



HOMESTEAD NATIONAL MONUMENT OF AMERICA: *CLIMATE FRIENDLY PARKS ACTION PLAN 2015*

INTRODUCTION

As participants in the National Park Service (NPS) Climate Friendly Parks (CFP) program, Homestead 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 a park-wide Environmental Management System (EMS).



The EMS 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, Homestead is taking an integrated approach to climate change response and sustainable management of park resources.

ENVIRONMENTAL POLICY & SUSTAINABILITY COMMITMENT STATEMENT

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

Our staff and volunteers 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.

Homestead has long been a pioneer in sustainability and will continue to make environmental stewardship visible to visitors and stakeholders through implementation of sustainable practices, interpretation, education and public engagement. This will demonstrate Homestead's environmental commitment and encourage the public to follow its lead. Through the many accomplishments and through future actions and commitments, Homestead National Monument of America hopes to become a leader in the Climate Friendly Parks Program.

ACCOMPLISHMENTS

Homestead has long been a leader in sustainability; in the late 1970s the park was a pioneer in the use of solar power and the use of geo thermal energy. As part of these efforts, the park has taken a number of actions which have reduced our environmental impact. For example, solar powered lights illuminate our parking lots. In our Maintenance Division, we are

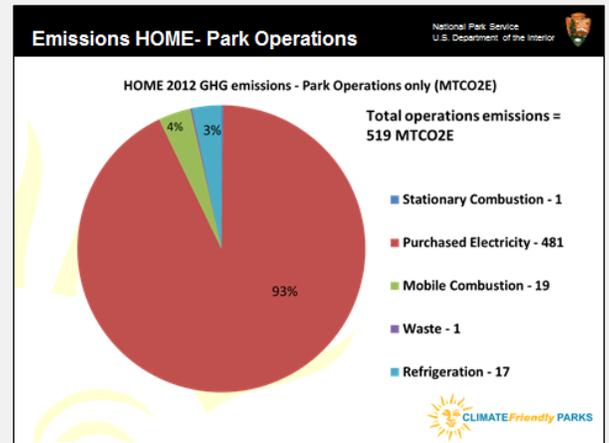
utilizing a 2013 Dodge Ram with E85 fueling capabilities. Our Maintenance Division also utilizes bio-fuels for all of our diesel components. Homestead as a whole shows commitment to the ideals of sustainability through our active recycling program and actively promotes sustainable practices through active interpretive programs. After conducting our CFP Workshop, we are ready to take on new ideas and accomplish new goals.

| Sustainability Concern | Completed Actions |
|----------------------------------|---|
| GHG Emissions | Performed energy audits for all park buildings including concessions and housing in 2010. |
| | Replaced over 500 incandescent lights with more energy efficient lights. |
| | The Heritage Center transitioned to LED Track Lighting from an old system of incandescent bulbs. |
| | Right-sized the fleet by reducing the overall number of vehicles and replacing vehicles with smaller and more fuel efficient models. |
| | The Education Center had a complete Fixture Replacement transitioning from the outdated T-12. Fluorescent tubes to the more efficient T-8 and LED fixtures. |
| Energy | The park Maintenance Build transitioned from the T-12 Fixtures to the T-8 and LED fixtures. |
| | Updated the park's Geo-Thermal heating and cooling system for the Education Center. |
| Education / Communication | In an effort to better conserve wasted energy, the Education Center installed automatic lighting, which turns off lights automatically when not in use. |
| | Held a Climate Friendly Park workshop! |
| | Encourage recycling in public areas. |
| | Developed bathroom displays focused on water conservation. |

BASELINE GREENHOUSE GAS EMISSIONS PROFILE

Homestead developed a greenhouse gas (GHG) inventory using the Climate Leadership in Parks (CLIP) tool. The largest single source of GHG emissions from park operations was purchased electricity (481MTCO₂E, as shown in the figure). Having this baseline helps inform the goals and targets we have set and the actions we are taking to meet those.

For Homestead, purchased electricity is the largest contributor, accounting for 93% of the park's total emissions. Mobile combustion is the next largest source of GHG emissions at 4%. The total park emissions are 519 MTCO₂e.



In 2008 a new building (visitor center) significantly increased energy use at the site. Energy consumption at the park is all from electricity. Costs and intensity have both increased, but are now leveling off. The site now does more school and other events than previous years and some increased equipment onsite which may explain some of the increase in intensity.

Homestead has had an energy and water audit in the past, but we can get a new audit done to update the information. With the new incentives and drop in prices of technology, there may be more options of how to reduce park energy and water use.

GOALS & ACTIONS

As part of the CFP program, the park has identified a number of goals. To help meet these goals, the park will develop annual actions and track them through the EMS. Subsets of the first year's actions are listed below. We will continue to chart our progress against the goals annually and refine our actions as part of our annual EMS review.

| | GHG Emissions | Climate Change Response | Education |
|-------------------------|---|---|---|
| Goal | Reduce GHG emissions by 15% from baseline year of 2012 by 2017 | Reduce energy use by 10% by 2019 | Educate 3000 visitors about climate change and sustainability practices by 2017. |
| 2016 Action Plan | <ul style="list-style-type: none"> • Complete a comprehensive energy audit for all park buildings to understand building-by-building performance. • Research opportunities for hybrid and/or alternative fueled vehicles for in-park use. • Submit grant for electric vehicle charging stations accessible to visitors and park vehicles | <ul style="list-style-type: none"> • Research energy conservation opportunities for the park’s Heritage Center (e.g. install curtains and/or UV films for windows) • Replace current HC environmental system with Geo-thermal heat pump. • Install energy-efficient light bulbs in the EC multi-purpose room | <ul style="list-style-type: none"> • Promote staff behavior changes to reduce energy use including options to shutoff parts of the buildings and adjust thermostat temperature ranges • Identify 2-3 park-specific climate change messages to share with visitors |

ROLES, RESPONSIBILITIES, & RESOURCES

Homestead National Monument of America’s Green Committee 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 Homestead, we are developing an environment that provides guidance and clarity while instilling ownership and support in accomplishing goals and initiatives. The park has improved communication amongst employees through all-employee meetings, park-wide training sessions and a monthly newsletter that highlights past and upcoming sustainability events within the parks and greater region. The newsletter (or a link) is emailed to all employees and posted on the Homestead’s websites.



CONCLUSION

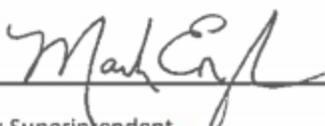
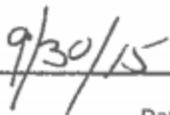
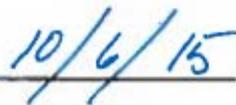
The elements of our EMS form the foundation of the environmental protection, climate change response, and sustainability work that we will accomplish at the Homestead National Monument of America. We hope that visitors will check back in with us and see how we progress as our program continues to evolve!

CONTACTS

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

Homestead National Monument of America
Website: www.nps.gov/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, Homestead National Monument of America 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).

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| Park Superintendent | Date |
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| CFP Regional Representative | Date |
| SHAWN NORTON <small>Digitally signed by SHAWN NORTON DN: c=US, o=U.S. Government, ou=Department of the Interior, ou=National Park Service, cn=SHAWN NORTON, 0.9.2342.19200300.100.1.1=14001000180175 Date: 2015.10.08 14:00:20 -04'00'</small> | 10/8/2015 |
| CFP National Representative | Date |