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Draft

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1. Introduction

The purpose of this handbook is to familiarize candidate parks with the Climate Friendly Parks (CFP) program. The handbook explains the program and outlines the responsibilities of the park, EPA, and NPS Headquarters throughout the CFP planning process.

Due to EPA's technical expertise and experience in voluntary environmental protection projects (especially voluntary mitigation projects), emissions inventories, and science communication, DOI/NPS has asked EPA's Program Integration Branch to collaborate in responding to the President's February 2002 call for voluntary action on climate change. The Climate Friendly Parks initiative is one of several programs within the Green Parks Partnership Program at the National Park Service.

The Climate Friendly Parks program adds the climate change/energy efficiency aspect to the Green Parks Partnership Program, which already collaborates with EPA in implementing Green Purchasing. In 2005, NPS and EPA expanded the CFP program mandate to include a criteria air pollutant (CAP) component as well.

The Climate Friendly Parks program provides a means to bring to the public eye a voluntary, intergovernmental effort to respond to climate change and the problems that result from CAP emissions; participating parks take mitigation and sustainability actions and then educate the public about what they are doing and how and why they are doing it. The goals of the CFP program are as follows:

- **Educate** park staff on the climate change and air quality issues, especially in relation to each particular park's natural resources, through workshops, preparing a greenhouse gas (GHG) and CAP inventory and providing educational materials.
- **Mitigate** climate change and air quality impacts in the parks through the implementation of an action plan created through the Climate Friendly Parks Program to reduce emissions in the park and provide examples to visitors on how to reduce emissions in their communities.
- **Communicate** to park visitors and the community the importance of reducing emissions and the success stories from the parks' mitigation work in the program through helping NPS develop creative labels on energy efficient projects in the parks, interpretive programs in the parks and in the communities, educational programs in schools, and wayside exhibits, to name but a few.

By changing lights and heating/air conditioning mechanisms to energy efficient ones, reducing vehicle traffic in the parks wherever possible, recycling all recyclable waste and buying recycled and recyclable products, taking eco-friendly measures along coastlines, etc., National Parks can serve as visible examples of what can be done at the community, corporate, or even household level to reduce greenhouse gas emissions and save money that can then be put toward preserving natural resources. The Park Service has recently begun adding state-of-the-art Research Learning Centers to their sites—ideal places in which to add the project's most valuable component: educating the public about the impacts of GHG and CAP emissions, thereby empowering those who ask what they can do to protect the environment.

Responsibilities of a Climate Friendly Park:

- Conduct a greenhouse gas and criteria air pollutant emissions inventory for the park.
- Assess the health of the park's (and, where appropriate, surrounding community's) ecosystems and natural resources and their ability to be sustained in the face of global change.
- Develop an action plan to reduce greenhouse gas and criteria air pollutant emissions, raise awareness among the public, and sustain the health of ecosystems and natural resources. The action plan will be integrated into the park's Environmental Management System (EMS).
- Identify park staff who will serve as local climate change "experts" and energy efficiency

champions to ensure the action plans developed by the park are implemented and communicated to the public.

- Implement actions identified within the plan. These could include efforts, for example, to reduce energy consumption and to assess eco-friendly responses to sea level rise.
- Pursue partnerships with corporations, organizations, concessionaires, and/or surrounding communities to carry out the identified actions.
- Develop and implement a community outreach and education plan.

The CFP program is a park-by-park initiative. Participating parks work with representatives from EPA's Program Integration Branch and NPS Headquarters throughout the planning and implementation processes. The four central elements of the CFP program are:

- A two-day CFP strategic planning workshop
- A greenhouse gas/criteria air pollutant inventory
- An Action Plan that addresses a park's GHG and CAP emissions and includes a strategy to implement community outreach and education efforts
- Sustained follow up with technical assistance from NPS Headquarters and EPA.

CFP Workshop Planning

The participating park is required to conduct a two-day CFP workshop that includes enough key staff members of varying job titles and responsibilities to make the goals of the workshop viable. The workshop planning and production process was established by the CFP pilot, launched at Gateway National Recreation Area, New York, but may be tailored to fit the participating park's needs.

Parks will be asked to join four planning meetings conducted by the EPA/NPS CFP team to customize the workshop agenda and production tasks. *Section 2* contains sample planning meeting/conference call agendas. A sample workshop agenda and cover letter is contained in *Section 3*. See *Section 4* for a detailed list of proposed tasks and assignments. Planning meetings are conducted in Washington D.C.; park representatives are invited to join via phone or in person. An on-site meeting at the park usually enhances the planning process, but will be dependent on travel funds.

Greenhouse Gas/Criteria Air Pollutant Emissions Inventory

Each park that joins the program will undergo an analysis of greenhouse gas/criteria air pollutant emissions and receive a comprehensive inventory of those emissions following the workshop. A site visit may be necessary and could be conducted in conjunction with the planning team's on-site meeting. *Section 5* provides an overview of the emissions inventory component of the CFP Initiative.

Action Plan

Following the workshop, participating parks are obligated to develop an action plan within the EMS framework. To support this process, EPA will provide participating parks with tools such as planning templates and educational resources. The action plan template is provided in *Section 6*. The action plan should identify initiatives and milestones and the resources associated with them, along with measures of success to track progress.

Follow Up

EPA is committed to assisting the planning and implementation process of CFP initiatives. EPA will consider requests from the participating park for ongoing technical assistance. EPA will also arrange and attend strategic planning meetings 6 months and 1 year after the workshop, along with interim meetings if needed.

The Action Plan that resulted from the Gateway NRA Workshop is contained in *Section 7*. This report contains actions that were devised during workshop presentations and breakout sessions. Action Plans may differ in content and design depending on a park's needs.

2. Planning Meeting Agendas

Conference Call Meeting 1 (12 weeks out)	
Time Allotment TBD	Review Objectives of Climate Friendly Parks Initiative <ul style="list-style-type: none"> ➤ Review handbook and make modifications to program design ➤ Review milestones of the program ➤ Discuss action plan, EMS, and follow up support for Climate Friendly Parks Program
	Workshop Agenda <ul style="list-style-type: none"> ➤ Tailor focus of presentations to meet park's needs ➤ Suggest speakers
	GHG/CAP Inventory <ul style="list-style-type: none"> ➤ Overview of inventory process ➤ Set timeline for data collection
	Workshop Invitees <ul style="list-style-type: none"> ➤ Identify stakeholders at park (e.g., key staff and partners) ➤ Identify stakeholders in community ➤ Identify regional government agency partners

Conference Call Meeting 2 (8 weeks out)	
Time Allotment TBD	GHG/CAP Inventory <ul style="list-style-type: none"> ➤ Progress update on data collection
	Agenda <ul style="list-style-type: none"> ➤ Suggestions for final revisions ➤ Suggestions for speakers ➤ Suggestions for facilitators
	Workshop Date <ul style="list-style-type: none"> ➤ Confirm date of workshop ➤ Confirm invitees ➤ Define invitations: What is the best way to notify staff at your park? When should they be notified? How and when should other participants (e.g., concessionaires, community stakeholders, other government agencies, and park partners) be notified?
	Site visit (optional) <ul style="list-style-type: none"> ➤ Set date

Site Visit (optional)	
Time Allotment TBD	Tour of park
	Meet with park stakeholders or Green Team
	Agenda <ul style="list-style-type: none"> ➤ Review agenda and define guidance for breakout sessions
	Confirm speakers

Conference Call Meeting 3 (4 weeks out)	
Time Allotment TBD	Preparatory Materials <ul style="list-style-type: none"> ➤ Decide on preparatory materials to be distributed at or before the workshop ➤ Assess intranet capabilities
	Assess meeting space and available technical equipment
	Workshop Objectives <ul style="list-style-type: none"> ➤ Tailor workshop objectives to park

Conference Call Meeting 4 (2 weeks out)	
Time Allotment TBD	Workshop Production <ul style="list-style-type: none"> ➤ Identify and assign remaining workshop production tasks ➤ Confirm equipment and supplies
	Facilitation <ul style="list-style-type: none"> ➤ Train facilitators
	Evaluation
	Confirm Attendees and game participants
	Assign participants to breakout groups and assess group categories

3. Sample Workshop Agenda and Cover Letter

This section presents the workshop agenda from Glacier NP's Climate Friendly Parks workshop. It includes presentations given by scientists, community stakeholders, and climate change specialists. The majority of time, however, was allotted for interactive activities and facilitated breakout sessions. For breakout sessions, participants were divided into four specialty groups: transportation, resources management, facilities management, and visitor protection and fire management (Groups are decided based on the park's management structure and may change from park to park). Each group is asked to brainstorm initiatives in their area of expertise that help to reduce greenhouse gas emissions or educate coworkers, visitors, and the community about climate change. At the culmination of the workshop, all groups meet together to develop goals and milestones for the park that will serve as the basis of the action plan. Workshop facilitators will assist park staff in integrating the action plan into the park's EMS. As all future CFP workshops will now include mitigation and education efforts for criteria air pollutants, the workshop agenda for your park will reflect a CAP as well as a GHG component.

If desired, workshop packets can be provided for all workshop participants. An agenda and a cover letter explaining the workshop objectives are recommended components of the packet. A sample cover letter from Gateway NRA's workshop is included in this section following the workshop agenda.

Climate Friendly Parks: Moving From Knowledge to Action
Waterton-Glacier International Peace Park
December 9-10, 2003

Location: Best Western Rocky Mountain Lodge
6510 Highway 93 South
Whitefish, MT 59937
Phone: 406/862-2569

Agenda

Day 1:

7:30 – 8:30 **Registration**

8:30 – 9:15 **Setting the stage:**

- Introductions/Welcome – *Mick Holm, Superintendent of Glacier National Park*
- Why Should Parks Be Concerned about Climate Change – *Julie Thomas, NPS WASO*
- Overview of the NPS Sustainability Program and the Climate Friendly Parks Initiative – *Shawn Norton, NPS WASO*
- Goals of the workshop – *Karen Scott, EPA*

9:15 – 10:15 **Climate Change: Global and Regional Impacts**

Panel presentation on what we know and what we don't know about climate change
– *Leigh Welling: moderator*

Panel members: *Dan Fagre, Ecologist, US Geological Survey Glacier Field Station; Bob Keane, Fire Ecologist, US Forest Service Fire Sciences Lab; Philip Mote, State Climatologist, University of Washington; David Welch, Head of Environmental Quality, Parks Canada*

10:15 – 10:30 Q&A

10:30 – 10:45 **BREAK**

10:45 – 11:45 **Linking Climate Science to Human Needs and Values**

Panel discussion of how our communities can and should respond to the existing knowledge of climate change and its impacts – *Dave Dahlen: moderator*

1st round panel discussants: *Bob Gough, Intertribal Council on Utility Policy; Jerry O'Neal, Deputy Superintendent, Glacier National Park; Lex Blood, Founder, The Glacier Institute; Susie Burch, Board Chair, Kalispell Chamber of Commerce*

2nd round panel discussants: *to be determined at workshop*

11:45 – 12:15 **LUNCH** (Provided on-site)

Charting a Course for Waterton-Glacier

12:15 – 12:30

Participants are asked to identify significant operations and management activities that are planned for coming years and to list these on flip charts.

12:30 – 1:15 Glacier National Park’s Effect on Climate Change

- Glacier’s Greenhouse gas emissions inventory results – *Anne Choate, ICF Consulting*
- Q&A

1:15 – 2:00 Where are our biggest challenges/opportunities?

Discussion on which upcoming park projects and activities present the biggest challenges and opportunities toward demonstrating environmental leadership and creating a “climate friendly park”. – *Karen Scott: facilitator*

2:00 – 2:15 BREAK

2:15 – 3:15 Demonstrate Past and Present Successes

Interview style exploration of past successes and current efforts underway to reduce energy consumption and mitigate GHG emissions in Waterton-Glacier. – *Shawn Norton: Interviewer*

Interviewees:

- *Lou Summerfield* – Alternative fuels use in the GNP fleet
- *Susan Law* – Alternative transportation projects
- *Del Zimmerli* – Energy efficient buildings
- *Neil Brewster* – Procuring Green products
- *Diane Rossetti* – Waterton’s Greenteam

3:15 – 4:15 Future Opportunities and How to Seize Them

Exploration of more options/ideas for mitigating and monitoring GHG emissions. – *Julie Thomas: moderator*

- NPS’s EMS – *Chris Lane, Xanterra Parks and Resorts*
- Park Canada’s EMS – *Bill Dolan, Waterton Lakes National Park*

4:15 – 4:30 Summary and Homework Assignment – *Beth Binns: facilitator*

Homework Assignment – Creating a Vision

Participants will be asked to think about, and be ready to discuss in small groups, their vision for how the park would be operating if it were truly “Climate Friendly” in another 5 years. The assignment will be to imagine that it is early evening 5 years from now and you turn on the TV to your local news to see a reporter interviewing a park representative about all the actions the park has taken to be “climate friendly” and about how the park is educating the public about those actions. Visions will be discussed in small groups the following day and will culminate in the development of a 5-minute news report in front of the large group.

4:30 – 5:30 Workshop facilitators/Green Team meeting

7:30 – 9:00 Evening Presentation

Climate Change in Canadian Parks – *David Welch, Parks Canada*

In depth presentation and discussion of how climate change impacts park resources

Day 2:

- 8:00 – 8:15 **Welcome** – Recap of Day 1; Goals for Day 2 – *Beth Binns: facilitator*
- 8:15 – 9:15 **Small Group Sessions I – Creating a Vision**
Participants will break into small groups to collectively develop a 5-minute news report (as outlined in the homework assignment).
- 9:15 – 10:00 **News Reports and Discussion**
Each group will present their 5-minute news report to full assembly, followed by questions and a discussion of what can be done realistically at Waterton-Glacier to mitigate GHG emissions and to talk to the public about it. – *Beth Binns: facilitator*
- 10:00 – 10:15 **BREAK**
- 10:15 – 10:45 **“Geo”pardy**
Interactive game to explore participants’ knowledge of climate change over a wide range of topics including science, policy, and personal choice – *Karen Scott: facilitator*
- 10:45 – 12:00 **Small Group Sessions IIa – Developing an Operational Action Plan**
Participants meet in small groups, organized operationally, to identify how they can contribute to being a Climate Friendly Park and explore the role each individual can play. Focus will be on objectives that can be met in 1-year and 5-year time frames.
- 12:00 – 12:30 **LUNCH** (Provided on-site)
- 12:30 – 1:15 **Integrating Objectives across Park Operations**
Each operational group will present the objectives and proposed actions they want to accomplish on both 1-year and 5-year time frames. Facilitated discussion about how the various plans fit together as a park strategy. – *Beth Binns: facilitator*
- 1:15 – 1:45 **Climate Friendly Feud Game**
An entertaining approach designed to illuminate how personal choice may impact climate change. – *Karen Scott: facilitator*
- 1:45 – 2:00 **BREAK**
- 2:00 – 3:15 **Small Group Sessions IIb – Refining the Plan**
Operational groups reform to refine their part of the overall plan. Group outcome will be to develop specific steps that will enable the parks meet the overall goals of the workshop.
- 3:15 – 4:00 **Presentations of Draft Plans by Operational area** – *Beth Binns: facilitator*
- 4:00 to 4:30 **Closing Remarks**



United States Department of the Interior

NATIONAL PARK SERVICE

Gateway National Recreation Area
210 New York Ave.
Staten Island, N.Y. 10305-5019

IN REPLY REFER TO
N42(GATE-GS)

June 2, 2003

Dear Workshop Participant,

Welcome to the Climate Friendly Parks Workshop at Gateway National Recreation Area. The Climate Friendly Parks Initiative was established to address climate change through energy efficiency and other climate friendly actions in daily park operations. Our goal is to make Gateway a model of excellence in sustainable practices such as climate-friendly design and development. In addition, we hope that this workshop will be useful to other parks as they pursue their own efforts to exemplify environmentally responsible operations.

This workshop is a collaborative effort by Gateway, the Washington Office of the National Park Service, and the Environmental Protection Agency's Branch of Science, Communication, Outreach, and Adaptation. Together we devised the enclosed workshop agenda. Although this agenda is based on the specific needs of Gateway, we feel that the topics and activities are transferable to most parks in the Northeast Region.

Underpinning this workshop are the following goals--all of which assume follow-up action by each participant:

- To educate every park employee and park partner about climate change/global warming and the role each can take in addressing the problem and making a difference in daily activities.
- To establish park-wide and individual commitments for NPS employees and park partners to reduce greenhouse gas emissions in order to help slow climate change.
- To empower every park employee and park partner to serve as a communicator—helping the public understand global warming/climate change, how the park is dealing with it, and the difference that each person can make.
- To regularly inform park employees, park partners and the public about the challenges of becoming a Climate Friendly Park and about our accomplishments.

During these two days, you will learn about climate change, how it affects Gateway, and what we, as a park, can do to reduce the greenhouse gas emissions that cause it. The workshop program consists primarily of four interactive breakout sessions that are designed to help you use your experience as a park employee to determine climate-friendly practices that would best be suited to our operation.

This is a busy part of the year for all of you. Thanks for taking the time to attend this workshop. More important, please remember that what is being asked of you is not just to be here, but to leave with new ideas and information that you act on.

As part of the National Park Service, our jobs are to protect park resources and provide opportunities for quality visitor experience. This workshop provides a reminder that resource protection is, in some instances, a global issue. At the same time, it holds out the promise that we can tackle large-scale problems by doing the right things every day we come to work. You already make a great deal of difference to lots of people; what you chose to do in days to come can literally change the world.

Sincerely,

Billy G. Garrett
Acting General Superintendent

4. Proposed Tasks and Assignments

Workshop Planning and Follow Up Climate Friendly Park Initiative		
Task	Subtask	Delivery Date: Weeks from Event
Park		Dates TBD
Location and Space	One large room for presentations and whole group discussions	
	Breakout rooms or spaces for groups of 6-10 participants	
	Space for lunch and/or reception	
	An area for a resource table	
Food	Serve lunch on site	
	Refreshments during breaks (optional)	
Invitations and Registration	Develop a list of invitees; if the event is to be open to community leaders and corporate partners, invite them	
	Distribute invitations or post on intranet (invitations provided)	
	Assign participants to breakout sessions and recruit volunteers for interactive games	
	Prepare a list of participants that can be given to guards, receptionists, parking lot attendants, or other "gatekeepers" to reduce the hassles for participants	
Staffing	Assign at least one person to logistics for the entire event. This person will be responsible for handling registration; making sure refreshments for breaks and/or lunch are on time and as planned; and ensuring that equipment functions properly.	
Equipment and Supplies	Flip charts, markers, masking tape, paper, and pens (These items will be supplied if the park does not have them.)	
	Screen and slide projectors. (Lap top and proxima for projecting electronic presentations will be provided)	
	Microphones (if necessary)	
	Extension chords	
	Registration table	
Emissions Inventory	Assign at least one person to be responsible for data collection.	
Action Plan	Develop a greenhouse gas/criteria air pollutant mitigation and outreach strategy	
	Submit requests for technical assistance to EPA	
	Attend strategic planning meetings 6 months and 1 year after the workshop, and schedule and attend interim meetings as needed	
ICF		
Meeting coordination	Arrange and host planning meetings	
Workshop Presentations	Equipment: lap tops and proxima projector	
	Ascertain presentations prior to workshop and compile on CD and lap top	
	Provide tech assistance for presenters during workshop	
Workshop Materials	Provide signs, name tags, etc. if needed	
Facilitation	Staff lead facilitator for workshop	
Workshop Summary Report	Take notes at workshop	
	Draft workshop summary	
EPA/NPS		
Packet for participants	Decide materials to be given out at workshop	
	Provide evaluation forms	
	Decide on and provide background materials to be given out at workshop	
	Prepare CD of reference of materials to be distributed prior to workshop	
Invitation	Draft letters to speakers	
	Draft invitations	
Post workshop support	Provide technical assistance in preparing Climate Change Action Plan and implementing actions.	
Team: Park, ICF, EPA/NPS		
Planning Meetings	Attend 4 planning meetings	
Agenda	Customize agenda for participating park	
Speakers and co-facilitators	Recruit speakers	
	Assign co-facilitators	
Travel arrangements	Arrange travel accommodations for speakers and workshop planning team.	
Emissions Inventory	Conduct site visit	
	Perform inventory analysis	
	Draft inventory report	
Follow Up	Assist in the development of the park's Climate Change Action Plan and provide technical guidance and advice on implementing the plan	
	Attend strategic planning meetings 6 months and 1 year after the workshop, and schedule and attend interim meetings as needed	

5. Greenhouse Gas/Criteria Air Pollutant Inventory

The purpose of performing a greenhouse gas (GHG)/criteria air pollutant (CAP) inventory is to provide the foundation for discussions of GHG/CAP emissions at the CFP Workshop and to assist park officials in identifying ways to reduce these emissions. In addition, the inventory will provide participating parks with a baseline against which future actions to reduce emissions may be compared.

Air emission inventories, of which GHG/CAP inventories are a subset, are often—but not necessarily—prepared for regulatory reasons. Although no existing federal regulations limit GHG emissions, concern over the prospect of global warming¹ has prompted the development of corporate, state, regional, national, and global inventories. The Gateway NRA inventory was the first to include estimates of GHG emissions from activities directly attributable to park operations (e.g., stationary combustion, mobile combustion, refrigeration, fertilizer application). Once emissions from these sources are measured, the park may consider options to reduce emissions. In the interest of considering a full range of options for reducing emissions, the GHG inventory for Gateway also included “indirect emissions,” or emissions from sources that are not directly within the park’s control, but which the park has some influence over (e.g., purchased electricity, visitor vehicle emissions, waste management). Consideration of these indirect emissions both expand the park’s portfolio of possible emission reduction actions and enable the park to work with its electricity providers, waste haulers, and visitors to reduce park-related emissions occurring outside park boundaries.

In order to assist the GHG/CAP inventory process, participating parks are asked to choose a park contact who will be responsible for the data collection process. Suggestions for selection and contact responsibilities are as follows:

- The staff person chosen as the park liaison on inventory matters should be chosen carefully and should be told up front what he/she is responsible for in terms of data collection. In particular, we would ask that the park liaison be familiar with quantitative databases, well connected in the park (not new to the park), and comfortable with the quantitative nature of this task. It is crucial that this liaison distribute the park data needs form to the appropriate park contacts for the estimation sources (i.e., stationary/buildings, highway and non-road mobile, agricultural, and waste management), and describe the importance of this data collection process. Additionally, park personnel should be informed that collecting these data should not be a burdensome task, but one that will help in providing the park with the necessary tools/understanding to strategize ways to implement emissions reductions.
- The liaison is expected to follow-up with the assigned park contacts in advance of the site visit, collect and review the completed data forms, and return to the inventory analysts when sufficiently complete. Once the analysts receive the data, they will identify gaps and strategize with ICF sector experts on ways to handle missing data points during the site visit.
- Before any site visit, the inventory analysts should receive a schedule ensuring that park staff will be available for discussion at a mutually acceptable time and place. A site visit should build in some time for discussion with staff that might lead to anecdotal information that could be helpful in filling data gaps.

It is not necessary to estimate emissions from all sources of GHG/CAP emissions present in each participating park. Table 1 provides some suggestions on which sources should/should not be included in a park inventory. The full spectrum of emission sources should always be considered, but it is probable that all but a few need to be included in the actual inventory.

¹ For an explanation of global warming, visit EPA’s Global Warming Site:
<<http://yosemite.epa.gov/oar/globalwarming.nsf/content/climate.html>>.

Table 1. Selection of Source Categories for Future Park Inventories

Pollutant/Source Category	Comments on Inclusion/Exclusion
Energy CO ₂ from Fossil Fuel Combustion (including stationary and mobile) CH ₄ and N ₂ O from Stationary Combustion CH ₄ and N ₂ O from Mobile Combustion Highway Vehicles Nonroad Vehicles Coal Mining Natural Gas and Oil Systems International Bunker Fuels	<p>The first three categories of emission sources -- CO₂ from fossil fuel combustion, CH₄ and N₂O from stationary combustion, and CH₄ and N₂O from mobile combustion -- should always be included.</p> <p>Emissions from coal mining, natural gas and oil systems, and international bunker fuels are probably not relevant in most national parks and if they are, it is unlikely that the park has the authority to reduce emissions from these sources.</p>
Industrial Processes CO ₂ from Cement Production CO ₂ from Lime Manufacture CO ₂ from Limestone and Dolomite Use CO ₂ from Soda Ash Manufacture and Consumption N ₂ O from Nitric Acid Production N ₂ O from Adipic Acid Production Perfluorocarbons from Aluminum Production HFC-23 from HCFC-22 Production HFCs and PFCs from Consumption of Substitutes for Ozone-Depleting Substances (Refrigeration & Air Conditioning) PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture SF ₆ Emissions from Electric Power Transmission and Distribution SF ₆ Emissions from Magnesium Production and Processing	<p>Emissions from nearly all industrial process categories are likely to be small for most parks. Only emissions from substitutes for ozone-depleting substances are likely to be significant and/or likely to be increasing dramatically over time. That said, it is important to consider the relatively meager selection of mitigation options available for this sector. Knowing about emissions from this source category is of limited usefulness until there are more practical solutions for reducing emissions (e.g., alternate refrigerants that are neither ODSs or GHGs).</p>
Solvent Use	<p>Solvent use results in emissions of oxides of nitrogen, carbon monoxide, and non-methane volatile organic compounds. None of these ambient air pollutants has a commonly agreed upon direct radiative forcing effect; therefore, their emissions cannot be compared to emissions of direct GHGs such as CO₂. Given the uncertainty associated with estimating emissions from this source category, the relatively small size of this source in parks, and the difficulty of obtaining the necessary data, it would not be worthwhile to include in the next park inventory.</p>

Agriculture Enteric Fermentation Manure Management Rice Cultivation Agricultural Soil Management (Fertilizer Use) Agricultural Residue Burning	It is unlikely that agricultural activities at national parks emit significant quantities of GHGs; however, this source category should be considered just in case some park data indicate that one of these sources could be significant.
Land-use Change and Forestry Changes in Forest Carbon Stocks Changes in Carbon Stocks in Urban Trees Changes in Agricultural Soil Carbon Stocks Changes in Yard Trimming Carbon Stocks in Landfills	Emissions and sinks associated with land-use change and forestry are likely to be substantial in many of the western parks and should be considered. Because the Good Practice Guidance for estimating emissions from this source category is currently under review, the estimate done for the next park may have to rely on some type of apportioning technique using existing estimates for each state done by Richard Birdsey.
Waste Landfills Waste Combustion (sometimes included under Energy) Wastewater Treatment Human Sewage	Although parks generate a great deal of solid and liquid waste in season when their visitor population is highest, it seems as though most parks contract out waste and wastewater management rather than managing the waste on site. As a result, parks have very little control over the associated emissions from landfills and wastewater treatment plants. However, parks can encourage recycling and if they are successful, their efforts may result in significant life-cycle GHG benefits. This is why we would recommend including solid waste management in the next inventory, but leaving out wastewater treatment.

6. Action Plan Template

Climate Change Friendly Parks Initiative Draft Workplan Template													
OBJECTIVE	INITIATIVE	TO DO/ Milestones	LEAD	TIMELINE	INTERNAL			EXTRAMURAL \$\$	GHG REDUCTION PRIORITY	MEASURE OF SUCCESS	TRACKING DATA		
					Name	Name	TOTAL						
		SUBTASK COMPLETE											
		SUBTASK COMPLETE											
	SUBTASK COMPLETE												

7. Draft Gateway NRA Action Plan