



CLIMATE *Friendly* PARKS

# Kalaupapa National Historical Park Action Plan

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## KALAUPAPA NATIONAL HISTORICAL SITE BECOMES A CLIMATE FRIENDLY PARK

As a participant in the Climate Friendly Parks program, Kalaupapa National Historical Site belongs to a network of parks nationwide that are putting climate-friendly behavior at the forefront of sustainability planning. By conducting an emission inventory, setting an emission reduction goal, developing this Action Plan, and committing to educate park staff, visitors, and community members about climate change, Kalaupapa National Historical Park provides a model for climate-friendly actions within the Park Service.

This Action Plan identifies steps that Kalaupapa National Historical Site can undertake to reduce GHG emissions mitigate its impact on climate change. The plan presents the park's emission reduction goals, and associated reduction actions to achieve the park's goals. Strategies and action plan items were developed by working groups at the Pacific Islands Climate Friendly Parks Workshop.<sup>1</sup> While the plan provides a framework needed to meet the park's emission reduction, it is not intended to provide detailed instructions on how to implement each of the proposed measures. The park's Environmental Management System will describe priorities and details to implement these actions.

Kalaupapa National Historical Park intends to:

- Reduce 2008 energy GHG emissions from park operations by 20 percent by 2016.
- Reduce 2008 transportation GHG emissions from park operations by 20 percent by 2016.
- Reduce 2008 waste GHG emissions from park operations by 10 percent by 2016.
- Reduce total 2008 park GHG emissions, including concessioners, by 5 percent by 2016.

To meet these goals, the park will implement strategies proposed in this plan that relate to the park's current and future emission inventories. Specifically, the plan recommends three strategies:

**Strategy 1:** Identify and implement mitigation actions that the park can independently take to reduce GHG emissions resulting from activities within and by the park.

**Strategy 2:** Increase climate change education and outreach efforts.

**Strategy 3:** Monitor progress with respect to reducing emissions and identify areas for improvement.

## THE CHALLENGE OF CLIMATE CHANGE

Climate change presents significant risks and challenges to the National Park Service and specifically to Kalaupapa National Historical Park. Scientists cannot predict with certainty the general severity of climate change nor its impacts. Average global temperatures on the Earth's surface have increased about 1.1°F since the late 19<sup>th</sup> century, and the 10 warmest years of the 20<sup>th</sup> century all occurred in the last 15 years. The single leading cause of this warming is the buildup of GHGs in the atmosphere—primarily carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O)—which trap heat that otherwise would be released into space.

The continued addition of CO<sub>2</sub> and other GHGs to the atmosphere will raise the Earth's average temperature more rapidly in the next century; a global average warming of 4-7°F by the year 2100 is considered likely.<sup>2</sup> Rising global temperatures will

<sup>1</sup> Original notes from these workshops, including detailed action items not presented in the final plan have been archived by Kalaupapa National Historic Site and are available upon request.

<sup>2</sup> IPCC 2007. Climate Change 2007: The Physical Science Basis. Intergovernmental Panel on Climate Change, Geneva Switzerland. Available online at < <http://ipcc-wg1.ucar.edu/wg1/wg1-report.html> >

further raise sea levels and affect all aspects of the water cycle, including snow cover, mountain glaciers, spring runoff, water temperature, and aquatic life. Climate change is also expected to affect human health, crop production, animal and plant habitats, and many other features of our natural and managed environments.

At Kalaupapa National Historical Park, change in climate will drastically affect the natural ecosystems. With temperatures increasing, ocean levels will rise and threaten to displace the habitat of many endangered species such as the Monk seal. There are many species of rare birds and plants that exist only in Kalaupapa due to its isolation from human impacts. The sudden change in environmental factors threatens all of these species as well as the cultural heritage that Kalaupapa represents. Visitors to Kalaupapa come to enjoy the stunning natural features as well as the deep history of the peninsula. As a national park Kalaupapa, should represent the height of environmental sustainability by striving to reduce green house gas emissions and other environmental contaminants.

## GREENHOUSE GAS EMISSION INVENTORY AT KALAUPAPA NATIONAL HISTORICAL PARK

Naturally occurring GHGs include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and water vapor. Human activities (e.g., fuel combustion and waste generation) lead to increased concentrations of these gases (except water vapor) in the atmosphere.

### Greenhouse Gas Emissions

GHG emissions result from the combustion of fossil fuels for transportation and energy (e.g., water distribution, electricity generation), the decomposition of waste and other organic matter, and the volatilization or release of gases from various other sources (e.g., fertilizers and refrigerants).

In 2008, GHG emissions within Kalaupapa National Historical Park totaled 1,421 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>E). This includes emissions from park and concessioner operations and visitor activities, including vehicle use within the park. For perspective, a typical single family home in the U.S. produces approximately 11 MTCO<sub>2</sub> per year.<sup>3</sup> Thus, the combined emissions from park and concessioner operations, and visitor activities within the park are roughly equivalent to the emissions from the electricity use of 130 households each year.

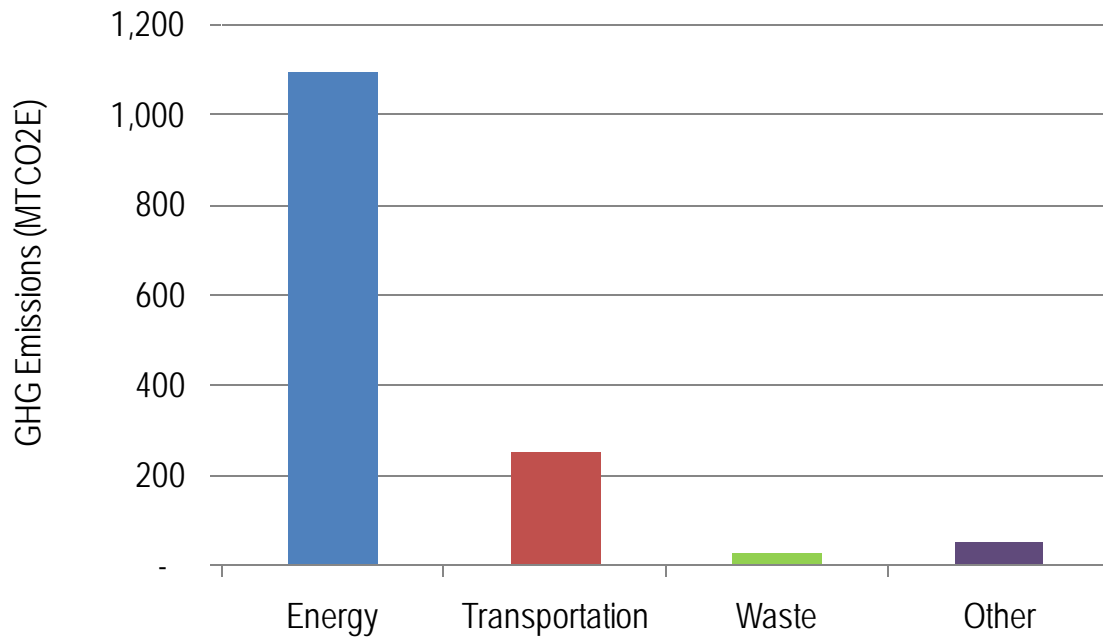
The largest emission sector for Kalaupapa National Historical Park is energy, totaling 1,093 MTCO<sub>2</sub>E in 2008 (see Figure 1 and Table 1). Purchased electricity comprises 94 percent of emissions from energy and 72 percent of total park emissions. The vast majority of the purchased electricity in the park is used by State of Hawaii Department of Health. Emissions from park operations, which exclude visitor and concessioner activities, totaled 224 MTCO<sub>2</sub>E (see Figure 2 and Table 2). Park operations emissions mainly result from stationary combustion and purchased electricity (52 percent combined), though transportation is a significant source as well (28 percent).

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<sup>3</sup> U.S. EPA, Greenhouse Gases Equivalencies Calculators – Calculations and References, Retrieved , Website: <http://www.epa.gov/RDEE/energy-resources/calculator.html>

## FIGURE 1

*Kalaupapa National Historical Park 2008 Total Greenhouse Gas Emissions by Sector*



## TABLE 1

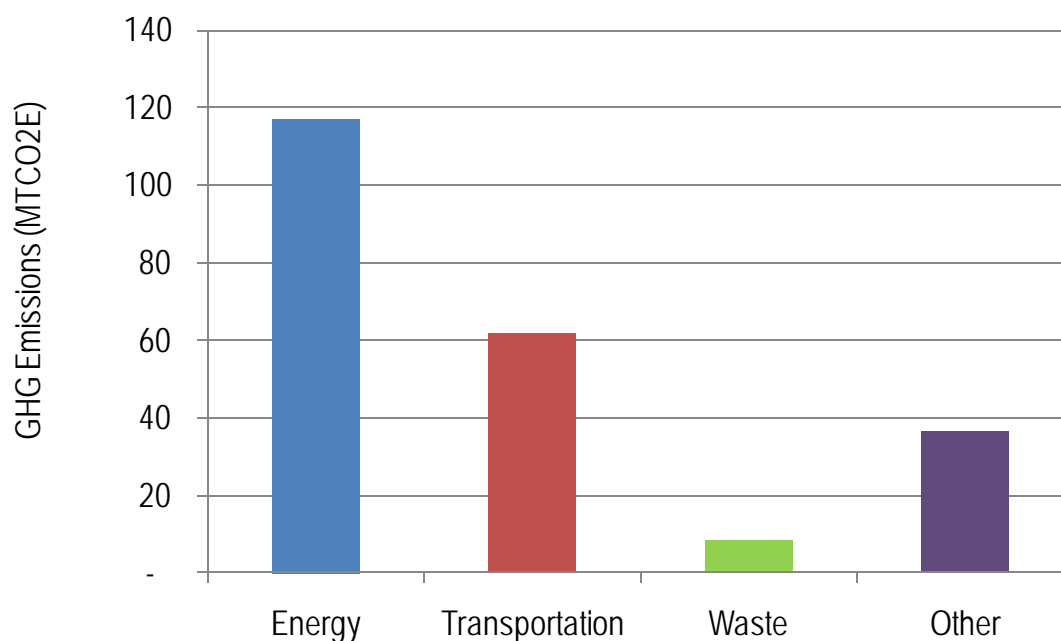
*Kalaupapa National Historical Park 2008 Total Greenhouse Gas Emissions by Sector and Source*

	Emissions (MTCO2E)
<b>Energy</b>	<b>1,093</b>
Stationary Combustion	65
Purchased Electricity	1,028
<b>Transportation</b>	<b>251</b>
Mobile Combustion	251
<b>Waste</b>	<b>26</b>
Landfilled Waste	26
<b>Other</b>	<b>50</b>
Refrigeration and Air Conditioning	19
Other	31
<b>Total</b>	<b>1,421</b>

Note: Totals may not sum due to rounding

## FIGURE 2

*Kalaupapa National Historical 2008 Park Operations Emissions by Sector*



## TABLE 2

*Kalaupapa National Historical Park 2008 Park Operations Emissions by Sector*

	Emissions (MTCO2E)
<b>Energy</b>	<b>117</b>
Stationary Combustion	60
Purchased Electricity	57
<b>Transportation</b>	<b>62</b>
Mobile Combustion	62
<b>Waste</b>	<b>8</b>
Landfilled Waste	8
<b>Other</b>	<b>37</b>
Refrigeration and Air Conditioning	8
Other	28
<b>Total</b>	<b>224</b>

Note: Totals may not sum due to rounding

# Kalaupapa National Historical Park Responds to Climate Change

*The following actions were developed during the Pacific Islands Climate Friendly Parks Workshop on May 11<sup>th</sup> and 12<sup>th</sup>, 2010, in order to meet the park's climate change mitigation goals.*



# STRATEGY 1: REDUCE GHG EMISSIONS RESULTING FROM ACTIVITIES WITHIN AND BY THE PARK

Kalaupapa National Historical Park has developed a set of actions that the park is committed to taking in order to reduce emissions from activities within and by the park. These strategies have been prioritized based on a qualitative assessment of a set of criteria including: emission reduction potential, cost-effectiveness, feasibility, co-benefits, regional impact, and ability to rapidly implement. Actions that Kalaupapa National Historical Park will take have been presented below in order from highest to lowest priority within each sub-category.

## Energy Use Management

*Emission Reduction Goal: Reduce park operations' energy use emissions to 20 percent below 2008 levels by 2016.*

Improving energy efficiency and implementing alternative energy sources reduces park-based fuel use, lowers GHG emissions, decreases electricity consumption, and offers monetary benefits for the park. Emissions inventory results indicate that 52 percent of the park's GHG emissions from Park Operations are from energy consumption. Consequently, Kalaupapa National Historical Park identified actions it will take to reduce energy-related emissions. Presented below are the actions that are currently under way and which comprise the park's progress to date, as well as those actions the park will pursue.

### Progress to Date

- Procurement of CFL bulbs for all NPS buildings.

## Energy Use Management – Planned Actions

### 1 Promote energy efficiency and energy conservation in the park through behavioral change

- Encourage energy conservation in all park activities.
  - Increase energy efficiency in all park buildings and housing by encouraging conservation and efficiency behaviors.
  - Add conservation to closedown checkout process.
- Develop a mandatory energy-saving training program.
  - Instruct staff how to turn off equipment when it is not in use and enable energy-saving settings for computers and monitors.
  - Incorporate an energy performance reward system.
- Ensure all computers' power management settings follow current ENERGY STAR recommendations.
  - Set computers to enter system standby or hibernation mode after 30 minutes of inactivity and monitors to enter sleep mode after 15 minutes of inactivity (visit: [www.energystar.gov/powermanagement](http://www.energystar.gov/powermanagement)).

## 2 Upgrade lighting options

- Upgrade all light fixtures and bulbs in park to energy-efficient bulbs.
  - Replace incandescent light bulbs with compact fluorescent light bulbs (CFLs) where appropriate.
- Install dimmable ballasts and pair lighting with photo sensors to reduce electricity use.
  - Continue with the ongoing efforts to replace light fixtures with dimmable ballast and motion/photo sensors.
- Install energy-efficient outdoor lighting.
  - Use motion sensors and make sure that a recommissioning schedule is in place to ensure appropriate use.
  - Low lighting in outdoor areas.

## 3 Switch to more efficient electronics and devices

- Establish and implement a green procurement policy that sets minimum energy performance standards for all electronic equipment.
  - Ensure that all new electronic/office equipment is ENERGY STAR qualified at [www.energystar.gov](http://www.energystar.gov), and rather than purchasing individual copy, fax, print, and scanning equipment, consider a multi-function device.
- Conduct an appliance inventory and replace inefficient appliances
- Purchase only energy-efficient electronics.
  - Refer to the Federal Energy Management Program guidelines for purchasing energy-efficient appliances in accordance with federal procurement procedures.

## 4 Utilize alternative energy sources

- Research feasibility solar development in park.

## 5 Measure energy use throughout the park

- Incorporate energy efficiency criteria into new contracts for park and concessioner construction.
- Conduct an energy audit for all park buildings. Partner with local utilities to conduct the audit.
  - As part of energy audit, have recommendations made for appropriate lighting solutions for each space.

## Transportation Management

*Emission Reduction Goal: Reduce park operations' transportation emissions to 20 percent below 2008 levels by 2016.*

Reducing vehicle miles traveled, improving vehicle efficiency, and using alternative fuels can significantly reduce Kalaupapa National Historical Park emissions. As the inventory results indicate, GHG emissions from transportation comprise 28 percent of park operations emissions and 18 percent of the park's overall emissions (including visitors, and concessioners). Accordingly, in addition to the park operations emissions reduction goal, Kalaupapa National Historical Park set a goal to reduce overall transportation emissions to 12 percent below 2008 levels by 2016. Presented below are the actions that are currently under way and which comprise the park's progress to date, as well as those actions that the park will pursue.

### Progress to Date

- Fuel rationing for all NPS vehicles.
- No idling policy passed by park administrator on July 31, 2009.
- Tracking and publication of fuel use data.
- Encourage other modes of transportation through the procurement of park bicycles.

## Transportation Management – Planned Actions

### 1 Transportation-related behavioral changes

- Prohibit visitor vehicle idling.
  - Post signs and information with park idling rules.
- Encourage staff carpooling.
  - Develop carpooling information and support services for staff.
- Reduce staff idling.
  - Prohibit staff vehicle idling unless required for vehicle maintenance.
  - Create dashboard idling guidelines and post in vehicles.
- Encourage employees to bike to work and to bike within the park.

### 2 Reduce NPS vehicle and equipment fuel consumption

- Analyze fleet fuel-consumption patterns for efficiency improvements.
  - Use FAST to track fuel use and analyze fleet needs with efficiency improvements.



- Replace two-stroke engines in weed eaters with four-stroke engines.

### 3 Replace NPS vehicles and equipment

- Develop a vehicle replacement plan.
  - Develop a plan to hire a fleet mechanic and manager.
  - Evaluate AFV options: Hybrid electric vehicles (HEVs), electric vehicles, compressed natural gas (CNG), biodiesel.
  - As older vehicles come up for replacement, order alternative fuel vehicles.

### 4 Implement appropriate vehicle maintenance procedures

- Develop a vehicle maintenance plan.
  - Keep vehicles in top condition and develop plan to hire a mechanic.
- Use bio-based lubricants and greases.
  - Move to biobased lubricants in the park's equipment.

## Waste Management

*Emission Reduction Goal: Reduce park operations' waste emissions to 10 percent below 2008 levels by 2016 through waste diversion and reduction.*

The connection between waste and GHG emissions may not be obvious. However, waste management—in the form of source and solid waste reduction—can dramatically reduce GHG emissions. Landfills are the largest human-generated source of CH<sub>4</sub> emissions in the United States. Reducing the amount of waste sent to landfills reduces CH<sub>4</sub> emissions caused by decomposition as well as the GHGs emitted from the transportation of waste. The less the park and its visitors consume in terms of products and packaging, the less energy is used and fewer GHGs are emitted.

Kalaupapa National Historical Park operation activities emitted 8 MTCO<sub>2</sub>E from waste management in 2008. Diverting or reducing the park's waste stream through increased recycling efforts and waste management will reduce the amount of waste sent to landfills and the resulting emissions. Presented below are the actions that are currently under way and which comprise the park's progress to date as well as those actions that the park will pursue.

#### Progress to Date

- Creation of educational material about recycling program.
- Procurement of containers for source-separation recycling.
- Contacted GSA, Grainger, to eliminate plastic bubble wrap and Styrofoam packing.

## Waste Management – Planned Actions

### 1 Decrease waste through behavior change

Continue to train staff on waste reduction initiatives and green purchasing requirements.

- Include green procurement practices in performance evaluations.
  - Develop green procurement and waste reduction into employee performance standards
- Require that construction contractors reuse or recycle materials used during building renovations and new site construction/remodeling projects.
- Train staff on waste reduction initiatives.
  - Continually inform maintenance crews and staff about recycling and composting policies at the park; conduct periodic trainings.
- Develop a “free store.”
  - Develop a store where community members can donate household items for re-use.
- Develop vegetable garden.
  - Develop a garden for patients and tenants of buildings in which compost can be used as fertilizer. An on-site garden will support community sustainability within Kalaupapa.

### 2 Establish new plans and policies that promote waste reduction.

- Start a comprehensive waste reduction and recycling outreach campaign aimed at park visitors.
  - Continue with pack in pack out policy and continue with recycling and trash display boards during community events.
- Reduce plastic water bottle use.
  - Develop plan to take advantage of Kalaupapa's "Best Water in Hawaii" ranking to reduce plastic bottled water consumption. Water fill stations at Slaughter House, Bar and the Air Port. HAVO will provide graphics with a ranger from KALA image on the poster.
- Create a materials and equipment exchange program.
  - Establish a "Free Store" for the community.
  - The store will have items available for re-use within the community.
- Minimize waste associated with paper towels.
  - Replace paper towels with fabric towels.
- Eliminate non-recyclable Styrofoam/food serviceware at community and employee events.
  - Purchased washable plates, glasses, and flatware for community use.
- Incorporate waste reduction into green office practices.

- Purchase products that minimize packaging.
- Contacted GSA, Grainger to eliminate plastic bubble wrap, Styrofoam packing.
- Reduce purchases where possible and avoid duplicate purchases.
  - Purchase CPG office supplies with maximum recycled content, avoid PVC supplies.
  - Purchase durable, reusable supplies, always print double sided, reuse office supplies when possible.
- Work with concessioners to reduce packaging and material use.
  - Purchased washable plates, glasses, and flatware for kitchen use.

### 3 Implement recycling and composting practices

- Continually increase the capture rate of waste material that can be recycled.
  - Recycle cardboard, aluminum, scrap metal, glass, white paper, and no. 1 PET and 2 HDPE plastics.
  - Add mixed paper, tin, other plastics (including bags), and pallets.
  - Find reuse opportunity or donate unwanted items. Look into cooperative waste disposal or recycling to increase volume and reduce costs/traffic.
- Start a comprehensive recycling outreach campaign aimed at park visitors.
  - Include waste prevention/recycling messages in park talks.
  - Provide recycling messages in brochures, trail guides, maps, and posters.
  - Use recycling messaging at waysides, campground display boards, and kiosks.
- Install easy-to-use recycling containers throughout park facilities.
  - Purchase containers with recycled content. Place trash and recycling containers next to each other.
  - Evaluate signage; use graphics.
- Recycle or donate old computers and electronics.
  - Recycle unusable computers and electronics.
  - Donate old equipment to schools, senior centers, etc.
  - Practice cradle-to-grave recycling to ensure toxic components are properly managed. Purchase electronics with less toxic components.
- Implement a construction waste management/plan and job site recycling policy.
  - Require a construction waste management or recycling plan; track quantities of recyclables.
  - Make sure contract language addresses waste plan/recycling. Check on “take-back” policies (e.g., ceiling tiles, cardboard, carpet, and drywall).
  - Reuse construction waste on-site, reuse elsewhere, or sell for recycling materials of value including lumber/wood, drywall, metal, rubble, cardboard, fixtures, hardware, and wiring.

- Require drywall contractors to recycle waste.
- Work with haulers to prevent contamination of waste sorting. Ensure no illegal dumping occurs off job site.
- Practice environmentally responsible deconstruction.
  - Old building materials will be reduced, reused, and salvaged, in that order.
  - Inefficient materials or components will not be salvaged; ensure that the reuse of vintage items represents an environmental gain.
- Send used florescent bulbs to reclaim/recycle service center.
- Institute alkaline, lithium battery recycling locations in every office building.

#### 4 Reduce waste through green procurement

- Evaluate current purchases and reduce redundant products.
- Reduce amount of packaging used in products sold and used in the park.
  - Let vendors know your packaging preferences.
  - Coordinate with Hawaii Natural History Association (HNHA)
- Use post-consumer recycled paper in all park publications.
  - Use 100% post-consumer (PC) content, processed chlorine-free (PCF) copy paper. Consider alternative fibers (i.e., non-wood) and water-based or vegetable-based ink. Target paper reduction.
- Train staff on green procurement practices.
  - Encourage procurement staff to take OFEE's online green purchasing training.
- Coordinate procurement practices so that surplus materials in one unit may be used by another unit.
  - Repurpose rather than discard surplus materials.
  - Establish an exchange process so different departments can source surplus materials internally.
- Continually increase the recycled content of purchased materials.
  - Focus on office supplies, gift shop concessioners, building supplies, furniture and maintenance equipment: hoses, mulch, edging, timbers, posts, and compost with recycled content.
- Adhere to Federal, NPS, and PWR Guidance for Procurement.
- Develop a schedule for replacing existing materials.
  - Consider replacing equipment with recycled equipment or new equipment that will enhance reuse and recycling, (e.g., copiers that can make two-sided copies).
  - Consider environmental impacts across each product's entire life cycle.
- Develop a Green Procurement Plan.

- Inventory and substitute all cleaning supplies with non-toxic products.
  - Conduct an inventory and review of all cleaning supplies. Substitute products containing hazardous/toxic chemicals with non-toxic products.
  - Look for Green Seal Certified products and other green attributes when procuring cleaning and maintenance equipment (phase out use of Simple Green).
- Implement petroleum product substitution program.
- Use low/no-VOC insulation, carpets, paints, and adhesives.
- Increase the use of biobased products.
  - Audit the biobased products in use and look for opportunities to incorporate new products.
- Use carpet with high recycled content for any building projects.
- Promote the use of recycled content products and materials procurement within the NPS.
- Manage waste associated with Computers and FAX/Printers.
  - Purchase remanufactured toner cartridges.
  - Purchase LCD monitors, which use less toxic substances, instead of CRT monitors.
  - Reduce the printer-to-employee ratio by maximizing shared network printers.

## 5 Reduce and reuse wastewater

- Install low-flow faucets.
- Replace toilets with low-flow models.
  - Install water efficient technology, e.g., composting toilets and waterless urinals.
  - Look at installing composting toilets at park comfort stations.
- Manage non-point wastewater.
  - Prevent pollution and use green products. Keep storm drains clean. Clean up spills, but do not hose into streets.
  - Dispose of pesticides and tank rinseate properly. Check state and local requirements.

## 6 Other waste-related actions

- Purchase equipment to reduce volume of waste and recyclables.
  - Use shredders for plastic and crushers for aluminum.



## STRATEGY 2: INCREASE CLIMATE CHANGE EDUCATION AND OUTREACH

Climate change is a complex and easily misunderstood issue. Kalaupapa National Historical Park can play an integral role in communicating about climate change to a vast audience. A better understanding of the challenges and benefits of reducing GHG emissions can motivate staff, visitors, and community members to incorporate climate-friendly actions into their own lives. Kalaupapa National Historical Park recognizes that the greatest potential impact the park can have on mitigating climate change is through public education. Thus, the park sees public education as an end goal of any climate initiative. From increasing the efficiency of public transportation to developing a green purchasing program, the actions Kalaupapa National Historical Park takes to address climate change serve as opportunities for increasing the public's awareness of climate change. Presented the actions that are currently under way and which comprise the park's progress to date, and those actions that the park will pursue.

### Progress to Date

- Utilizing park outlets for information posting educational materials about recycling program are produced on a regular basis.

### Park Staff

Developing a climate change education program for park staff is vital to increasing awareness about climate change among park visitors and fostering a sense of collective responsibility among staff to help reduce park emissions. By incorporating climate change education into staff development programs, Kalaupapa National Historical Park will enable its staff to demonstrate their commitment through leading by example, and providing visitors with the tools and resources they need to reduce GHG emissions in the park and in their own communities. Potential actions include:

- Create a park Climate Change Policy Memo specific to Kalaupapa National Historical Park.
- Hold internal Climate Friendly Park discussions and workshops.
  - Devise new strategies to continually reduce greenhouse gas (GHG) emissions.
  - Distribute resources and tools to staff, and acknowledge success of current strategies, including giving awards to climate leaders.
- Keep staff members that are part of the Green Team/Environmental Management Team informed about climate-related issues.
  - Use materials, publications, and tools available from the U.S. Environmental Protection Agency (EPA) and other agencies and organizations to mentor fellow staff about climate change.
- Incorporate climate change issues into the employee handbook.
  - Include climate materials in employee orientation packets.
- Include the science and impacts of climate change into park education tools.
  - Incorporate sessions on climate change into seasonal staff training.

- Tailor seasonal staff handbook to include Climate Friendly Parks information.
- Include Climate Friendly Parks language in kiosks and other educational materials.
- Incorporate sessions on climate change into new staff training.
- Develop a brown bag series for park staff including concessioners, partners, and occasionally visitors to educate about current climate change science, the park's efforts, and what they can do.
- Create visual reminders for park employees with climate change information and tips on how employees can help reduce emissions.
- Create personal incentives for staff to reduce GHG emissions in park and at home.
- Develop and leverage relationships with other agencies and entities to create opportunities for workshops on climate-friendly activities.
- Disseminate information about climate-friendly actions the park is taking at conferences, meetings, and regional workshops.

## Visitor Outreach

Understanding climate change and its consequences is essential to initiating individual behavioral change. Kalaupapa National Historical Park realizes that it has a unique opportunity to educate the public in a setting free from many of the distractions of daily life. By using existing materials, developing park-specific materials, highlighting what the park is currently doing about climate change, and encouraging visitors to reduce emissions, Kalaupapa National Historical Park can play an important role in educating the public about climate change.

Kalaupapa National Historical Park staff recognize the many different audiences that visit the park, including recreational and non-recreational park visitors, "virtual visitors" who visit the park online, school-aged visitors, local and out of town visitors, local tribes, and external audiences. Reaching these various audiences with climate change information and engaging them in the park's efforts requires appropriately focused messaging. The park has developed a number of strategies to reach these various audiences effectively. These strategies include:

- Educate visitors about climate change.
  - Link climate change and National Parks preservation with actions like using mass transit and alternative forms of transportation.
- Create and distribute previously produced information on climate change and its effects on national parks in general and on Kalaupapa National Historical Park in particular.
- Develop plan for interpretation on shuttle buses.
- Integrate climate change themes into interpretive programs.
  - Integrate Climate Friendly Parks program with school programs using educational kits, wayside exhibits, posters, etc. Look for opportunities to educate with resources like the Climate Change Wildlife and Wildlands Toolkit. For more information, visit: <http://www.globalchange.gov/resources/educators/toolkit>
- Create signs promoting the park's efforts to curb emissions.
  - Develop consistent messaging for recycling, idling, and emission reduction posters.

- Host distance learning events on climate change.
- Incorporate climate change information into existing park brochures.
  - Create/utilize bilingual brochures that talk about the success of the CFP program in terms of resource and economic savings where appropriate. Include information and illustrations on Do Your Part!
- Incorporate climate-friendly information into interpreter programs and talks.
- Educate visitors about their recycling options at the park and at home.
  - Create visitor ads about the park's recycling activities.
- Communicate with local communities, park visitors, and local media about actions they can take to reduce GHG emissions.
  - Encourage internal and external stakeholders to reduce their carbon footprints using tools like "Do Your Part!"
- Develop and distribute "Do Your Part!" materials.
- Develop a "Do Your Part!" kiosk in the visitor's center.
- Create demonstration projects and exhibits to convey park sustainability message to visitors.

## Local Community Outreach

The gateway communities, agencies, vendors, and volunteers surrounding Kalaupapa National Historical Park can play a significant role in supporting the park's climate change mitigation goals. As such, when appropriate, park staff will assist local communities with incorporating climate change messages into community events and find partners to promote climate change education at those events, and engage with surrounding agencies to coordinate effective outreach and education efforts. Potential actions include:

- Work with the surrounding community to address climate change.
- Consider the local economy in procurement and other areas.
- Include community members in climate change discussions.
- Host climate change education workshops.
  - Focus presentations on climate change priorities and talk about success stories.
- Educate local community about what your park is doing to manage waste.
- Plan a community event for Earth Day.
- Set up a "Do Your Part!" table at local events.

## STRATEGY 3: EVALUATE PROGRESS AND IDENTIFY AREAS FOR IMPROVEMENT

By taking the actions established in strategies 1 and 2 above, Kalaupapa National Historical Park plans to reduce its emissions to the specified goals. Achieving these goals will require an ongoing commitment by the park, which may include subsequent emission inventories, additional mitigation actions, and reevaluation of goals. As part of this strategy, Kalaupapa National Historical Park will:

- Monitor progress with respect to reducing emissions. This will include subsequent emission inventories to evaluate progress toward goals stated in this action plan.
- Develop additional emission mitigation actions beyond those listed in this plan.
- Periodically review and update this plan.
- Kalaupapa National Historical Park will track climate-friendly actions through the environmental management system.

## CONCLUSION

Kalaupapa National Historical Park has a unique opportunity to serve as a model for its visiting public. This report summarizes the operational actions the park commits to undertake to address climate change. Specifically, the park realizes its ability to educate the public and serve as a valuable model for citizens. By seriously addressing GHG emissions within the park and sharing its successes with visitors, Kalaupapa National Historical Park will help mitigate climate change far beyond the park's boundaries.

The National Park Service faces an uncertain future due to the possible effects of climate change. However, by seriously addressing climate change impacts and reducing emissions, Kalaupapa National Historical Park will reduce its contribution to the problem while setting an example for its visitors. The strategies presented in this Action Plan present an aggressive first step toward moving Kalaupapa National Historical Park to the forefront of Climate Friendly Parks.

## APPENDIX A: LIST OF WORK GROUP PARTICIPANTS

- Arthur Ainoa
- Simon Anderson