



CLIMATE *Friendly* PARKS

Channel Islands National Park Action Plan

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CHANNEL ISLANDS NATIONAL PARK BECOMES A CLIMATE FRIENDLY PARK

As a participant in the Climate Friendly Parks program, Channel Islands belongs to a network of parks nationwide that are putting climate friendly behavior at the forefront of sustainability planning and informed decision-making. 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, Channel Islands provides a model for climate friendly behavior within the park service.

This Action Plan identifies steps that Channel Islands can undertake to reduce GHG emissions that 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 Mojave Desert and Mediterranean Coast Climate Friendly Parks Workshop.¹ 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 (EMS) will describe priorities and details to implement these actions.

Channel Islands aims to:

- Reduce 2007 energy GHG emissions from park operations by 10 percent by 2016.
- Reduce 2007 transportation GHG emissions from park operations by 10 percent by 2016.
- Reduce 2007 waste GHG emissions from park operations by 10 percent by 2016.
- Reduce total 2007 park GHG emissions, including concessioners, by 10 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 Channel Islands. 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 19th century, and the 10 warmest years of the 20th 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 (CO₂), methane (CH₄) and nitrous oxide (N₂O)—which trap heat that otherwise would be released into space.

The continued addition of CO₂ 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.² Rising global temperatures will

¹ Original notes from these workshops, including detailed action items not presented in the final plan have been archived by Channel Islands National Park and are available upon request.

² 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 ocean acidification, 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.

Although climate change is a global phenomenon, it manifests differently depending on regional and local factors. Climate change is expected to result in many changes to the southern California region and Channel Islands National Park in particular. Some of these changes are already occurring. Climate change is expected to affect the park's weather, resources (e.g., shorelines, ocean chemistry, vegetation, wildlife, historic structures), facilities (e.g., roads, piers), and visitor experiences on the islands.

The high number of endemic species on the Channel Islands, by definition of limited distribution and small population size, may be particularly vulnerable to altered climates. These changes will have direct implications on resource management and park operations, and on the way visitors use and experience the park.

Climate change is expected to increase ocean acidity and water temperatures. Climate change is likely to alter marine currents, upwelling, nutrient availability, and the productivity and distribution of marine species.

Climate change may affect the visitors' park experience in a variety of ways, including:

- changes in wildlife activities, such as wildlife viewing due to altered terrestrial and marine ecosystems,
- reduced visitor access to sites and structures affected by climate change, and
- disruption of visitor services and recreational opportunities.

Climate change also may affect cultural resources. For example, higher sea levels could increase erosion of archeological resources near the shorelines of the islands. Although historic structures and cultural landscape features are currently at some risk from wildland fires and storm damage, these risks could potentially increase as climate change intensifies the severity of fires and storms.

Although some effects of climate change are considered known or likely to occur, many potential impacts are unknown. Much depends on the rate at which temperature will continue to rise and whether global emissions of greenhouse gases can be mitigated before serious ecological thresholds are reached.

GREENHOUSE GAS EMISSION INVENTORY AT CHANNEL ISLANDS

Naturally occurring GHGs include CO₂, CH₄, N₂O, 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., boats, boilers, 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 2007, GHG emissions within Channel Islands totaled 1,297 metric tons of carbon dioxide equivalent (MTCO₂E). This includes emissions from park and concessioner operations and visitor activities, including vehicle and vessel use within the park. For perspective, a typical single family home in the U.S. produces approximately 11 MTCO₂ per year.³ Thus, the combined emissions from park and concessioner operations within the park are roughly equivalent to the emissions from the electricity use of 118 households each year.

The largest emission sector for Channel Islands is Transportation, totaling 1,038 MTCO₂E (see Figure 1 and Table 1). Emissions from park operations (e.g., park buildings and vehicles) totaled 661 MTCO₂E.

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

FIGURE 1

Channel Islands 2007 Total Greenhouse Gas Emissions by Sector

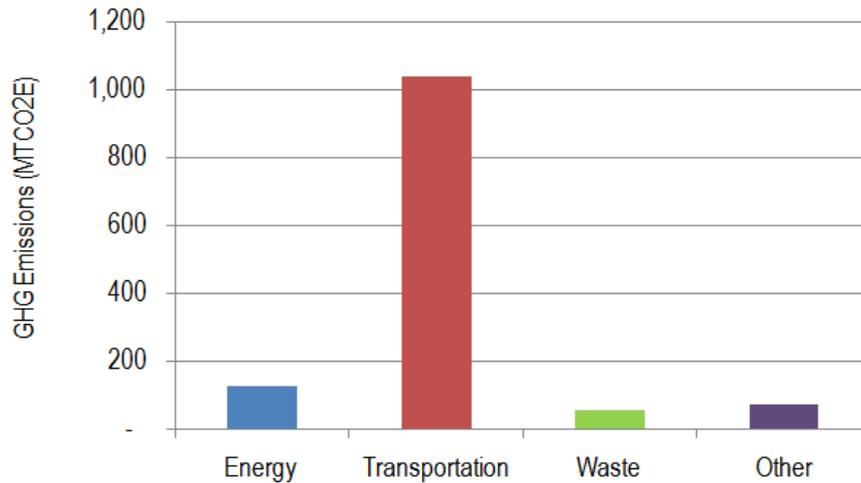


TABLE 1

Channel Islands 2007 Total Greenhouse Gas Emissions by Sector and Source

	MTCO2E
Energy	127
Stationary Combustion	66
Purchased Electricity	61
Transportation	1,038
Mobile Combustion	1,038
Waste	58
Landfilled Waste	58
Other	73
Refrigeration and Air Conditioning	3
Other	70
Total	1,297

Note - Totals may not sum due to rounding

FIGURE 2

Channel Islands 2007 Park Operations Emissions by Sector

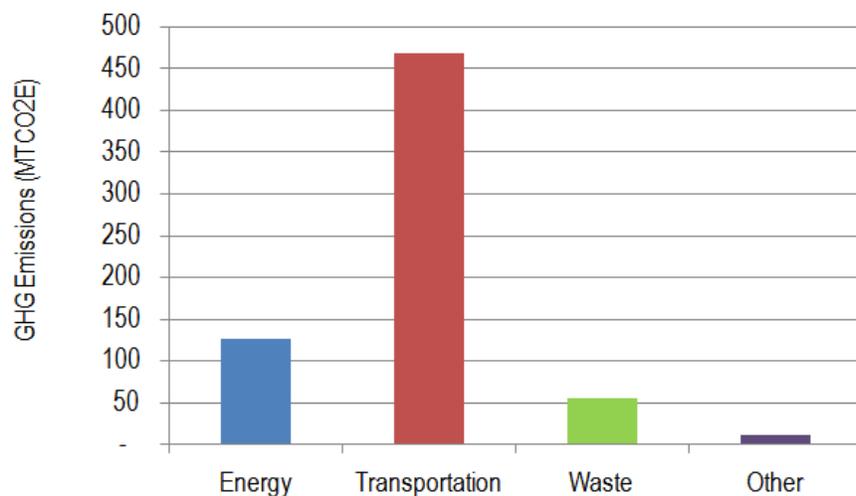


TABLE 2

Channel Islands 2007 Park Operations Emissions by Sector

	MTCO2E
Energy	127
Stationary Combustion	66
Purchased Electricity	61
Transportation	468
Mobile Combustion	468
Waste	55
Landfilled Waste	55
Other	11
Refrigeration and Air Conditioning	3
Other	8
Total	661

Note - Totals may not sum due to rounding

Channel Islands Responds to Climate Change

The following actions were developed during the Mojave Desert and Mediterranean Coast Climate Friendly Parks Workshop on December 1st and 2nd, 2009, in order to meet the park's climate change mitigation goals.

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

Channel Islands 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 Channel Islands 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 10 percent below 2007 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 19 percent of the park's GHG emissions from Park Operations are from energy consumption. Consequently, Channel Islands 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

Engaging concessioners and partners to aid in energy use reduction.

- Partnered with local universities on energy efficiency studies, audits and building audits (i.e. leverage local resources beyond utility companies).

Transitioning to energy efficient electronics.

- Performed a bulk replacement of all residential unit appliances to upgrade to energy efficient models. Worked with the General Services Administration (GSA) at the management level to ensure that these products are available.

Improved building structures and envelopes

- Replaced old windows with double-glazed, low e system windows which provide better insulation and solar selectivity.

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.
 - Identify “vampire energy users.”
 - Add conservation to closedown checkout process.

- Develop a mandatory energy-saving training program, beginning with creating a Green Team.
 - Instruct staff how to turn off equipment when it is not in use and enable energy-saving settings for computers and monitors.
 - Incorporate conservation into training and tailgate sessions.
 - Incorporate an energy performance reward system.
- Establish an Operations and Maintenance (O&M) schedule that evaluates energy use across the entire park.
 - Conduct an energy audit of all maintenance activities.
 - Use in depth project and purchase planning to reduce Vehicle Miles Traveled (VMT), specifically the number of trips out of the park.
- 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)

2 Upgrade lighting options

- Upgrade all light fixtures and bulbs in park to energy efficient bulbs.
 - Use high intensity discharge (HID) lamps and/or fluorescent lights (T-12's with electronic ballasts) in all fixtures used for more than 3 hours a day.
 - Replace incandescent light bulbs with Compact Fluorescent Light bulbs (CFLs) where appropriate.
- Install energy efficient outdoor lighting.
 - Replace all sidewalk lights with LEDs or CFLs
- Install lighting controls.
 - Use motion sensors and make sure that a recommissioning schedule is in place to ensure appropriate use.

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, and rather than purchasing individual copy, fax, print, and scanning equipment, consider a multi-function device.
- Default all computers to print double-sided.
- Install smart power strips.
- Purchase only energy efficient electronics.

- Refer to the Federal Energy Management Program guidelines for purchasing energy efficient appliances in accordance with federal procurement procedures.
- Install energy meters to measure energy use and monitor big consumers.
- Replace park's existing boiler or furnace with an energy-efficient model.
- Install on-demand heating and tankless water heaters.
- Install energy efficient water heaters.
- Perform an assessment that compares energy usage conserved through existing solar water heaters to cost and energy production of being tied to power grid.

4 Improve building structures and envelopes

- Implement an interior and exterior window shading program to reduce solar heating.
- Assess the existing water heating system to determine in energy saving alternatives are needed.

5 Utilize alternative energy sources

- Install photovoltaic panels on buildings, parking lots and other open areas.
- Explore reverse osmosis system for Santa Barbara, Anacapa, and San Miguel Islands.
- Switch to biomass and biofuel instead of conventional fuel to heat park buildings.

Transportation Management

Emission Reduction Goal: Reduce park operations' transportation emissions to 10 percent below 2007 levels by 2016.

Reducing vehicle miles traveled, improving vehicle efficiency, and using alternative fuels can significantly reduce Channel Islands' emissions. As the inventory results indicate, GHG emissions from transportation comprise 71 percent of park operations emissions and 80 percent of the park's overall emissions (including concessioners). Accordingly, in addition to the park operations emissions reduction goal, Channel Islands set a goal to reduce overall transportation emissions by 10 percent below 2007 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

- Park vessel fleet operates on alternative fuel sources such as biofuels.

Transportation Management – Planned Actions

1 Transportation-related behavioral changes

- Reduce park vessel 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.
- Establish an employee Bike-to-Work program

2 Reduce concessioner vehicle fuel consumption

- Perform a footprint analysis of concessioner fuel usage and display on transportation vessels for visitor education.

3 Reduce National Park Service vehicle and equipment fuel consumption

- Analyze fleet fuel-consumption patterns for efficiency improvements.
 - Use FAST, an online tracking system available at <http://fastweb.inel.gov>, to track fuel use and analyze fleet needs with efficiency improvements.
- Develop a cost-benefit calculator for scheduled boat and flight transportation.
 - Consider not staffing island facilities if efficient transportation not available.
- Make transportation schedules available via computer and allow all park staff access to promote “carpooling” opportunities.
- Reduce and/or eliminate the use of skiffs to load and unload passengers/cargo.
- Encourage transportation efficiency through planning.
- Provide energy efficient vehicles for transportation between buildings in the Ventura Harbor
 - Small electric vehicles or bicycles.

4 Replace National Park Service vehicles and equipment

- Incorporate alternative fuel guidelines into fleet specifications.
 - Work with GSA to catalogue available (Alternative Fuel Vehicles) AFVs and set minimum AFV goals.



5 Improve vehicle maintenance efforts

- Operate all fleet vehicles using re-refined engine oil, with a minimum 25 percent post consumer content.
- Use bio-based lubricants and greases.
 - Move to bio-based lubricants in the park's fleet vehicles and equipment.

Waste Management

Emission Reduction Goal: Reduce park operations' waste emissions to 10 percent below 2007 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 CH₄ emissions in the United States. Reducing the amount of waste sent to landfills reduces CH₄ 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.

Channel Islands' park operation activities emitted 55 MTCO₂E from waste management in 2007. 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 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.

Waste Management – Planned Actions

1 Decrease waste through behavior change

- Promote Pack-in Pack-out program for visitors.
- Engage staff to reduce and manage waste at work.
 - Encourage park staff to be responsible at work by making it easy to recycle and compost waste; make sure containers fit environment (e.g., animal-proof, rust-proof/salt air-resistant/moisture resistant, and proper size).
 - Make ceramic plates, bowls, mugs, and silverware available for employee use in lieu of disposable products.
 - Institute paperless office practices. Establish standards for double-sided printing and copying, office supply reuse, electronic correspondence procedures, electronic file storage, elimination of colored paper, etc.
 - Take into account the amount of packaging when making purchases.
- Train park staff and contractors on waste reduction responsibilities.
 - Ensure that staff and contractors are aware of their roles and responsibilities to reduce waste. Conduct periodic trainings to inform maintenance crews about recycling and composting policies at the park.
 - Make reusable and recyclable materials available for staff to use (e.g. plates, cups, silverware, etc.).

- Train maintenance staff on waste reduction initiatives.
 - Continually inform maintenance crews about recycling and composting policies at the park; conduct periodic trainings.
- Train custodial staff in most efficient use of cleaning products, especially to stop using aerosol cans.

2 Establish new plans and policies that promote waste reduction.

- Explore the use of bioconversion on the islands to reduce the cost and pollution of transportation.
- Incorporate waste reduction into green office practices.
 - Reduce purchases where possible and avoid duplicate purchases.
 - Purchase Comprehensive Procurement Guidelines (CPG) office supplies with maximum recycled content, avoid PVC supplies.
 - Purchase durable, reusable supplies, always print double sided, reuse office supplies when possible.
- Choose hand dryers over paper towels.
 - Install energy efficient hand dryers throughout park facilities.
- Measure baseline solid waste generation.
 - Record waste management data in an EMS or a spreadsheet tracking system.
- Measure, track, and report waste stream data (include landfill waste and recycled waste) to monitor reductions and success in diverting waste from the landfill.
 - Record waste management data in an EMS or a spreadsheet tracking system.
- Reduce waste generated at meetings and employee functions.
 - Establish guidelines for waste minimization: use durable, reusable utensils and mugs, buy in bulk, use items with reduced packaging, and provide recycling receptacles.

3 Implement recycling practices

- Continually increase the amount of waste material at the park 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 film), and pallets.
 - Find reuse opportunity or donate unwanted items. Look into cooperative waste disposal or recycling to increase volume and reduce costs/traffic.
- 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.
- Send used florescent bulbs to recycling service center.

4 Reduce waste through green procurement

- Develop a Green Procurement Plan.
 - Ensure that purchases follow EPA's Comprehensive Procurement Guidelines for percentage of post consumer material.
- Train staff on green procurement practices.
 - Encourage procurement staff to take Office of Federal Environmental Executive (OFEE) online green purchasing training.
- 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.
- Develop a catalog of sustainable products for purchasing department.
 - Consider replacing equipment with recycled equipment or new equipment that will enhance reuse and recycling, (e.g., copiers that can make two-sided copies).
- Inventory and substitute all cleaning supplies with non-toxic products.
 - Conduct an inventory and review of all cleaning supplies. Substitute products containing hazardous and 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).
- Use carpet with high recycled content for any building projects.
- Promote the use of recycled content products and materials procurement within the park.

5 Reduce and reuse wastewater

- Install low-flow faucets.
 - Will become policy during the 2010 rehabilitation project of Headquarters and the Visitor Center.

STRATEGY 2: INCREASE CLIMATE CHANGE EDUCATION AND OUTREACH

Climate change is a complex and easily misunderstood issue. Channel Islands 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. Channel Islands 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. National parks can be effective models of sustainability and visible platforms to communicate information regarding climate change. From increasing the efficiency of public transportation to developing a green purchasing program, the actions Channel Islands 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

- Connecting with community and park partners on Climate Friendly Park efforts.
 - Build relationships with park concessioners, friends groups, local environmental groups, representatives from the local tourism/community business board, representatives from the state environment and energy departments, teachers, representatives from the regional transportation authority, and local university partners.
- Hosted traveling Climate Change interpretive wayside exhibit
 - Hosted a year -long Climate Change wayside exhibit that provided visitors insight to the effects of climate change throughout the National Park Service .
 - Climate change topics were featured and included in several lectures as part of an ongoing science lecture series hosted by the park and sanctuary.
- Selected an interpretive point of contact for the California Phenology Project.
 - A collaboration to develop education and outreach protocols and tools for an integrated phenology monitoring program across California NPS units over the next two years.
- NPS Climate Change publications is readily available for visitors in primary contact station.
- A climate change article is a featured story in our park newspaper and website.
- The park, sanctuary, and other partners hosted two workshops on ocean acidification.

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, Channel Islands 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:

- Incorporate climate change into park staff training, events, and performance plans.
- Create a Park Climate Change Policy Memo specific to Channel Islands.



- 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.
 - Encourage stronger linkages and information exchange between resource programs and other divisions.
 - Survey best practices and communication tools used by other partners and organizations to identify the most effective mechanism for transmitting messages.
- 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.
 - Engage, inform, and educate staff about the effects of climate change in the park.
 - Include climate materials in employee orientation packets.
- Include the science and impacts of climate change into park education tools.
 - Develop communications strategies for climate change by developing common messages, audiences, and means to share information.
 - 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.
- Create personal incentives for staff to reduce GHG emissions in park and at home.
- Identify actions that can reduce emissions and create visual reminders that can be distributed through the Green Team to encourage park staff to have green habits.
- Incorporate sessions on climate change into new staff training.
- 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. Channel Islands 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, Channel Islands can play an important role in educating the public about climate change.



Channel Islands 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 alternative energy use and alternative forms of transportation.
- Create and distribute previously produced information on climate change and its effects on National Parks in general and on your park in particular.
- 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>.
- Incorporate climate change information into existing park publications.
 - Create or utilize bilingual publications 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 actions to reduce the park’s carbon footprint into park publications and permanent/temporary wayside exhibits
- Incorporate climate friendly information into interpreter programs and talks.
- Educate visitors about their recycling options at the park and at home.
 - Create visitor opportunities to learn about the park’s recycling activities.
- 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 Channel Islands 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.
- Plan a community event for Earth Day.



STRATEGY 3: EVALUATE PROGRESS AND IDENTIFY AREAS FOR IMPROVEMENT

By taking the actions established in strategies 1 and 2 above, Channel Islands 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, Channel Islands 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.
- Channel Islands will track climate friendly actions through the Park's EMS.

CONCLUSION

Channel Islands National Park has a unique opportunity to serve as a model for over 300,000 recreational visitors annually.⁴ This report summarizes the operational actions the park commits to undertake to address climate change and the added challenge of explaining 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, Channel Islands 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, Channel Islands 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 towards moving Channel Islands to the forefront of Climate Friendly Parks.

⁴ Channel Islands: Park Statistics. Available online at: <http://www.nature.nps.gov/stats/viewReport.cfm>

APPENDIX A: WORK GROUP PARTICIPANTS

- Karl Bachman – Facility Manager
- Rhonda Brooks – Chief of Transportation
- Kent Bullard
- Yvonne Menard – Chief of Interpretation
- April Rabuck – Park Ranger