



## Climate Friendly Parks Action Plan 2014

This document reports commitments to reduce greenhouse gases (GHGs) and criteria air pollutants (CAPs) through the climate friendly management of park operations and increased education and outreach efforts. Developed using the Climate Friendly Park's CLIP (Climate Leadership In Parks) Tool, this Action Plan serves as a guide for meeting emission reduction targets through climate friendly behavior within the Park.

### CARL SANDBURG HOME NHS BECOMES A CLIMATE FRIENDLY PARK

As a participant in the National Park Service (NPS) Climate Friendly Parks (CFP) program, Carl Sandburg Home NHS belongs to a network of parks nationwide that are putting climate friendly behavior at the forefront of park operations and resource management. The action plan provides criteria and areas of emphasis that help frame specific priority actions we can take now, while retaining flexibility in responding to uncertainties.

As part of this program, Carl Sandburg Home 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, identified energy saving options and will integrate this action plan into a park-wide Environmental Management System (EMS).

### ENVIRONMENTAL POLICY & SUSTAINABILITY COMMITMENT STATEMENT

Carl Sandburg Home is committed to protecting and preserving its natural, cultural, and archeological resources through environmental stewardship as mandated by the Organic Act and the park's enabling legislation. This commitment includes energy, water, solid waste, chemical use, carbon footprint and GHG emissions reductions (collectively called sustainability) as required by federal Executive Orders, Department of the Interior, and NPS policy.

Our staff, volunteers, and contractors will be expected to follow our environmental, pollution prevention, energy reduction, and related procedures and programs. Together we will examine and conduct operations and activities in a professionally sound manner, effectively and efficiently complying with the letter, spirit, and intent of applicable environmental regulations, standards, executive orders, and policies related to sustainability.





**GOALS AND OBJECTIVES**

The objective of this Climate Friendly Action Plan is to identify actions that Carl Sandburg Home NHS can undertake to reduce its GHG emissions and thus address impacts of climate change. The plan further identifies the park’s emission reduction targets and associated reduction strategies designed to achieve the park’s emission reduction goals. While the plan does not provide detailed instructions on how to carry out each of the proposed measures, it provides the essential framework needed to meet Carl Sandburg Home NHS emission reduction targets. The plan presents an opportunity for the park to devote resources for climate action through a mandate from the park's superintendent. This mandate gives park staff the resources and authority to pursue the mitigation strategies contained in this plan. Carl Sandburg Home aims to operate the park in a carbon neutral manner by 2025 by implementing emission mitigation actions and carbon offset strategies. In order to meet this goal, the park will implement strategies proposed in this plan that are built upon the park’s current and future emission inventories.

Specifically, the plan recommends four main strategies:

Strategy 1: Reduce emissions from park facilities and operations by identifying and implementing emission mitigation actions

Strategy 2: Plan for and adapt to future impacts of climate change

Strategy 3: Increase climate change outreach and education efforts

Strategy 4: Evaluate progress and identify areas for improvement

**ACCOMPLISHMENTS**

Prior to holding the CFP workshop, the park had already started to embark on its sustainability journey by embedding sustainability actions into our park operations. As part of these efforts, Carl Sandburg Home NHS has taken a number of actions which have reduced our environmental impact. The cumulative actions cited below, initiated in 2007, have led to the park reducing overall GHG emissions by 10.4%. In addition, a number of other actions such as employee carpooling, use of green products, and recycling have been embraced by park staff as green behaviors.

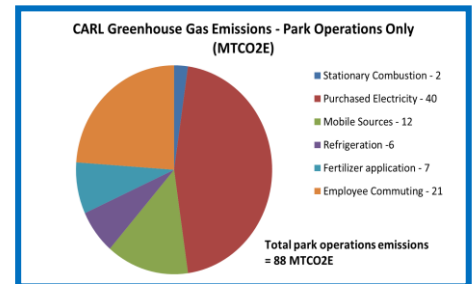
Sustainability Concern	Completed Actions
<b>GHG Emissions</b>	Performed energy audits for all park buildings and housing in 2010
	Purchased an electric visitor shuttle through equipment replacement and an electric Club Car for staff use
	Replaced 25 incandescent lights with fluorescent lights
	Constructed from recycled materials a heat generating solar collector with photo voltaic powered fan, to provide heat to a Quonset style cold frame. The park uses this to produce plants for the historic gardens.
	Initiated employee carpooling for two full time and occasional seasonal staff to ride share.
	Installed skylights in maintenance garage
	Installed timers on maintenance work area lights
	Installed on demand water heater at Tenant House
<b>Waste</b>	Measured and developed a baseline for waste generation at the park
	Segregated chemicals which will no longer be used by park staff from the general storage
	Conducted hazardous waste determination on suspect materials and disposed of properly
	Completed and implemented Integrated Solid Waste Action Plan (ISWAP) Expanded recycling program to include: plastic, paper, newspaper, cardboard,



	<p>aluminum, and ink cartridges</p> <p>Installed three rotating composters to manage garden debris and organic kitchen waste</p> <p>Began use of site generated goat manure for garden fertilizer and soil building</p> <p>Initiated policy that all wood debris that is chipped in the park remains in park for use on trails</p> <p>Purchased and use green and biodegradable products</p>
<b>Education / Communication</b>	<p>Held a Climate Friendly Park workshop!</p> <p>Completed a park wide chemical inventory by maintaining a list of all chemicals in the work place as a part of the HAZCOM plan.</p> <p>Developed a green team with members from each division</p> <p>Established partnership with Furman University Shi Center for Sustainability</p> <p>Published quarterly volunteer newsletter with column on living and working sustainably which reaches 180 volunteers, as well as park staff</p> <p>Embraced the Sustainable Jr. Ranger program developed by SERO.</p> <p>Acquired grant funding for Track Trails brochure program which highlights sustainable practices of the Sandburg's and ways visitors can be sustainable today</p>
<b>Water</b>	<p>Improved trail condition and trail maintenance to better manage storm water runoff.</p> <p>Installed a roof water runoff collection system at maintenance facility, which will be committed to irrigation lines to support a park tree and shrub nursery</p>

**BASELINE GREENHOUSE GAS EMISSIONS PROFILE**

Carl Sandburg Home NHS developed a greenhouse gas inventory using the Climate Leadership in Parks (CLIP) tool. Total GHG emissions from the park, including visitors, was 89 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e), equal to the operations of about 8 American households for a year. Because visitors park and walk inside the park, visitor emissions were only 1 MTCO<sub>2</sub>e. The largest single source of park operational GHG emissions was from purchased electricity at 40 MTCO<sub>2</sub>e, or 45%. To address the 1 ton of emissions from visitors and potentially the 21 tons from employees commuting to work, we are in the process of forging relationships with the community to establish alternative methods of transportation to this park and other points of interest in the community.



2012 GHG Emissions from Park Operations in Metric Tons

Emissions from the park's purchased electricity represent the largest source (as shown in the figure). Using the baseline data provides a starting point for us to identify the areas of highest impact to GHG and subsequent strategies to reduce these percentages.

**GOALS & ACTIONS**

As part of the CFP program, Carl Sandburg Home has developed goals through 2025. To help meet these goals, the park will develop annual actions and ultimately track them through the EMS which will be implemented next fiscal year. The first year of those actions are listed out below, followed by proposed actions to implement in the next five years. We will continue to chart our progress against our identified annual goals. We will refine goals and actions as needed and communicate our actions and decisions to the National and Regional offices, as well as to staff, volunteers, partners, and the public.



	GHG Emissions	Climate Change Response	Education
<b>Goal</b>	Reduce GHG emissions by 12% from baseline year of 2012 by 2025	Reduce energy use by 5% by 2025	Educate 25% of visitors annually about climate change and sustainability practices by 2020.
<b>2014 Action Plan</b>	<ul style="list-style-type: none"> <li>• Reduce idling by establishing and communicating a park wide no idling policy to park staff and visitors</li> <li>• Identify areas to eliminate mowing</li> <li>• Investigate the feasibility of installing quick charging stations for electric vehicles at the Visitor Parking Lot</li> <li>• Perform an investment grade energy audit for the park</li> <li>• Work with clean cities to review clean vehicle opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce winter temperature setting to 65F and increase summer setting to 75F</li> <li>• Utilize power strips in centrally located areas within park offices</li> </ul>	<ul style="list-style-type: none"> <li>• Create a park specific climate change message to share with every visitor coming to the park</li> <li>• 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</li> <li>• Provide training and information for interpretive staff to better equip them to support CFP and sustainability messages to visitors.</li> </ul>
<b>2015-2020 Action Plan</b>	<ul style="list-style-type: none"> <li>• Install solar panels on the Preservation Center (from previous energy audit)</li> <li>• Install solar powered lights with timers in the parking lot (also look into night skies program for parking lot)</li> <li>• Perform a feasibility study to assess the possibility of installing ground source heat pumps</li> <li>• Use Infrared gun throughout the various buildings onsite to look for areas that leak heat and old cold air</li> <li>• Work with clean cities to review clean vehicle opportunities</li> <li>• Implement planning actions and baseline info into Environmental Management System</li> </ul>	<ul style="list-style-type: none"> <li>• Review the feasibility of micro-hydro generation at the Front Lake Dam</li> <li>• Transition to more sustainable water heating</li> <li>• Upgrade old appliances to Energy Star</li> <li>• Install motion sensors for lighted areas</li> <li>• Transition to waterless urinals</li> <li>• Install more rainwater collection stations throughout the Park</li> <li>• Install the water bottle filling station and consider phase out of plastic water bottles sales in bookstore</li> <li>• Have zero waste events</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage behavioral changes at the park through information and action.</li> <li>• Install CFP interpretive information at the water bottle filling station</li> <li>• Review ability to collect glass for recycling</li> <li>• Add a dog waste disposal system to areas of the park</li> <li>• Have zero waste events</li> <li>• Look for community partners to find ways to work together on waste and recycling and interpretive initiatives</li> <li>• Add CFP's successes to educational information for visitors</li> <li>• Remove public trash cans and continue providing recycle bins</li> </ul>



- Perform a trash audit
- Default printers to double sided printing
- Adapt to visitor needs through developing web articles, education programs, signs, cultural landscape tours highlighting sustainable practices, both historic and current
- Look for community partners to find ways to work together on waste and recycling initiatives

**ROLES, RESPONSIBILITIES, & RESOURCES**

Park management will ensure that operations are conducted in the spirit and intent of being a Climate Friendly Park, will advise park’s Green Team and staff of mandates, initiatives, and protocols to ensure compliance as needed, and will encourage and demonstrate sustainable actions and decisions.

The “Green 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.

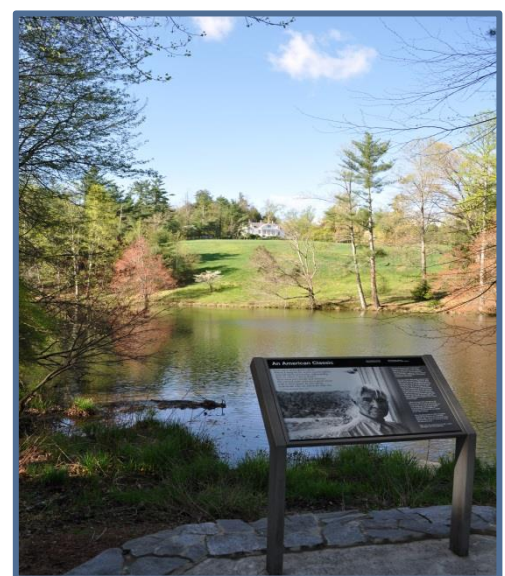
Park staff will be encouraged and supported in adopting Climate Friendly Parks behaviors and actions, and will assist in developing interpretive and educational messages for both staff and park visitors

**EDUCATION & COMMUNICATION**

We now know through social science surveys conducted in the parks that visitors are looking to the NPS staff for honest dialogue about the critical and sometimes debated issue of Climate Change. We must approach the future of preservation of our resources, and forging connections with visitors through science informed decision making and effective communication strategies. The park will continue to develop and sustain an environment that provides guidance and clarity while instilling ownership and support for our endeavors with our park partners, staff and the visiting public; in accomplishing our CFP action plans goals and initiatives.

Carl Sandburg Home NHS has the benefit of a cultural landscape that reflects past sustainable practices which provides an excellent opportunity to approach the issue of climate change in a positive way by incorporating this relevance into current and future interpretive programming.

Carl Sandburg Home NHS informs employees through all-employee meetings Park-wide training sessions and a monthly newsletter that highlights past and



*Sandburg Home overlooks Front Lake*



upcoming sustainability events within the parks and greater region. The newsletter (or a link) is emailed to all employees and posted on the Carl Sandburg Home NHS's website.

**CONCLUSION**

This action plan provides criteria and areas of emphasis that help frame the priority actions we can take now, while at the same time, recognizing that we must remain flexible and resilient as we adapt our management strategies and personal behaviors with innovation and ingenuity in facing this critical resource challenge.

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