AS A GOOD NEIGHBOR & RESPONSIBLE GLOBAL CITIZEN

It is helpful to remember that Concord Academy is not an island; as a global community of students, families, and alumnae/i, we are tied into global climatic changes and into the groundswell of support that is responding.

The town of Concord, with its rich intellectual and cultural history of environmentalism, is no exception. In 2017, the town has adopted progressive energy goals, including a 25% reduction in greenhouse gases by 2020; 100% non-carbon emitting electricity by 2030; and an 80% reduction in greenhouse gases by 2050 (all below 2008 levels). The town has also, for the first time, created the role of sustainability coordinator, to dedicate resources to coordinate local efforts to meet these goals. Moving forward, in all building permit applications, questions and standards of sustainability will be considered as a part of the review process.

## TOWN OF CONCORD COMMITMENTS, GOALS, AND MILESTONES



At the state level, in 2008 Massachusetts passed the Global Warming Solutions Act. This established a statewide limit on greenhouse gas (GHG) emissions of between 10% and 25% below 1990 levels for 2020. This is under the long-term goal of an 80% reduction in emissions by 2050.

Internationally, countries are moving on this issue as well. 183 states and the EU have signed the Paris Climate Accord, though it is notable that US national leadership has recently wavered on this agreement. Still, with 88% of the world's GHG captured in these countries, it is clear that the movement is toward a more sustainable future.

CA's long-term goals are framed so as to be in alignment with our neighbors and with our global community. We view this as not only responsible but also our duty.

# SUMMARY OF GOALS

## FOCUS AREA

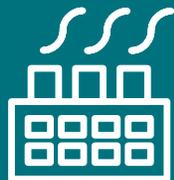
## GOALS

**INSTITUTIONAL**



**One full-time equivalent of faculty/ staff dedicated time to sustainability by 2022.**

**GHG REDUCTION**



**Reduce on campus GHG emissions from buildings by 15% by 2022**

**SUSTAINABLE FOOD**



**Reduce food waste by 20% by 2022 from a 2019 baseline**

**SUSTAINABLE BUILDING OPERATIONS AND MATERIALS MANAGEMENT**



**Reduce overall waste by 10% by 2022**

By 2022 have part of the annual budget dedicated towards sustainability efforts.

Complete a standardized sustainability assessment by 2022

Incorporate sustainability into the curriculum and job descriptions of adults.

Develop a comprehensive 20 year GHG reduction plan for the campus infrastructure with appropriate financial support.

Implement a pilot program for individual climate action plans for community members

CA food will either sourced from within 250 miles, organic, and/ or fair trade by 2022

Become a local collaborator in promoting education and awareness of local and sustainable food systems by 2020.

Create green operations and management standards for all CA buildings that include energy, water, and operations practices by 2022.

Implement sustainable purchasing guidelines by 2022.



# TOWARDS A MORE SUSTAINABLE, THRIVING COMMUNITY: OVERARCHING INSTITUTIONAL GOALS

With the goal of making our efforts both more coordinated and more efficient, we have articulated a set of institutional level goals that will serve to guide all of our sustainability efforts. These goals make clear that this opportunity — of creating a more sustainable future — is one that we all share.



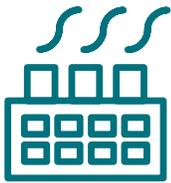
## OVERARCHING INSTITUTIONAL GOALS AND STRATEGIES

<b>GOAL 1</b> One full-time equivalent of faculty/staff dedicated time to sustainability by 2022.	STRATEGY 1.1	Assign 5 hours a week for key stakeholders to work toward the goals outlined in this Sustainability Strategic Plan.
	STRATEGY 1.2	Use a consultant to provide advice and expert guidance.
	STRATEGY 1.3	Create a sustainability committee that identifies the needs and potential benefits of staff time dedicated to implementing sustainability on campus.
<b>GOAL 2</b> By 2022 have part of the annual budget dedicated towards sustainability efforts.	STRATEGY 2.1	Seed a sustainability revolving fund for GHG reduction projects by 2022 with one-time funding that would sustain itself over time through energy cost savings. These savings would make a virtuous loop that would provide funds in perpetuity for the efficient fulfillment of these ambitions.
	STRATEGY 2.2	Use GreenerU's report to create a cashflow assessment for the investment into the buildings and infrastructure.
	STRATEGY 2.3	Apply for grants and donor support for sustainability efforts.
	STRATEGY 2.4	Explore alternative finance options including partnering with an energy service company for infrastructure upgrades.
<b>GOAL 3</b> Complete a standardized sustainability assessment by 2022	STRATEGY 3.1	Review and if appropriate, complete the Sustainable tracking and roadmap tool (START) for K-12 schools by the Green School Alliance.
	STRATEGY 3.2	Use the Sustainability Tracking, Assessment & Rating System (STARS) is a transparent, self-reporting framework for colleges and universities to measure to make an informal review.
<b>GOAL 4</b> Incorporate sustainability into the curriculum and job descriptions of adults.	STRATEGY 3.3	Hire an outside sustainability auditor to assess the school and to create a baseline which could be used for identifying targeted areas for further assessment.
	STRATEGY 4.1	Identify sustainability-related curriculum offerings and create a curriculum guide to share with students.
	STRATEGY 4.2	Have all job descriptions articulate the importance of sustainability, and look for integrations into fulfilling this work.



# REDUCING EMISSIONS IN A CHANGING CLIMATE: GREENHOUSE GAS REDUCTION

One of our greatest responsibilities to the planet is to reduce greenhouse gas emissions at the greatest rate possible. Reducing energy consumption, improving efficiency, and shifting to sustainable energy productions are CA's main priorities. To that end, CA will focus both on improvements to existing infrastructure, standards for new construction and retrofitting, as well as behavioral changes to reduce energy consumption on campus that can be adopted by all members of our community.



## GREENHOUSE GAS REDUCTION GOALS AND STRATEGIES

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Overarching goal:  
Concord Academy will be  
carbon neutral by 2050.

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<b>GOAL 1</b> Reduce on campus GHG emissions from buildings by 15% by 2022	STRATEGY 1.1	Using GreenerU GHG reduction report Concord can reduce its GHG emission by an estimated 20% by implementing 12 energy efficiency upgrades. The estimated cost is \$750,000 and will have an annual cost saving of \$78,000, with a payback of fewer than 10 years.
	STRATEGY 1.2	Develop a baseline of greenhouse gas emissions by July 1, 2019. Continue and maintain annual data collection processes moving forward.
	STRATEGY 1.3	Have buy in from the CA community to be Carbon Neutral by 2042.
<b>GOAL 2</b> Develop a comprehensive 20 year GHG reduction plan for the campus infrastructure with appropriate financial support.	STRATEGY 2.1	Conduct and publish a yearly collaborative GHG inventory of campus emissions.
	STRATEGY 2.2	Explore creating a Green Revolving Fund.
	STRATEGY 2.3	Identify local, state, and regional incentives and grant opportunities.
	STRATEGY 2.4	Work with local providers to produce renewable energy by 2022.
<b>GOAL 3</b> Implement a pilot program for individual climate action plans for community members	STRATEGY 3.1	In the next 3 years, create a test group of CA members to implement a personal GHG reduction plan with CA resources and incentives. This will act as a pilot program for making GHG emissions personal and actionable while working on long-term planning.
	STRATEGY 3.2	Review public transportation commuter support for community members.
	STRATEGY 3.3	Create a course/club/extracurricular program in which adults and students work together to learn, baseline, assess, and implement options for reducing individual's GHG emissions.

A Green Revolving Fund will create cost savings that will be reinvested in Concord Academy's Sustainability Initiatives



## **HEALTHY & SUSTAINABLE COMMUNITY: SUSTAINABLE FOOD STANDARDS**

Food touches all of us; you are, as the saying goes, what you eat. While much has been done here at CA to reduce waste and improve sourcing, our community feels strongly that yet more can be done. This focus area has both great excitement, and great potential to galvanize the community around a core set of values, to educate our community, and to ensure that we are leading healthy and sustainable lives.



## SUSTAINABLE FOOD STANDARDS GOALS AND STRATEGIES

<b>GOAL 1</b>  Reduce food waste by 20% by 2022 from a 2019 baseline	STRATEGY 1.1	Inventory and share all food waste data annually.
	STRATEGY 1.2	Adjust dining hall operations and procedures to reduce food loss at consumption.
	STRATEGY 1.3	Implement a food waste education program to teach the CA community the impacts of food waste and how to easily reduce waste.
	STRATEGY 1.4	By 2022 all campus residents will be composting food and organic waste.
<b>GOAL 2</b>  CA food will either sourced from within 250 miles, organic, and/or fair trade by 2022	STRATEGY 2.1	Actively participate in the Real Food Challenge, a program that has assigned values to food in a dining hall and has a calculator for schools to assess how much of the food that is sourced from 250 miles, organic, and or fairtrade.
	STRATEGY 2.2	Create and maintain an inventory for all food operations' impacts - positive and negative impacts.
	STRATEGY 2.3	Create and uphold a comprehensive sustainable food waste policy.
	STRATEGY 2.4	Promote vegetarian diets and/or reduced meat consumption through educational outreach programs.
<b>GOAL 3</b>  Become a local collaborator in promoting education and awareness of local and sustainable food systems by 2020.	STRATEGY 3.1	Volunteer at a local farm and commit to buying a specific percentage of food.
	STRATEGY 3.2	Have local farmers come and speak at the school and serve as a catalyst the community,
	STRATEGY 3.3	Collaborate with other local buyers to support local farms by pre-bulk buying.



## **WASTE NOT: SUSTAINABLE BUILDING OPERATIONS AND MATERIALS MANAGEMENT**

While so often the small things around us — the hand towels, printing paper, and cleaning products — are invisible, they make a significant impact on determining whether a community is healthy and sustainable or not. With these goals, we will focus on reducing waste and improving sourcing to reduce our negative impact on the world.



## SUSTAINABLE BUILDING OPERATIONS AND MATERIALS MANAGEMENT GOALS AND STRATEGIES

<b>GOAL 1</b>  Reduce overall waste by 10% by 2022	<b>STRATEGY 1.1</b>	Complete a yearly waste audit and publish data internally with a goal of annual reduction.
	<b>STRATEGY 1.2</b>	Create and implement a simple waste reduction action plan.
	<b>STRATEGY 1.3</b>	Implement standardized waste resources bins across campus.
<b>GOAL 2</b>  Create green operations and management standards for all CA buildings that include energy, water, and operations practices by 2022.	<b>STRATEGY 2.1</b>	Document current practices and assess their sustainability following LEED and STARS standards.
	<b>STRATEGY 2.2</b>	Research on best practices and implement where feasible.
	<b>STRATEGY 2.3</b>	Collect and maintain baseline data on current operations and management including water, energy, and operations.
<b>GOAL 3</b>  Implement sustainable purchasing guidelines by 2022.	<b>STRATEGY 3.1</b>	Inventory current purchasing costs and volumes contact Green School Alliance for recommendations.
	<b>STRATEGY 3.2</b>	Research best practices in sustainable purchasing within secondary schools and institutions of higher education.



## TRACKING PROGRESS

Goals are wishes without a plan, and a plan needs accountability to ensure ambitions become actions. We have therefore created an internal action plan that includes tracking and reporting on any progress as a core part of this plan. Accountability is both necessary and desirable; it is both motivation and record, both a way of recording history and part of the required encouragement to make it.

We recognize that this is a living document. We have outlined the first and the essential steps; when we start implementing the plan, the outcome of one action will influence the direction following actions for a strategy, and the action plan will help us keep on track toward our long-term 2050 goals. It is documentation on who, what, when, and how for each strategy.

## INTERNAL ACCOUNTABILITY AND SUPPORT COORDINATION

To implement this plan is a communal effort, where key-stakeholders will be responsible for ensuring that the right people stay involved at the appropriate times. The sustainability committee will have the overall responsibility for developing and managing the plan, and will work with the three working groups. In addition to reviewing and updating the action plan, the sustainability committee will report to the Facility Planning Committee (FCP) of the board as well as the community on an annual basis.

The transparency will help to identify gaps and opportunities in the process. We will community support when revising the strategies that are not working and determining adjustments to implement the goal we have set for ourselves.

## REPORTING AND NEXT STEPS

Knowing that the plan will evolve and change over time, we want to avoid reporting getting in the way of implementing. We also want to improve our data collection and baseline so that we can track our progress and measure our impact. One goal (Institutional goal 3) of this plan is to assess our sustainability, and the identified strategies to create a better baseline to which we can measure our success are to report to an external sustainability assessment tool.

# APPENDIX

## **TOWN OF CONCORD CLIMATE MITIGATION GOALS (THE TOWN OF CONCORD MASSACHUSETTS):**

By 2020 - 25% reduction in town-wide greenhouse gas (GHG) emissions from 2008

100% carbon-free electricity source by 2030

By 2050 - 80% reduction in town-wide greenhouse gas (GHG) emissions from 2008

## **TOWN OF CONCORD SUSTAINABILITY PRINCIPLES (THE TOWN OF CONCORD MASSACHUSETTS):**

Reduce dependence on fossil fuels, underground metals, and minerals

Reduce dependence upon synthetic chemicals and other manufactured substances

Reduce encroachment on nature

Meet human needs fairly and efficiently

## **MASSACHUSETTS STATE CLIMATE GOALS:**

The Global Warming Solutions Act of 2008 required the Secretary of Energy and Environmental Affairs to establish a statewide limit on greenhouse gas (GHG) emissions of between 10% and 25% below 1990 levels for 2020 and toward an 80% reduction in emissions by 2050.

## THE PARIS AGREEMENT:

The 2015 Paris Agreement is international agreement within the United Nations Framework Convention on Climate Change (UNFCCC) in which countries have signed onto the common cause to combat climate change and adapt to its effects by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. (United Nations Climate Change<sup>1</sup>)

## DEFINITIONS:

### GREEN REVOLVING FUND

“A Green Revolving Fund (GRF) is an internal capital pool that is dedicated to funding energy efficiency, renewable energy, and/or sustainability projects that generate cost savings. A portion of those savings are then used to replenish the fund (i.e. revolved) allowing for reinvestment in future projects of similar value. This establishes an ongoing funding vehicle that helps drive energy efficiency and sustainability over time, while generating cost savings and ensuring capital is available for important projects.” (U.S. Department of Energy, Better Buildings<sup>2</sup>)

## GREENHOUSE GAS EMISSIONS

### SCOPE 1 EMISSIONS

“Scope 1 GHG emissions are direct GHG emissions occurring from sources that are owned or controlled by the institution. Scope 1 emission sources include: Combustion of fuels to produce electricity, steam, heat, or power using equipment in a fixed location such as boilers, burners, heaters, furnaces, incinerators Combustion fuels by institution-owned cars, tractors, buses, and other transportation devices” (Association for the Advancement of Sustainable in Higher Education, STARS 2.1 Technical Manual)

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<sup>1</sup> <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>, January 23, 2018

<sup>2</sup> <https://betterbuildingssolutioncenter.energy.gov/solution-roundup/green-revolving-funds>, January 23, 2018

## SCOPE 2 EMISSIONS

“Scope 2 GHG emissions are indirect GHG emissions that are a consequence of activities that take place within the organizational boundaries of the institution, but that occur at sources owned or controlled by another entity. Scope 2 emission sources include purchased electricity, purchased heating, purchased cooling, and purchased steam.” (Association for the Advancement of Sustainable in Higher Education, STARS 2.1 Technical Manual)

## SCOPE 3 EMISSIONS

Scope 3 GHG emissions are all indirect emissions not covered in Scope 2. Consistent with the WRI Corporate Value Chain (Scope 3) Standard, Scope 3 GHG emissions sources include: (Association for the Advancement of Sustainable in Higher Education, STARS 2.1 Technical Manual)

### **UPSTREAM SCOPE 3 EMISSIONS**

- Purchased goods and services
- Capital goods
- Fuel- and energy-related activities (not included in scope 1 or scope 2)
- Upstream transportation and distribution
- Waste generated in operations
- Business travel
- Commuting (employee and student)

### **UPSTREAM LEASED ASSETS**

- Downstream Scope 3 emissions
- Downstream transportation and distribution
- Processing of sold products
- Use of sold products
- End-of-life treatment of sold products
- Downstream leased assets
- Franchises
- Investments

## REAL FOOD

“Real Food is a holistic term to describe food that truly nourishes consumers, producers, communities, and the earth – all aspects of the food system. In order to be able to advocate for colleges and universities to source Real Food on campus, students identified the need for a clear, quantifiable way to define and track the purchasing of Real Food.” (Real Food Challenge, Real Food Standards 2.1)

This term is used by the Real Food Challenge, along with their Real Food Standards, Guide, and Calculator, to help organizations calculate their food purchasing.

Real Food Guide 2.1: <https://www.realfoodchallenge.org/resources/implementation-product-shift-resources/real-food-guide-20/>

## AASHE

The Association for the Advancement of Sustainability in Higher Education

“AASHE is the leading association for the advancement of sustainability in higher education. [They] serve a full range of higher education faculty, administrators, staff and students who are change agents and drivers of sustainability innovation. Established in 2005, AASHE is comprised of over 900 members across 48 U.S. states, 1 U.S. Territory, 9 Canadian provinces and 20 countries.” (The Association for the Advancement of Sustainability in Higher Education)

## ZERO WASTE

Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.

Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.” (Zero Waste International Alliance)



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