



## Greenhouse Gas Mitigation

### Background

The challenges of climate change have pushed Federal Land Managers to think and act on an ecosystem scale, creating unprecedented partnership opportunities with other land managers, policy makers and the public. At the same time the National Park Service (NPS) must demonstrate sustainability through leadership; in how we operate and manage our facilities, vehicles and lands; how we conserve energy; and how we engage innovative leadership at all levels.

The NPS is committed to conserving forest carbon stocks, reducing our greenhouse gas emissions by reducing our operational footprint, expanding our sustainable practices, and sharing information about the actions we are taking with the visiting public, partners and surrounding communities.

### Approach

There are two general approaches to greenhouse gas mitigation:

- Natural carbon storage in vegetation as a side-benefit of natural resource management actions such as forest conservation, habitat restoration, and fire management; and,
- Reduction of emissions from oil, coal, and other fossils fuels used for vehicles and buildings.

In keeping with the NPS mission of preserving resources, the first priority is to protect existing natural systems that hold carbon, old-growth forests and wetlands. Although existing federal guidelines do not require or recommend including ecosystem sequestration in greenhouse gas (GHG) inventories, national park forests contribute to removing CO<sub>2</sub> from the atmosphere and contain carbon at some of the highest densities in the world.

To address the second approach, the NPS developed the *Green Parks Plan (GPP)*, an implementation road map for GHG mitigation and sustainability efforts as a component of the *NPS Climate Change Response Strategy*.



Above: An electric vehicle charging station is available to visitors at Thomas Edison National Historical Park. NPS Photo

Bottom left: Solar panels at Craters of the Moon National Monument. NPS Photo

This plan establishes goals for energy conservation and GHG emission reductions, significant areas where we can demonstrate environmental and operational leadership and make our greatest contribution to a global effort to use resources more mindfully.

First released in 2012 and updated to reflect progress-to-date and continual improvement goals in 2016, the GPP is the sustainability roadmap for the NPS. At the core of the GPP is a comprehensive and vigorous Environmental Management System (EMS) framework to guide planning, monitoring, and reporting on our goals and objectives. A key goal of the GPP is for all parks to identify sources (i.e., park operations) and calculate their GHG emissions. To do so, many parks engage in the Climate Friendly Parks (CFP) Program which has promoted sustainable operations and climate change education in parks since 2003. The CFP Program helps each park establish a GHG emission inventory baseline and set conservation targets with meaningful actions to achieve emission reductions while emphasizing resource conservation, energy improvements, and renewable energy.

By conducting GHG emission inventories, the NPS is able to track progress in reaching efficiency and reduction goals and share that progress with visitors and partners to encourage sustainable actions beyond our park borders. Results of these actions can be tracked in combination with all the mitigation efforts outlined in the *Green Parks Plan* and the *NPS A Call to Action*.

### More Information

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## Status and Next Steps

Goal Category	Description	Status in 2016	2025 Objective
<b>Continuously Improve Environmental Performance</b>	The NPS will meet and exceed the requirements of all applicable environmental laws and adopt sustainable best practices in all facility operations.	NPS encourages innovation and the sharing of best practices both internally and externally to incorporate sustainability.	The NPS will continue and expand the use of environmental management systems (EMS) to implement the GPP and integrate sustainability across planning initiatives.
<b>Be Climate Friendly and Climate Ready</b>	The NPS will reduce Greenhouse Gas emissions and adapt facilities at risk from climate change.	The primary drivers of NPS GHG emissions are facility energy consumption and fleet operations.	Reduce Scope 1 and 2 GHG emissions associated with NPS operations by 36% by 2025 from the 2008 baseline, and Scope 3 GHG emissions associated with NPS operations by 23%.
<b>Be Energy Smart</b>	The NPS will improve facility energy performance and increase reliance on renewable energy.	Electricity use accounts for over 40 percent of NPS annual GHG footprint.	Reduce servicewide building energy use per square foot (energy intensity) by 25% by 2025 from the 2015 baseline. Implement energy conservation, efficiency, renewable energy use, and tracking.
<b>Be Water Wise</b>	The NPS will improve facility water use efficiency.	Continue to implement efforts to conserve and reduce water use.	Reduce potable water use intensity by 36% by 2025 from the 2007 baseline. Improve tracking of use and water conservation measures.
<b>Green Our Rides</b>	The NPS will transform our fleet and adopt greener transportation methods.	Transportation accounts for over 30% of annual GHG emissions from NPS operations.	The NPS will reduce the fleet-wide average GHG emissions per mile traveled by vehicles.
<b>Buy Green and Reduce, Reuse, Recycle</b>	The NPS will purchase environmentally friendly products and increase waste diversion and recycling.	NPS is adhering to green purchasing principles and pursuing opportunities to reduce waste generation and disposal.	Reduce solid waste generation in parks and annually divert at least 50 percent of solid waste from landfills through recycling, composting, and other practices.
<b>Preserve Outdoor Experiences, Promote Healthy Engagement</b>	The NPS will promote healthy outdoor experiences and minimize the impact of facility operations on the environment.	Minimize operational impact on environment to ensure visitor enjoyment.	NPS will continue to reduce the impact of Service operations on the environment and seek to preserve night skies, natural sounds, water quality, ecosystems, and viewsheds to improve the visitor experience and protect natural and cultural resources.
<b>Strengthen Sustainability Partnerships (NEW GOAL)</b>	The NPS will incorporate sustainability initiatives into new and existing partnerships.	Through an NPS/WCU Partnerships, national parks are receiving climate change vulnerability assessments and exposure maps to identify assets at risk due to climate change including sea level rise, erosion, storm surge.	Integrate sustainability and operational resilience principles, actions, and initiatives into existing partnerships.
<b>Foster Sustainability Beyond Our Boundaries</b>	The NPS will engage visitors about sustainability and invite their participation.	NPS demonstrates sustainable practices.	Inform visitors, partners, and surrounding communities about the impacts of climate change on parks; describe what we are doing to reduce our own emissions; and engage youth in sustainability initiatives to encourage individuals to implement sustainable actions.
<b>Green Our Grounds (NEW GOAL)</b>	The NPS will enhance the sustainability of our landscapes.	Preserving NPS resources, including landscapes, for the enjoyment of future generations is our statutory responsibility.	Incorporate sustainability into the planning, design, and maintenance of our landscapes.