



CONGAREE NATIONAL PARK

2014 CLIMATE FRIENDLY PARKS ACTION PLAN / ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) SUPPLEMENT

INTRODUCTION

As participants in the National Park Service (NPS) Climate Friendly Parks (CFP) program, Congaree National Park 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, these parks have 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 this park-wide Environmental Management System (EMS).



This EMS supplement takes a systematic approach to identifying and addressing environmental impacts at the park. It also

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, Congaree National Park is taking an integrated approach to climate change response and sustainable management of park resources.

ENVIRONMENTAL POLICY & SUSTAINABILITY COMMITMENT STATEMENT

Congaree National Park protects, studies, and interprets the resources, history, stories, and wilderness character of the nation's largest remaining tract of Southern old-growth bottomland forest and its associated ecosystems. The park protects numerous national and state champion trees in a primeval landscape nourished by a 14,000 square mile watershed. Congaree is also designated as a National Natural Landmark, an International Biosphere Reserve, a Globally Important Bird Area, a RAMSAR Wetland of International Significance, and a congressionally-authorized Wilderness Area. Congaree aims to be a leader in environmental stewardship and will do so as a member of the Climate Friendly Parks program.

ACCOMPLISHMENTS TO DATE

Park staff began embedding sustainability into park operations even before the CFP workshop. As part of these combined efforts, the park has taken a number of actions that have reduced the park's environmental impact (Table 1).

Table 1. Sustainability actions completed at Congaree National Park as of 2014.

Sustainability Concern	Completed Actions (as of 2014)
GHG Emissions	GHG Inventory – Congaree National Park conducted a greenhouse gas emissions inventory to gain better understanding of where emissions are coming from as they relate to park operations
Energy & Water	Green Power Partnership – Congaree National Park holds a certificate of partnership with the EPA Green Power program, which recognizes efforts to mitigate climate change through the purchasing of green power.
	Lighting – Congaree has already initiated an inventory and plans to change lighting in the Harry Hampton Visitor Center to efficient LED bulbs.
Transportation	Hybrid Vehicles – Congaree NP maintained a hybrid vehicle in the park fleet since 2010. Funds and contracts are in process to acquire two more hybrids by early 2015.
Waste	Composting – Staff started a composting program for dorm guests and program participants at the Old-Growth Bottomland Forest Research and Education Center facility.
	Recycling – Congaree National Park maintains an active recycling program for staff; visitor recycling is readily available, though there are opportunities for expansion.
Education / Communication	Climate Friendly Parks Workshop – Hosted a Climate Friendly Park workshop to discuss climate change issues and sustainability actions for Congaree National Park and partners.

BASELINE GREENHOUSE GAS EMISSIONS PROFILE

Park staff developed a 2013 baseline GHG emissions inventory for Congaree National Park using the Climate Leadership in Parks (CLIP) tool. The inventory revealed a total of 290 metric tons of carbon dioxide equivalent (MTCO₂E; Table 2, Figure 1). For reference (<http://www.epa.gov/cleanenergy/energy-resources/calculator.html>), this is roughly equivalent to burning 32,632 gallons, or 3.8 tanker trucks, of gasoline per year. In terms of coal, this is about the same as 311,493 pounds, or 1.6 railcars per year; this may sound like a lot, but many coal-fired power plants burn several cars every day. To compare this number with carbon in natural landscapes, 290 MTCO₂E is the amount of carbon stored by 7,436 tree seedlings grown for ten years or the amount of carbon stored in a single year over 238 acres of forest.

Purchased electricity and mobile combustion (vehicle fleet) are the two largest contributors to park emissions; they also seem represent the largest potential targets for GHG emissions reduction. Employee commuting is the third largest contributor, but this may be more difficult to manage given the park’s geographic location and staffing needs. Other contributions were fairly minor. Because the park uses well water and septic systems, the GHG footprint was not impacted by emissions associated with water supply and wastewater management. Visitor travel to the site was not included in the scope of the inventory. This baseline helps inform the goals and targets the park has set and the actions staff are taking to meet those goals. It also helps engage in the sustainability conversation with park visitors.

Table 2. The 2013 GHG emissions for Congaree NP totaled 290 metric tons of CO₂ equivalent (MTCO₂E)

Item	MTCO ₂ E	Percent
Purchased Electricity	149	51.4%
Mobile Combustion	73	25.2%
Employee Commuting	59	20.3%
Waste	6	2.1%
Refrigeration	2	0.7%
Stationary Combustion	1	0.3%
TOTAL Emissions	290	100%

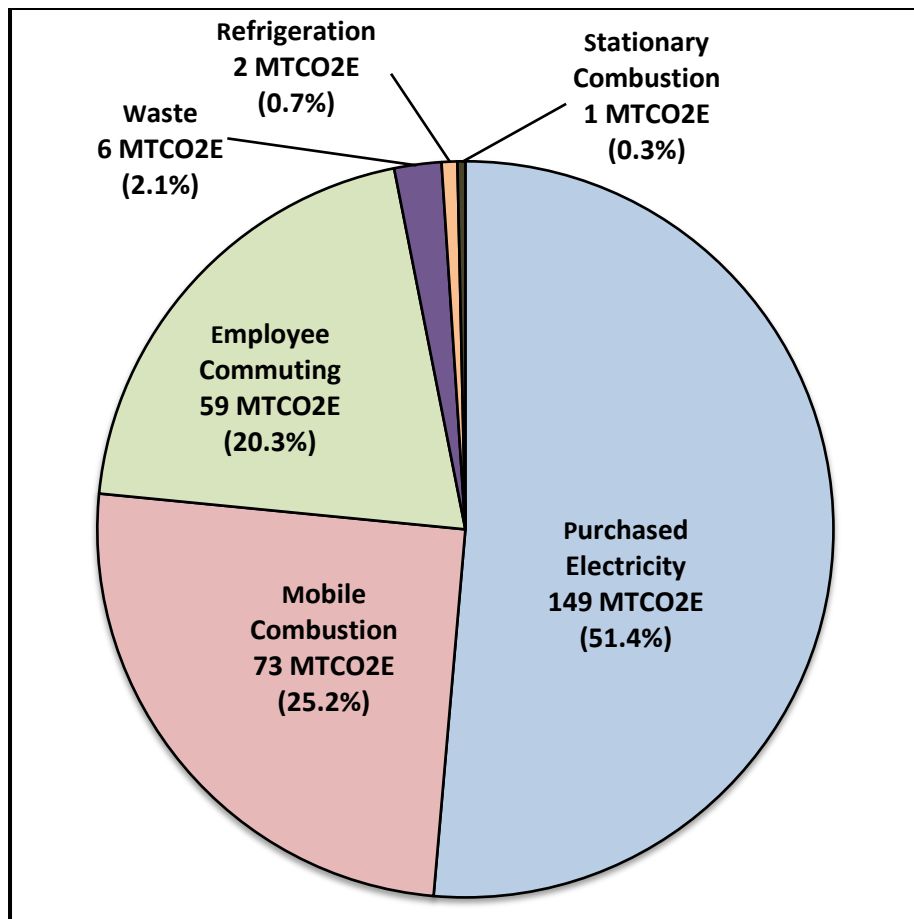
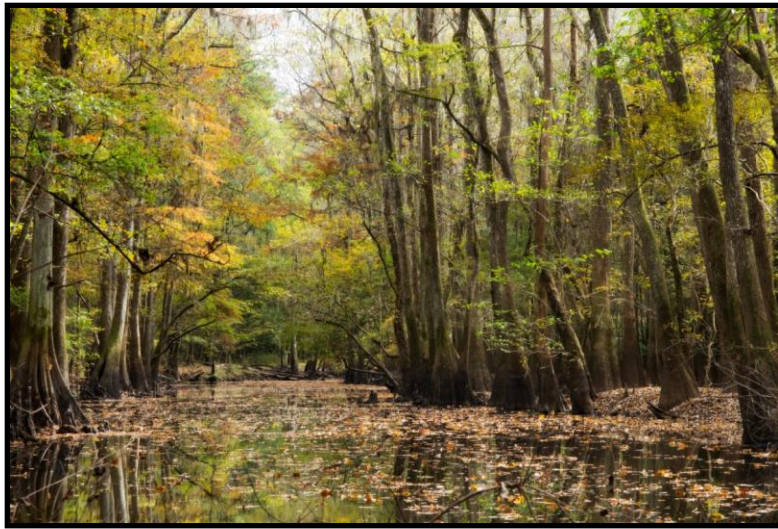


Figure 1: The 2013 GHG emissions for Congaree NP totaled 290 metric tons of CO2 equivalent (MTCO2E)

GOALS & ACTIONS

As part of the CFP program, Congaree has identified a number of goals. To help meet these goals, the park will develop annual actions and track them through the EMS. A subset of the first year’s actions are listed in Table 3. The park will continue to chart our progress against the goals annually and refine our actions as part of our annual EMS review.

Table 3. Subset of sustainability goals and actions for Congaree National Park in 2015			
	GHG Emissions	Climate Change Response	Education
Goal	Reduce GHG emissions by 5% (2013 baseline) by 2020.	Reduce energy and water use.	Educate visitors about climate change and sustainability practices.
2015 Action Plan	<ul style="list-style-type: none"> Research opportunities for full-building energy / performance audits Research opportunities and initiate PMIS projects for installing solar projects such as hot water heaters 	<ul style="list-style-type: none"> Create a staff Green Team with representatives from all divisions Complete park-wide lighting inventory to identify replaced fixtures and those needing to be replaced Reduce solid waste generation through expanded composting programs Replace water fountains with bottle filling stations Review office power supply options (power strip placement) to minimize vampire power. 	<ul style="list-style-type: none"> Update recycling infographic for park-wide receptacles Utilize park-based research findings to develop Congaree’s climate change messages – share these through park programs, website, and social media



ROLES, RESPONSIBILITIES, & RESOURCES

A primary outcome of the initial Climate Friendly Parks effort at Congaree National Park is the formation of a “Green Team.” This is an interdisciplinary group of diverse employees that, with the support of the superintendent, regularly monitors and updates sustainability goals for the park. This team also works together to identify sustainability challenges, identify opportunities, promote accountability, and track progress toward achieving goals. Through their leadership, the park ensures that sustainability initiatives move forward and goals are accomplished.

EDUCATION & COMMUNICATION

Congaree National Park is working to improve communication with staff, partners, and visitors. This involves providing guidance and clarity while instilling responsibility to accomplish set goals. Congaree has improved communication amongst employees through all-employee meetings, training opportunities, and climate change programming with partners. Many of these partners were involved in the initial workshop, and many of them are also involved in climate change communication in the local area. Distillation of specific “Congaree Climate Change” talking points will help streamline and simplify the fundamental issues involved.

CONCLUSION

The elements of this EMS supplement form the foundation of the environmental protection, climate change response, and sustainability work pursued by Congaree National Park. We hope that visitors will check back in with us and see how we progress as our program continues to evolve!

CONTACTS

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

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CFP National Representative Date

Robin Z. Cook 12/18/14

CFP Regional Representative Date

J. Tracy Stabel
Park Superintendent Date
12/16/14