



SAGAMORE HILL NATIONAL HISTORIC SITE

CLIMATE FRIENDLY PARKS ACTION PLAN

2014

INTRODUCTION

As a participant in the National Park Service (NPS) Climate Friendly Parks (CFP) program, Sagamore Hill National Historic Site (SAHI) belongs to a network of parks nationwide that are putting climate friendly behavior at the forefront of park operations and resource management. As part of this program, SAHI has conducted a greenhouse gas (GHG) emission inventory, participated in a climate change and sustainability educational workshop, set climate change mitigation and GHG emission reduction goals, and integrated these actions into a park-wide Environmental Management System (EMS).

The EMS takes a systematic approach to identifying and addressing environmental impacts at the park. The EMS

provides a framework for tracking environmental protection and sustainability priorities and details the implementation of these actions. By integrating CFP-related actions into the park's EMS, SAHI is taking an integrated approach to climate change response and sustainable management of park resources.

ENVIRONMENTAL POLICY & SUSTAINABILITY COMMITMENT STATEMENT

Sagamore Hill National Historic Site preserves in public ownership and interprets the structures, landscape, and collections associated with Theodore Roosevelt's home in Oyster Bay, New York to ensure that future generations understand and appreciate the life and legacy of Theodore Roosevelt, his family, and the significant events associated with him at Sagamore Hill.

Theodore Roosevelt purchased land in Oyster Bay, New York in 1880 and built the home between 1884-85 where he lived until his death on January 6, 1919. From 1902 – 1908, Sagamore Hill was the Summer White House. Throughout his life there, Theodore Roosevelt, the 26th President of the United States, attracted national and international figures from every walk of life to the place. His personal and political commitment to environmental conservation laid the foundation for a conservation ethic in the United States that influenced a world-wide awareness of environmental policy and public land preservation.

As a former public centerpiece of the environmental conservation movement and unit of the National Park Service, Sagamore Hill National Historic Site will:

- *Comply with all applicable Federal, State, and local environmental laws, regulations, Executive Orders, and Department of the Interior environmental policies;*



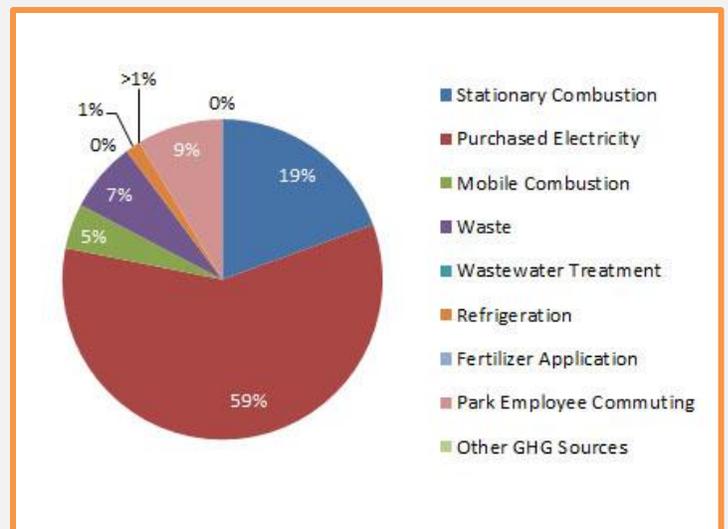
Visitors enjoying the park

- *Integrate and implement environmentally sensitive Best Management Practices including pollution prevention into all our operations;*
- *Consider the environmental impacts in planning, purchasing, and operating decisions;*
- *Provide environmental training and educate our staff on how to comply with environmental laws and be environmentally responsible on and off the job;*
- *Assign clear responsibility to our staff for environmental activities and hold them accountable for their environmental performance, recognizing superior effort when it is demonstrated;*
- *Seek opportunities to promote environmental compliance and stewardship to the visitors and neighboring communities we serve;*
- *Monitor our environmental compliance performance regularly at both operational and organizational levels and seek and implement opportunities for environmental improvement in how we do business.*

BASELINE GREENHOUSE GAS EMISSIONS PROFILE

SAHI developed a GHG inventory using the Climate Leadership in Parks (CLIP) tool. SAHI's GHG inventory for 2009 includes emissions from park operations, employee housing, and visitors. Sources from emissions include heating oil, propane, purchased electricity, gasoline and diesel use for park-owned vehicles and equipment, solid waste disposal, refrigerant use, and employee commuting.

Total GHG emissions for our baseline year of 2009 amounted to 232 MTCO₂E. At 134.1 MTCO₂E (59% of total park emissions), purchased electricity accounts represents the largest source of GHG emissions (as shown in the figure). Stationary combustion, at 63.7 MTCO₂E (19% of total park emissions), is the second largest producer of GHG emissions at SAHI. Park employee commuting contributed 20 MTCO₂E (9%) and waste contributed 16.2 MTCO₂E (7%) toward total park emissions. Having this baseline helps inform the goals and targets we have set and the actions we are taking to meet those.



To put our baseline year (2009) emissions into perspective, consider the following:

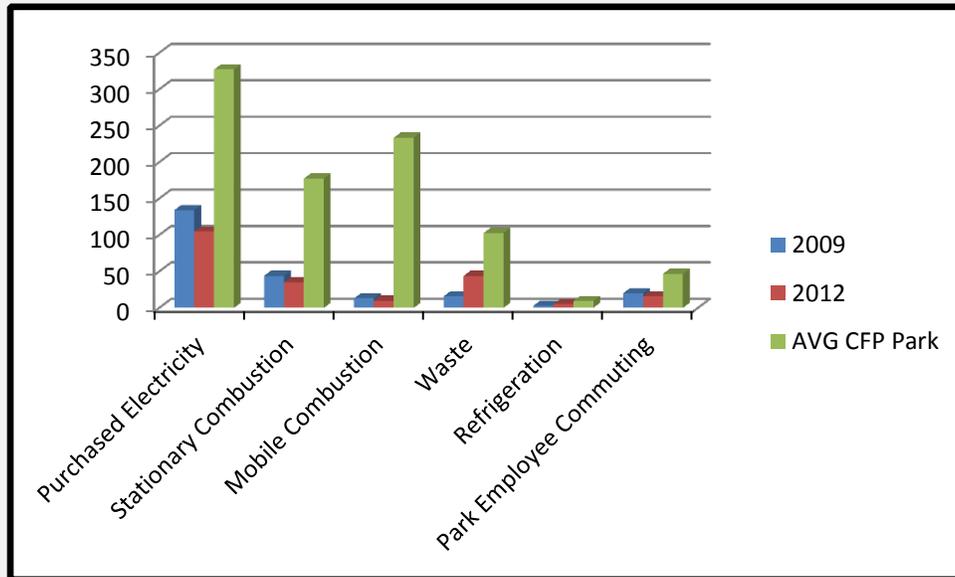
232 MTCO₂E is equivalent to:

- Annual GHG emissions from:** 48.8 passenger vehicles
- Co₂ emissions from** 26,106 gallons of gasoline consumed
- Energy use from** 21.2 homes
- Switching** 6,069 incandescent lamps to CFLs

Using 9,667 propane cylinders used for home barbeques.
Carbon sequestered by 5,949 tree seedlings grown for 10 years or 190 acres of U.S. forest in one year.

SAHI ACCOMPLISHMENTS

Prior to holding the CFP workshop, SAHI had already started to embark on our sustainability journey by embedding sustainability actions in our EMS. As part of these efforts, SAHI has taken a number of actions which have reduced our environmental impact. For example, between 2009 and 2012, these actions led to the park reducing overall GHG emissions by 8%. More specifically, the park has reduced GHGs from electricity by 21.6%, from stationary combustion by 21%, and from mobile source combustion by 10%. Waste and refrigeration went up for 2012, but these were temporary rises due to Superstorm Sandy. We expect that future studies will see a reduction in waste and refrigeration from 2009 levels.



To put our current achievements into perspective, consider the following:

In just 3 years, from 2009 to 2012, emissions from purchased electricity were reduced by 30 MTCO₂E. This savings is equivalent to one of the following per year:

Annual GHG emissions from 6.6 passenger vehicles
CO₂ emissions from 3,376 gallons of gas consumed
Energy use from 2.7 homes' energy use for one year
Switching 785 incandescent lamps to CFLs

Using 1,250 propane cylinders for home barbeques
Carbon sequestered by 769 tree seedlings grown for 10 years or 24.6 acres of U.S. forest in one year.

In the same time, our emissions from stationary combustion, mobile combustion, and employee commuting have collectively reduced by 16 MTCO₂E. More recent changes to employee scheduling and telecommuting have reduced our emissions by an additional 4 MTCO₂E. We have, then, reduced our GHG emissions from stationary combustion, mobile combustion, and employee commuting by 20 MTCO₂E.

This savings is equivalent to one of the following per year:

GHG emissions from 4.2 passenger vehicles
CO₂ emissions from 2,250 gallons of gas consumed
Energy use for 1.8 homes
Switching 523 incandescent lamps to CFLs

Using 833 propane cylinders used for home barbeques
Carbon sequestered by 513 tree seedlings grown for 10 years or 16.4 acres of U.S. forest in one year.



Achievements as of July 2014

Sustainability Concern	Completed Actions
<p>Energy Management At 134.1 MTCO₂E, purchased electricity is by far the largest contributor of greenhouse gas emissions at SAHI, accounting for 59% of total park emissions.</p>	<p>Performed energy audits for all park buildings, including housing, in 2009 and 2010. Recommendations presented in the energy audits included upgrading the lighting, improving temperature control, improving the building envelope, upgrading the HVAC, and installing lighting controls. As of December 2012, SAHI had upgraded all lighting and upgraded the building envelope for the Old Orchard Museum. As a result, SAHI has seen a 21.5% reduction from 2009 in GHG emissions from purchased electricity.</p>
<p>Fossil Fuel Consumption and Transportation The second largest contributor to SAHI's GHG emissions is stationary combustion, which accounts for 63.7 MTCO₂E, 19% of total park emissions. Mobile combustion, including park vehicle emissions, accounts for 10.9 MTCO₂E, 5% of total park emissions.</p>	<p>Installed exterior lights with motion sensors and dusk to dawn sensors.</p> <p>Right sized the fleet by reducing the overall number of vehicles and replacing vehicles with smaller and more fuel efficient models. The fleet includes a bio-fuel B20 compatible truck, E85 full-size van, and a hybrid vehicle. Electric vehicles are utilized as necessary for staff and visitor transportation on-site.</p>
<p>Transportation is a significant factor for GHG emissions at SAHI due in large part to its location: it is remote from public transportation and commutes are extended due to Long Island's high population density. At 20 MTCO₂E, employee commuting in 2009 contributed 9% of the park's total GHG emissions.</p>	<p>Established a no idling for staff and for busses. Staff are reminded of the no idling policy annually through all employee meetings. Signs in the bus parking area inform drivers of the no idling policy.</p> <p>Conducts site maintenance in an environmentally friendly manner. Some measures we have taken include: using appropriately sized equipment for each job, upgraded fuel tanks, and used oil (under 30 gallons) is recycled through the Town of Oyster Bay.</p>
<p>Stationary combustion, mobile combustion, and transportation together account for 94.6 MTCO₂E (33% of total park emissions).</p>	<p>Facilitated staff requests for alternative methods of transportation and alternative work schedules have reduced the GHG emissions of SAHI employees by 8 MTCO₂E.</p> <ul style="list-style-type: none"> - 4 employees participate in alternative work scheduling - 1 employee participates in telework. - 3 employees walk to work from on-site housing. - 1 employee reduces single car driving by taking the commuter rail to a nearby station. <p>Informed visitors of opportunities for walking and bicycling on site and using a combination of public transportation and taxis to travel to the park. Bicycle racks are available at the Visitor Center and the Old Orchard Museum.</p>

Achievements as of July 2014

Waste Management At 16.2 MTCO₂E, waste accounts for 7% of the park's total GHG emissions.	Measured and developed a baseline for waste generation at the park.
	Installed water bottle filling station to reduce single use plastic water bottles
	Established an agreement with the Town of Oyster Bay for paper, glass, plastic, aluminum and metal collection and processing.
	Installed recycle bins for paper/cardboard and co-mingled plastics, glass, and metal throughout the park, in both public and staff work spaces.
	Recycles toner and print cartridges through Lexmark and HP recycling programs.
	Participates in e-waste and battery recycling through the Town of Oyster Bay.
	Stocked the staff kitchen with reusable flatware, plates, bowls, and mugs.
	Encourages waste reduction through behavior, such as throwing away full, rather than partially full, bags of trash.
Water Management	Installed a swale to catch and filter rainwater from the Old Orchard Museum parking lot, minimizing the impact of heavy rain events on ground erosion and water runoff.
	Coordinated with Nassau County for maintenance of roads leading to the site. The county has subsequently put in a work order for reconditioning curbs, sidewalks, roads, and drainage leading up to the site. The work, which will hopefully begin in 2015, will help to limit erosion and improve water runoff.
	Installed automatic faucets and toilets in public areas.
	Replaced many high-flow toilets with low-flow toilets.
	Installed a water bottle filling station in the Visitor Center.
	Discussed plant management/watering with volunteers. The current policy to wait for signs of wilt before watering.
	Planted drought tolerant plants.
Education / Communication	Held a Climate Friendly Park workshop!
	Cooperates with groups and individuals monitoring bats, box turtles, horseshoe crabs and birds.
	Working to establish an environmental education partnership with the Audubon Sanctuary.
	Staff coordinate annual invasive weed treatments that include mechanical eradication efforts with local youth groups.
	Incorporated the message of climate change in interpretive programs such as a guided nature and a birding walks. In "Birding for Beginners", visitors compare birds they observe with a list of birds observed on the site by Theodore Roosevelt. A new education program, "Theodore Roosevelt: The Conservationist and Hunter" is currently under development.

GOALS & ACTIONS

As part of the CFP program, SAHI has developed a number of goals. To help meet these goals, the park will develop annual actions and track them through the EMS. The first year of those actions are listed out below. We will continue to chart our progress against the goals annually and refine our actions as part of the plan, do, check, act process.

2015 Action Plan	
Sustainability Concern	Planned Actions
Energy Management SAHI is committed to reducing our energy use through updating electronic equipment and lighting on a regular schedule and encouraging climate-friendly behavior and procedures.	Schedule energy audits on a 5 year cycle, beginning with 2015. SAHI will continue to address recommendations from the 2010 and future audits.
	Conduct an audit of computer hardware, printers, multi-function devices, and appliances. On a regular basis, dated hardware and appliances will be replaced as necessary and non-replacement will be considered. The current copier and fax machine will be replaced with a new copier with the capability to scan and fax. Defaults for the new copier will be set to black & white, double-sided printing. Staff will be encouraged to use the new copier as their primary printer.
	Pursue certification as a Dark Night Sky Park. Dark Night Sky Parks work to mitigate artificial light while recognizing the education, cultural, environmental, and scenic value of a natural dark sky. To this end, more efficient and less intrusive outdoor lighting will be installed.
	Encourage behavioral change to conserve energy: - Staff will be directed to turn lights off in office spaces and maintenance areas when unoccupied. Where possible, signs will be installed by light switches to remind staff to turn off lights in unoccupied rooms. The future possibility of installing motion detectors will be explored. - Staff will be directed to turn off all electronics at end of day per park policy. - Current heating and cooling facility standards will be reviewed. Controlled methods of thermostat management will be considered. - The use of space heaters will be eliminated per policy standard.
Fossil Fuel Consumption & Transportation SAHI is committed to reducing our fossil fuel consumption through maintaining a right-sized fleet, updating heating systems, and encouraging the reduction of the environmental impact of employee commuting where possible.	Maintain a right-sized fleet. As necessary, vehicles will be replaced with “green” vehicles (E85, B20, hybrid or electric). More specifically, electric mini vehicles will be replaced with rechargeable electric vehicles and gas mini utility vehicles will be replaced with hybrid or electric vehicles.
	Direct staff to abide by the no idling policy by installing no idling stickers on park vehicle windshields.
	Incorporate shuttles into event planning, where feasible.
	Encourage employees to reduce the environmental impact of their commute through alternative methods of transportation, such as using public transit and walking, telecommuting, and alternative work scheduling.
	Establish a policy for walking rather than driving personal or utility vehicles for travel through the park. SAHI will, additionally, explore the option of having a staff bicycle available on site. Staff will be encouraged to park at the Visitor Lot, a move that will reduce emissions as well as wear and tear on the park roads. SAHI will encourage 100% compliance.
Reopen the Theodore Roosevelt home with a new energy efficient heating system and UV filters on windows.	

2015 Action Plan

<p>Waste Management SAHI is committed to reducing our landfill contributions through maintaining a healthy and active recycling program and reducing the volume of waste overall.</p>	Assess and adjust, as necessary, signage, locations, and number of waste receptacles to reduce waste disposal on trails and in recycling receptacles.
	Explore the potential for beginning a recycle/return brochure program.
	Investigate the potential for installing water bottle filling stations in exterior locations to eliminate single-use water bottles.
	Explore the potential for providing a battery disposal box for visitors.
	Explore the potential for introducing a pack in/pack out for school group programs.
	Phase out printing and copying where possible. Opportunities to consider include time sheet and schedules.
	Identify opportunities to “green” items and reusable items at events such as all-employee meetings.
<p>Water Management SAHI is committed to managing the use, reuse, and flow of water on the site. In particular, SAHI is committed to reducing the environmental impact of heavy rain events, improving plant management policy, and reducing water use required through regular park and visitor activities.</p>	Implement green procurement guidance annually.
	Recondition road and trail surfaces to improve water runoff and limit erosion.
	Continue to coordinate with Nassau County for maintenance of roads leading to the site. The county has put in a work order for reconditioning curbs, sidewalks, roads, and drainage leading up to the site. The work, which will hopefully begin in 2015, will help to limit erosion and improve water runoff.
	Identify and replace high-flow toilets with low-flow toilets.
	Explore the possibility of replacing dated urinals with waterless urinals.
	Replace old appliances, as necessary, with energy efficient appliances will be installed.
<p>Education / Communication SAHI is committed to growing awareness and understanding of the effects of climate change. We believe that education is key to preserving our historic, cultural, and natural resources for the future. We have the fantastic opportunity to integrate climate change education into our current programs, which generally focus on historic and cultural interpretation. However, we also have the opportunity to strengthen our natural history and environmental issues interpretation in the spirit of Theodore Roosevelt.</p>	Establish a written protocol for plant management/watering.
	Explore the possibility of installing irrigation for more efficient and effective watering of plants and fruit trees.
	Partner with new groups and individuals and continue NPS I&M program to continue inventory and monitoring flora and fauna and beach changes on the site.
	Integrate climate change and sustainability practices into current education programs.
	Install educational materials in public bulletin board exhibit to encourage recycling, no idling, and other climate friendly actions.
	Print and distribute educational flyers to encourage visitors to adopt climate friendly behaviors.
	Strengthen natural history, environmental issues and natural resources education programs.
Create an exhibit for the visitor center that highlights how climate change has impacted the park and actions that the park has taken to mitigate climate change	
Implement staff education through sustainability topics at all-employee meetings and encouraging staff to visit NPS’ My Green Park’s website to explore the impact of individual efforts toward recycling, waste reduction, energy conservation and more. Meeting topics may include: temperature control, energy conservation (turning off lights and electronics), and rationale behind the no-idling policy.	

ROLES, RESPONSIBILITIES, & RESOURCES

The SAHI “Environmental Management Team” is an interdisciplinary group of park employees that regularly monitors and updates sustainability goals for the park. This team also works together to identify sustainability and climate change challenges, track progress toward achieving goals, and works with other staff to continually improve operations. Through their leadership, the park ensures that sustainability initiatives move forward and goals are accomplished.

EDUCATION & COMMUNICATION

By improving communication within SAHI, we are developing an environment that provides guidance and clarity while instilling ownership and support in accomplishing goals and initiatives. SAHI has improved communication amongst employees through all-employee meetings, all-employee memoranda and/or email messages, bulletin boards, and the park intranet site. We educate the general public about our climate change response and sustainable management of park resources through informal personal contacts, press releases, education programs and exhibits.

CONCLUSION

The elements of our EMS form the foundation of the environmental protection, climate change response, and sustainability work that we will accomplish at SAHI. We hope that visitors will check back in with us and see how we progress as our program continues to evolve!

CONTACTS

Climate Friendly Parks Program
Email: CFP@nps.gov
Website: www.nps.gov/climatefriendlyparks

Sagamore Hill National Historic Site
Email: SAHI_interpretation@nps.gov
Website: www.nps.gov



The Theodore Roosevelt Home

By identifying a greenhouse gas reduction goal, climate change response/sustainability actions, and outreach initiatives related to sustainability and climate change and sustainability topics, Sagamore Hill National Historic Site is an official members of the Climate Friendly Parks Program. For more information about the program, please visit the CFP website or contact the CFP team (information above).

	9/23/14
CFP National Representative	Date
	9-30-2014
CFP Regional Representative	Date
	9/30/14
Park Superintendent	Date