Casey Farm Climate Action Plan

2024–2029

HISTORIC NEW ENGLAND

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MESSAGE FROM THE PRESIDENT

On the following pages, you will find the ambitious Climate Action Plan set forth by Casey Farm, the first site-specific plan of its kind for a Historic New England property. This is the culmination of months of rigorous data analysis, spirited community conversations, and the dedication of our exemplary employees and partners.

Our work on this began more than a year ago, when Historic New England staff began developing an institutional Climate Action Plan to set an overall framework and goals for work in this area. Our efforts were expanded by the generous support of the 1772 Foundation. Utilizing this grant funding, we partnered with the consulting firm GreenerU to baseline Casey Farm's current state of sustainability and facilitate a dynamic climate planning process.

Our core sustainability tenets of climate justice, resilience, and mitigation were the focal points of this process, guiding the diverse planning team of staff, volunteers, and patrons. This process engaged some of Casey Farm's biggest supporters through a review of the property's key greenhouse gas emissions and sustainability findings, followed by in-person goal-setting sessions that deployed SMARTIE evaluative criteria: strategic, measurable, achievable, realistic, time-bound, inclusive, and equitable. Participants discussed values and priorities, engaged in ideation activities to generate innovative solutions, and created actionable and ambitious goals supported by detailed strategies and metrics for success.

Climate planning is a critical component of Historic New England's work, both because we must work to ensure the resilience of our historic sites and neighboring communities, and because we have an obligation to support the greater movement towards an equitable, sustainable world. Casey Farm's Climate Action Plan is a model that other Historic New England properties will follow, as our actions today will be history tomorrow, and we must do our part to determine the trajectory that story takes.

Vin Cipolla
President and CEO
Historic New England

SUMMARY OF GOALS

CLIMATE JUSTICE

GOAL 1: OUTREACH
By 2029, Casey Farm will share its specialized knowledge with at least 25% more participants from organizations that serve underserved groups compared to 2023 data.

GOAL 2: ACCESSIBILITY
By 2029, Casey Farm's most frequently visited areas will be physically accessible to diversely abled people.

GOAL 3: RESOURCES SHARING
By 2029, Casey Farm will share 5% of its agricultural products annually with low- to moderate-income communities.

RESILIENCE

GOAL 4: LAND MANAGEMENT
By 2029, Casey Farm will have a sustainable land management plan to prepare for weather and climate events that impact its operations, programming, and community.

GOAL 5: STORMWATER MANAGEMENT
By 2029, Casey Farm will have a stormwater management plan and begin implementation.

GOAL 6: BUILDINGS
By 2029, Casey Farm will have prioritized the preparation and maintenance of its buildings and infrastructure to withstand changing weather and climate conditions.

MITIGATION

GOAL 7: EMISSIONS
By 2029, Casey Farm will have reduced Scopes 1 and 2 emissions 20% from a 2022 baseline and expanded Scope 3 emissions tracking for waste and commuting.

GOAL 8: WASTE MANAGEMENT
By 2029, Casey Farm will divert 60% of its waste from the landfill.

GOAL 9: TRANSPORTATION
By 2029, Casey Farm will increase the number of visitors using eco-friendly modes of transportation to the farmers market by 20% from 2023 data.

Detailed goals, strategies, and determinants of success are on pages 10–33.

LAND ACKNOWLEDGEMENT

Farms are excellent places to delve into what we owe and what we should own up to in our relationship with all people who worked the land. The land we now cultivate was cultivated by the Narragansett people and their ancestors for millennia and brutally taken from them through force and unfair transactions. Colonists of European descent found land that had been kept clear through the Indigenous practice of controlled burning so that the Narragansett people could raise and gather a healthy range of foods, land sadly cleared of so many people through disease, war, and enslavement brought on by contact with Europeans. Colonists viewed the open grassland as an opportunity to transplant their way of life in England that relied on grazing domesticated animals and sowing non-native crops, altering the ecosystem.

The same colonial and racist attitudes that dispossessed Indigenous people led to the kidnap, sale, oppression, and forced labor of African people, Indigenous people, and people of mixed backgrounds. The economy of this area and the success of this land were dependent on the labor of enslaved people and the displacement of Indigenous people, allowing the property to be passed down through the generations and eventually donated to Historic New England.

We still benefit from this history of cultivation tied to oppression even as we strive to enlighten ourselves and our visitors about it, and as we work toward inclusion, diversity, equity, and accessibility through our organization.

INTRODUCTION

Historic New England is the oldest, largest, and most comprehensive independent preservation organization in the United States.

We engage diverse audiences in developing a deeper understanding and enjoyment of New England home life by being the national leader in collecting, preserving, and using significant buildings, landscapes, archives, stories, and objects from the past to today. Amongst its holdings, Historic New England manages 40 historic properties that are open to the public in five New England states.

> Historic New England is committed to addressing the global climate crisis through actions that will reduce or eliminate our greenhouse gas emissions, promote the resiliency of our properties, engage our communities, and advance climate justice and energy equity.
>
> *–Historic New England's climate commitment statement, adopted September 2023*

HISTORIC NEW ENGLAND'S CLIMATE ACTION PLAN

In 2023, Historic New England's board of trustees adopted an official statement about climate change and identified four climate action goals:

1. Enacting operational shifts that integrate climate action into the day-to-day **operations** of Historic New England
2. Achieving **carbon neutrality** for all Historic New England sites by 2050, continuously evaluating progress and adjusting actions to achieve success
3. Managing our properties to meet our high preservation standards but also adapting those standards to ensure **resilience** in the face of weather extremes and sea level rise
4. Engaging a broad and inclusive public through robust partnerships, programs, and activities that advance **climate justice** for all

These institutional goals were developed through a year-long, staff-driven planning process. Casey Farm is the first of our properties to develop a site-specific climate action plan based on Historic New England's four climate action goals.

BACKGROUND: CASEY FARM

Located by Narragansett Bay on the ancestral homeland of the Narragansett people, Casey Farm once produced food for local and coastal markets and was one of many Southern Rhode Island plantations tied to slavery. By the nineteenth century, tenant farmers worked the land, but the Caseys retained active management and two rooms in the house for their own visits.

The Casey family pursued careers outside of Rhode Island as engineers, architects, and soldiers, and some influenced national events. Eight generations of the same family owned the farm since 1702, keeping the original 300 acres together, and donating a working farm with a circa 1750 farmhouse, 19th century barnyard buildings, more than ten miles of stone walls, and acres of fields and wooded land to Historic New England in 1955.

Today, farm managers raise organically grown produce for a community-supported agriculture (CSA) program and the seasonal Casey Farm Market. Farm teachers offer a wide range of education programs for children based in agriculture, life science, ecology, and history. Community events and tours happen frequently, making Casey Farm the most visited of Historic New England's sites.

Visitors may go to the farmhouse museum gallery featuring family portraits and cultural objects representing all the people of the land, to the cemetery where generations are memorialized, through the barnyards and fields with chickens and other farm animals, and along hiking trails to the bay shore or riverbank. About 80% of the acreage is conserved woodland, about twelve acres are cultivated or landscaped for visitors, and fifty-five acres are rented to the Boys and Girls Club of Newport County for their Camp Grosvenor. Casey Farm is a certified organic farm, a museum, an education facility, a community gathering space, and a conserved landscape.

THE PLANNING PROCESS

BASELINING

GreenerU, a climate planning, engineering, and construction company based in Waltham, Mass., spent four months working with Historic New England staff, both those with regional administration responsibilities and those focused specifically on Casey Farm, to create a comprehensive understanding of the current state of sustainability. This process assessed the state of engagement and outreach, operations, Scopes 1, 2, and 3 greenhouse gas emissions, and climate resilience. Part of this process was a stakeholder engagement survey provided to farmers market attendees to assess commuter habits and attitudes toward sustainability at Casey Farm. In addition, GreenerU completed a building decarbonization assessment with recommendations for energy conservation measures. All of this data was presented to Historic New England and Casey Farm staff and patrons at a webinar on September 20, 2023.

STAKEHOLDER ENGAGEMENT

Using a stakeholder mapping process, GreenerU worked with Historic New England staff to identify a number of stakeholders, including employees, volunteers, and community members. Stakeholders were invited to participate in two meetings to gather feedback on the baseline data, formulate draft goals, and to develop ideas for strategies and action items underneath each goal. The stakeholder group was divided into three subgroups that aligned with Historic New England's overarching sustainability categories: **climate justice, resilience,** and **mitigation**.

The first stakeholder meeting was held on October 4, 2023 at the Saunderstown Yacht Club, a local organization that leases a small portion of Casey Farm. During this meeting, the group of stakeholders created a shared understanding of Casey Farm's baseline, established a strategic direction for the Farm's climate action goals, and formulated a set of ideas for action. A core team of Casey Farm staff—Sustainability Coordinator Joie Grandbois, Property Care Team Leader Ben Haavik, and Casey Farm Site Manager Jane Hennedy, along with GreenerU staff—reviewed outcomes of this meeting and began to develop goal language.

At the second stakeholder meeting, held on November 8, 2023, at the Contemporary Theater Company in South Kingstown, refined goals developed at the first stakeholder meeting were presented in the form of a "gallery tour" with assignments of individual SMARTIE—specific, measurable, attainable, realistic, time-bound, inclusive, and equitable—criteria. The meeting resulted in multiple revisions and ultimately an actionable set of goals.

The core team then met two more times to identify a set of strategies to achieve the goals, as well as a set of action items that are encompassed within an internal implementation plan.

FOCUS AREA

Climate Justice

CURRENT STATE

Casey Farm strives to be an educational and environmental hub for the the greater Rhode Island community with most participants living within 25 miles of Saunderstown, and regularly adopts and integrates sustainable practices into the farm's daily operations. In the past five years, the farm has invited herbalists, naturalists, and experts on pollinator plants to run programs for both children and adults.

This wealth of programming that engages more than 26,000 participants per year provides unique opportunities for Casey Farm to expand its reach, provide education on sustainable farming techniques, contribute more of its harvest to the community, and make its properties more physically accessible to a diversely abled public.

In developing this Climate Action Plan, Casey Farm stakeholders looked at its framework of existing community and educational programming to seek opportunities on which to capitalize and expand its goals and strategies. In 2023, Casey Farm's primary activities included the following:

Community-supported agriculture

Casey Farm has a share-based community-supported agriculture (CSA) program that connects farmers and consumers. Each week, members receive fresh, certified-organic vegetables, fruits, herbs, and flowers. Produce that is not distributed to CSA members goes on sale at the farmers market each Saturday. All leftover produce at the market is open to the farm crew, market vendors, and musicians to take home. Any produce still left after this is given to farm pigs or composted to prevent it from entering the waste stream.

Children's educational programming

Casey Farm offers a variety of educational programming. Children between the ages of three and twelve have the opportunity to learn about a variety of the aspects of farm life. During the academic year, children from local schools participate in a number of programs both at the farm and in their classrooms that teach them about farming, plant life cycles, crop raising, geology, and aquatic ecosystems. Historic New England's program "At the Bay" introduces preschoolers through fifth grade students to Narragansett Bay where they learn about fresh and saltwater wetlands, the organisms that live in these waters, and the importance of preserving biodiversity.

2023 Casey Farm participation by the numbers

7,341	students and youth participated in programming
26,445	individuals participated in public programs such as the 14th Annual Egg Hunt, spring seedling sale, and Juneteenth event

Accessibility

Casey Farm offers priority parking close to the farmers market. The CSA barn entrance and bathroom are at grade, meaning these entrances are wheelchair-accessible. Studies have shown that compacted gravel and turf, like that in use at Casey Farm, meet Americans with Disabilities Act (ADA) standards under most weather conditions. The new crosswalk also includes an accessible crossing signal with sound and curb cuts. Signage for Rhode Island Slave History Medallions markers and the Three Sisters sculpture are also accessible for the visually impaired.

Donations

Farmers harvested 30,182 pounds of produce in 2023. In 2022, Casey Farm donated 300 pounds of produce to the Johnnycake Center of Westerly and invited Hope's Harvest volunteers to pick produce that hadn't been harvested for the farmers market. Hope's Harvest gleaned an additional 150 pounds of produce through this process to distribute to hunger relief agencies in the state of Rhode Island.

THE THREE SISTERS: RAINKEEP

Created by two artists, Allison Newsome and Deborah Spears Moorehead, the nature-inspired Three Sisters sculpture both honors the Narragansett people and their ancestors and reminds visitors of the importance of protecting the environment and being in harmony with nature.

More specifically, the sculpture tells the Eastern Woodlands creation story culminating in the Three Sisters—corn, beans, and squash—all of which grow in the CSA garden in which the sculpture resides.

The sculpture collects dew and rainwater and stores it in a 500-gallon rain barrel. Gardeners and children at Casey Farm programs draw the water from the basin to water the surrounding garden beds.

Climate Justice

GOAL 1: OUTREACH

By 2029, Casey Farm will share its specialized knowledge with at least 25% more participants from organizations that serve underrepresented groups compared to 2023 data.

STRATEGIES

1.1 Increase economic access to the farmers market and CSA to underrepresented groups

1.2 Build on existing relationships and create new ties with community organizations that advance climate justice

1.3 Develop accessible and affordable (or free) educational programming for Black, Indigenous, people of color, low- and moderate-income families and children, immigrants, and other underserved groups

DETERMINANTS OF SUCCESS

- 25% more time spent on free programs and tours
- 25% more participation in groups
- 25% more participation by demographically underserved groups in programming and tours

Climate Justice

GOAL 2: ACCESSIBILITY

By 2029, Casey Farm's most frequently visited areas* will be physically accessible by diversely abled persons.

* Casey Farm's most frequently visited areas are the parking lots, farmhouse, barnyard, farmers market field, and education garden.

STRATEGIES

2.1 Secure funding for accessibility planning by the beginning of 2026 and implementation by 2029

2.2 Make physical changes to Casey Farm's visitor spaces to increase their ease of use and accessibility

DETERMINANTS OF SUCCESS

- Increase in percentage of Casey Farm's physically accessible square footage

Climate Justice

GOAL 3: RESOURCE SHARING

By 2029, Casey Farm will share 5% of its agricultural products annually with low- to moderate-income families.

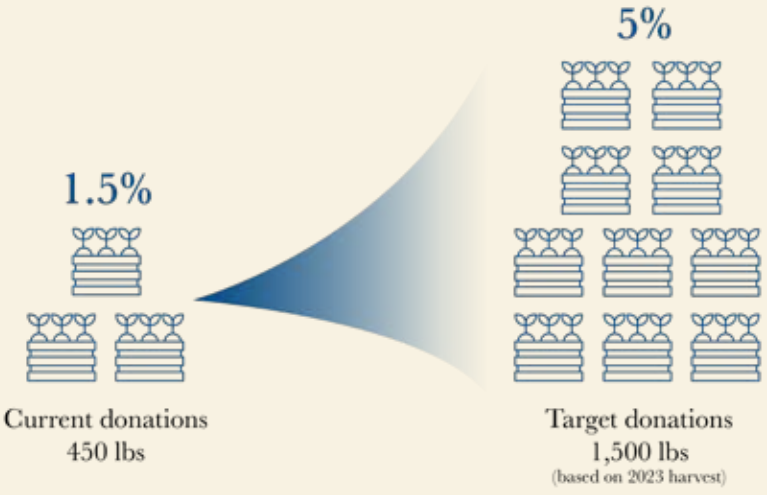
STRATEGIES

3.1 Expand programs to donate food to underserved communities

DETERMINANTS OF SUCCESS

- Strong and reliable baseline of agricultural products grown by weight
- 5% of those agricultural products donated
- Confirmation of low- to moderate-income communities receiving produce

Figure. — 2023 food donations compared to target food donations



FOCUS AREA

Resilience

CURRENT STATE

Historic preservation efforts are routinely challenged by the region's changing climate. Increased risk of flooding, fire, poor air quality, drought, and a host of other weather-related events can be threats to vulnerable properties and populations. Historic New England's resilience goal is to manage our properties to meet our high preservation standards while adapting those standards to ensure resilience in the face of weather extremes and sea level rise.

In May 2023, GreenerU conducted a study using flood maps to identify and summarize the climate impacts and threats to Casey Farm's property site for the foreseeable future. The study looked at three core areas of the property: 1) Casey Farm, 2) Casey Point, and 3) Camp Grosvenor (see map on page 19).

Casey Farm, located on three hundred acres of land, sits between Casey Point on the shoreline of the Narragansett Bay and the banks of the Pettaquamscutt Estuary, both of which are vulnerable to flooding and sea level rise. Camp Grosvenor, leased from Historic New England on the estuary side of the farm's property, will likely face erosion but minimal flooding. While the farm itself faces a minimal flood risk (the area is subject to a 1% chance of flooding annually), the property will likely face complications with climate-related drought, heat waves, and variable rainfall.

Land management

While the farm itself faces a minimal flood hazard, the property will likely face complications from drought, heat waves, and variable rainfall.

Given that hurricane and storm surges can significantly change the shoreline and coastal landscape, Casey Point, in addition to potential flooding, is vulnerable to erosion. More so, the shoreline itself has a 0.2% (1-in-500) chance of flooding, though these estimates can change.

While there is a low chance of flooding, the farm currently has issues with water pooling in the barnyard and farmhouse basement.

Building maintenance

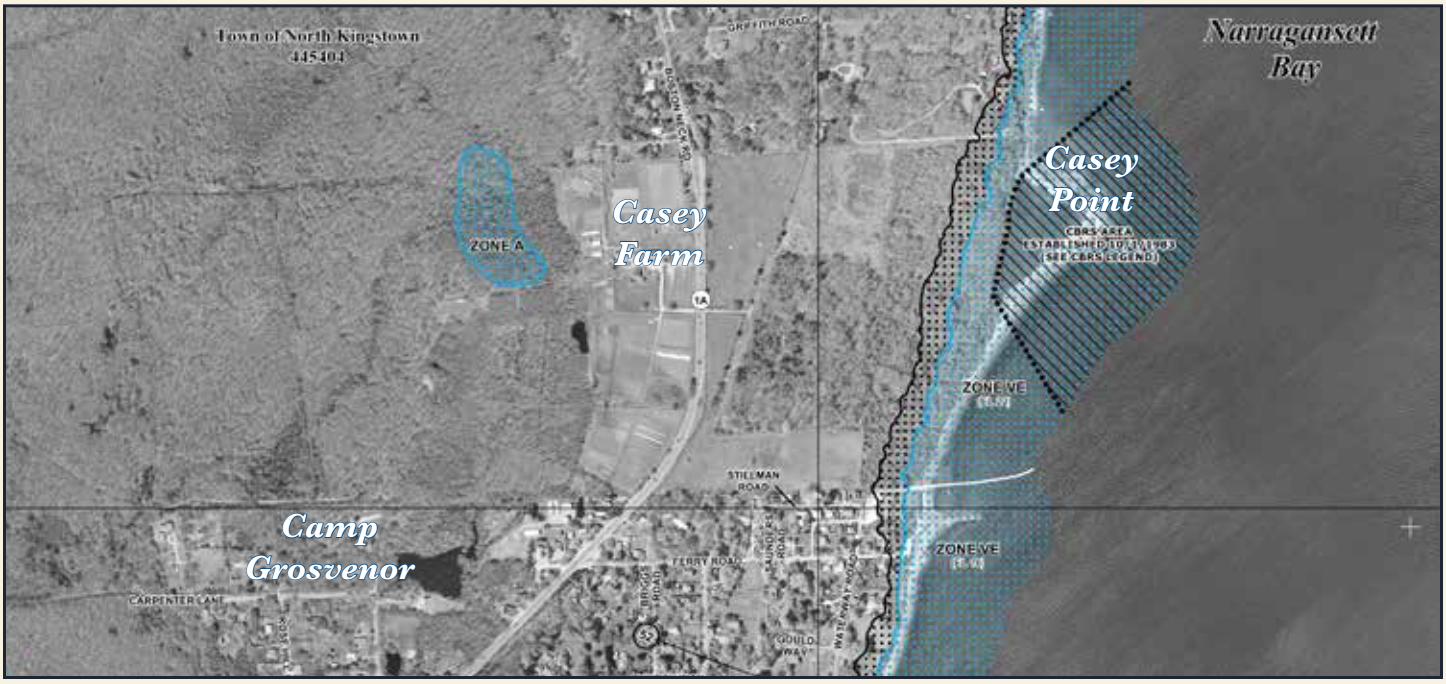
Historic New England's stewardship of Casey Farm is supported by a comprehensive building assessment that describes the current building conditions and issues at the property, and identifies the five most pressing preservation priorities. This assessment is cyclically reviewed and revised; the most recent amendments were made in August 2017. In addition, general maintenance needs are reviewed annually by Historic New England's staff and changes, if required, are implemented as necessary. A long-term predictive maintenance plan will take a more complete, holistic, and proactive look at the lifecycle of materials and systems such as roofing and paint finishes.

Stormwater management

Public water is used to irrigate the greenhouses and eight acres of cultivated land are irrigated using the irrigation pond.

Casey Farm does not currently have a stormwater management plan. Developing such a plan would involve looking at how precipitation enters, moves through, and then leaves the landscape and strategize ways to manage the impacts of that process, such as through water capture and installing water lines from the irrigation pond to the greenhouses.

An added benefit of capturing stormwater for reuse would be decreasing Casey Farm's dependence on the public water supply, a solution that overlaps with our climate justice goals.



Special flood hazard areas (SFHAs). Depicted in a light-blue dot pattern above, the 1% annual chance flood (100-year flood), also known as the base flood, has a 1% chance of being equaled or exceeded in any given year. Data and map from the Federal Emergency Management Authority.

Resilience

GOAL 4: LAND MANAGEMENT

By 2029, Casey Farm will have a sustainable land management plan to prepare for the weather and climate events that impact its operations, programming, and community.

STRATEGIES

4.1 Secure funding for multiple components of land management planning by the beginning of 2026

4.2 Develop a detailed baseline of current conditions and recommendations in the areas of forest management, sustainable agriculture, invasives, climate resilience, and adaptation

4.3 Continue current operations to manage land in a sustainable way while planning proceeds

4.4 Partner with the Boys and Girls Club to plan how to manage the impacts of potential river flooding and shoreline erosion

DETERMINANTS OF SUCCESS

- Forest management, sustainable agriculture, invasive plants and animal management, climate resilience, and adaptation are encompassed within Casey Farm's sustainable land management plan
- The sustainable land management plan helps to provide implementable guidance to Casey Farm staff and volunteers for at least 20-25 years ahead

Resilience

GOAL 5: STORMWATER MANAGEMENT

By 2029, Casey Farm will have a stormwater management plan and begin implementation.

STRATEGIES

5.1 Secure funding for a stormwater management plan by the beginning of 2025 and funding to begin implementation by 2029

5.2 Develop detailed baseline data on the current state of stormwater management

5.3 Develop physical systems to reduce the risk of drainage issues

5.4 Collect stormwater / rainwater to protect Casey Farm against drought and reduce reliance on the public water supply

DETERMINANTS OF SUCCESS

- Casey Farm has solutions in place to avoid drainage and flood conditions even as weather patterns become increasingly unpredictable
- Casey Farm has solutions in place to significantly reduce its dependence on public water supply and maximized available stormwater resources

GOAL 6: BUILDINGS

By 2029, Casey Farm will have prioritized the preparation and maintenance of its buildings and infrastructure to withstand changing weather and climate conditions.

STRATEGIES

6.1 Develop a long-term predictive maintenance plan for replacements, repairs, and painting

6.2 Address existing roofing, window, and cladding issues

DETERMINANTS OF SUCCESS

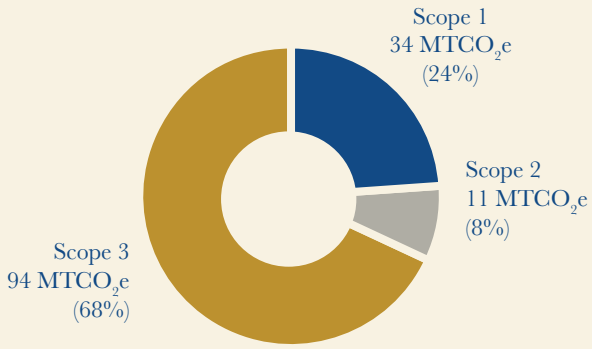
- Facilities staff have a schedule of building and infrastructure maintenance
- Facilities staff have a budget to implement regularly scheduled maintenance and upkeep
- Additional measures to protect Casey Farm's infrastructure are planned and budgeted for

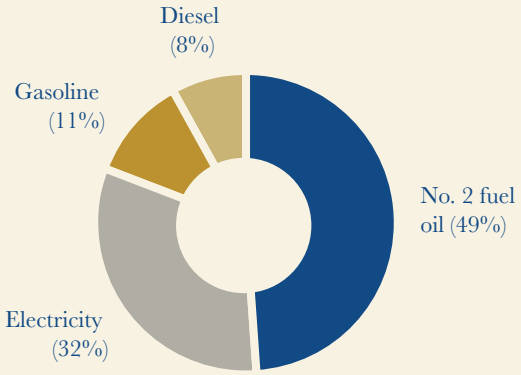

Tours
begin
here on
the hour

FOCUS AREA

Mitigation

CURRENT STATE





Greenhouse gas emissions

Casey Farm has comprehensive and accurate Scopes 1 and 2 data from utility invoices. Scope 3 was calculated from utility and water usage data, estimates, and assumptions.

Emissions from energy use (Scopes 1 and 2)

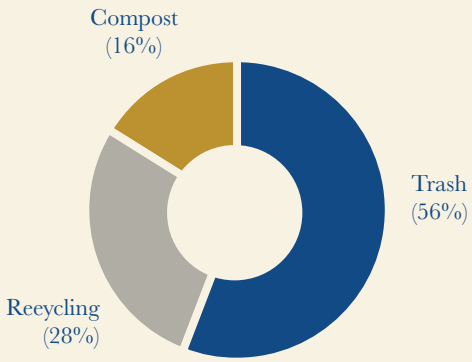
The majority of Casey Farm's energy use is from burning No. 2 fuel oil, which is a greenhouse gas intensive fossil fuel. The second largest source of energy at Casey Farm is electricity, the greenhouse gas intensity of which is dictated by the electric grid's fuel mix.

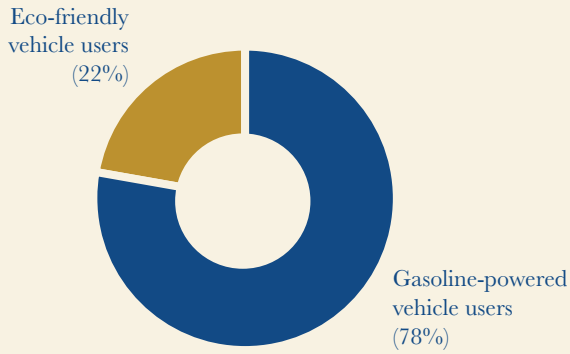
Universal definitions of greenhouse gas emissions fall under three categories:

Scope 1 emissions are generated directly on site, typically through the combustion of fossil fuels. These include emissions from central heating plants, fleet vehicles, fertilizers, refrigerants, and farm animals.

Scope 2 emissions are generated off-site, but are attributable to the institution's activities, such as emissions from purchased electricity.

Scope 3 emissions include indirect emissions through operations such as staff and visitor commuting, institution-sponsored travel, and the production and disposal of purchased products and services.





Waste management

The farm has three primary streams of discarded materials: trash, recycling, and organic material, with the latter two streams making up 44% of the total. The discarded organic material is composted and used to fertilize the fields, turning it into a resource.

Casey Farm recycles approximately 1,300 cubic feet of discarded material a year. The Farm estimates that 768 cubic feet of organic material is composted annually. This compost is then used as fertilizer on the farm fields, which returns those materials to the ground in which they originally grew.

Transportation

As part of a survey conducted at a farmers market during the climate action planning process, respondents were asked about their most commonly used mode of transportation when traveling to the farm. The survey indicated that roughly 22% of visitors and staff travel to the farm using eco-friendly modes of transportation, and 78% of visitors usually drive a gasoline-powered vehicle.

Mitigation

GOAL 7: EMISSIONS

By 2029, Casey Farm will have reduced Scopes 1 and 2 emissions by 20% from a 2022 baseline and expanded Scope 3 emissions tracking for waste and commuting.

STRATEGIES

7.1 Secure funding for multiple components of emissions mitigation by the beginning of 2027

7.2 Develop and implement historically appropriate energy-efficiency measures to reduce overall energy demand at Casey Farm infrastructure

7.3 Where possible, electrify Casey Farm's operations

7.4 Increase Casey Farm's on-site renewable energy generation

7.5 Measure and benchmark annual utility, commuting, and waste data starting in 2024

DETERMINANTS OF SUCCESS

- Scope 1 emissions are 27.2 MTCO2e and Scope 2 emissions are 8.8 MTCO2e in 2029
- More accurate methods are employed to track waste and commuting data, including for farm staff and visitors


Krafty
KIDS


Red Tomatoes

Mitigation

GOAL 8: BUILDINGS

By 2029, Casey Farm will divert 60% of its waste from the landfill.

STRATEGIES

8.1 Establish sustainable procurement guidelines and policies

8.2 Educate visitors on waste management policies and efforts

DETERMINANTS OF SUCCESS

- 60% of Casey Farm's total waste is diverted from the landfill when including recycling and compost measured by weight


Onions
Radish
Cebolla
Rabanos

Mitigation

GOAL 9: TRANSPORTATION

By 2029, Casey Farm will have increased the number of visitors using eco-friendly modes of transportation to the farmers market by 20% from 2023 data.

STRATEGIES

9.1 Create awareness about sustainable transportation opportunities to, from, and around the farm through marketing and communication pathways

9.2 Develop infrastructure needed to encourage greener forms of transportation

DETERMINANTS OF SUCCESS

- Survey data of annual farmers market visitors indicates that 38% are arriving via eco-friendly modes of transportation


COLD BREW
COFFEE
SEVEN STARS BAKERY
SEVEN STARS BAKERY

PLANNING PARTICIPANTS

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Facilitation provided by GreenerU

GLOSSARY OF TERMS

Term	Definition
decarbonization	the reduction or elimination of greenhouse gas emissions from a process or the operations of an institution
carbon neutrality	having no net greenhouse gas (GHG) emissions, to be achieved by either eliminating net GHG emissions, or by minimizing GHG emissions as much as possible, and using carbon offsets or other measures to mitigate the remaining emissions
energy-use intensity	a metric that expresses a building's energy use as a function of its size or other characteristics, abbreviated as EUI
greenhouse gas	any gas that has the property of absorbing infrared radiation (net heat energy) emitted from earth's surface and reradiating it back to earth's surface, warming the earth
heat pumps	devices that work to transfer heat from a colder area to a warmer area, making the cold space colder and the warm space warmer; different heat pumps can pull this energy from the ground or from the air
metric tons of carbon dioxide ($MTCO_2e$)	a standard unit of measure that sums up all greenhouse gas emissions in terms of the warming effect of carbon dioxide
solar photovoltaic greenhouse	a greenhouse with integrated solar panels
weatherization	the practice of protecting a building from sunlight, preciptation, and wind to reduce energy consumption and increase efficiency