



CLIMATE *Friendly* PARKS

# City of Rocks National Reserve Action Plan

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## CITY OF ROCKS NATIONAL RESERVE BECOMES A CLIMATE FRIENDLY PARK

As a participant in the Climate Friendly Parks program, City of Rocks National Reserve 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, City of Rocks National Reserve provides a model for climate-friendly actions within the Park Service.

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

City of Rocks National Reserve intends to:

- Reduce GHG emissions from the Reserve to 25% below 2007 levels by the year 2016 by implementing emission mitigation actions identified by the Reserve.

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

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

**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 City of Rocks National Reserve. 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 City of Rocks National Reserve 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 City of Rocks National Reserve, increasing temperatures, and changing precipitation patterns may alter park ecosystems, changing vegetation communities, habitats available for species, and the experience of park visitors. The Reserve is located at what scientists refer to as a bio-geographic crossroads. Such places exhibit high species turnover and are typically rich in species overall. This stems from the fact that crossroads are places where climatic regimes, geology, and other environmental features also “turnover” or transition. The Reserve features species typical of several biogeographic regions including the Northern Rocky Mountains, Snake River Plain, and the Northern Basin and Range. Of particular interest to the climate change discussion is the expanding/contracting population of Pinyon Pine, Simpson’s Hedgehog Cactus, Canyon Mouse, Ringtail, and Pinyon Jay, to name but a few.

## GREENHOUSE GAS EMISSION INVENTORY AT CITY OF ROCKS NATIONAL RESERVE

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.

It is important to note that the entire operation that supports the City of Rocks National Reserve is on state park lands outside the Reserve. All the cost savings and monitoring are the responsibility and jurisdiction of the state. There are no federal employees stationed at the Reserve due to the cooperative management structure designed by Congress. All implementation of goals are voluntarily committed to by state park staff, so far as they are feasible. Reduction in greenhouse gas emissions is compatible with the goals of Idaho state government.

### Greenhouse Gas Emissions

GHG emissions result from the combustion of fossil fuels for transportation and energy (e.g., 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). Human-generated greenhouse gas emissions at the Reserve are almost entirely due to automobiles and campfires. The Reserve has almost no structures or facilities.

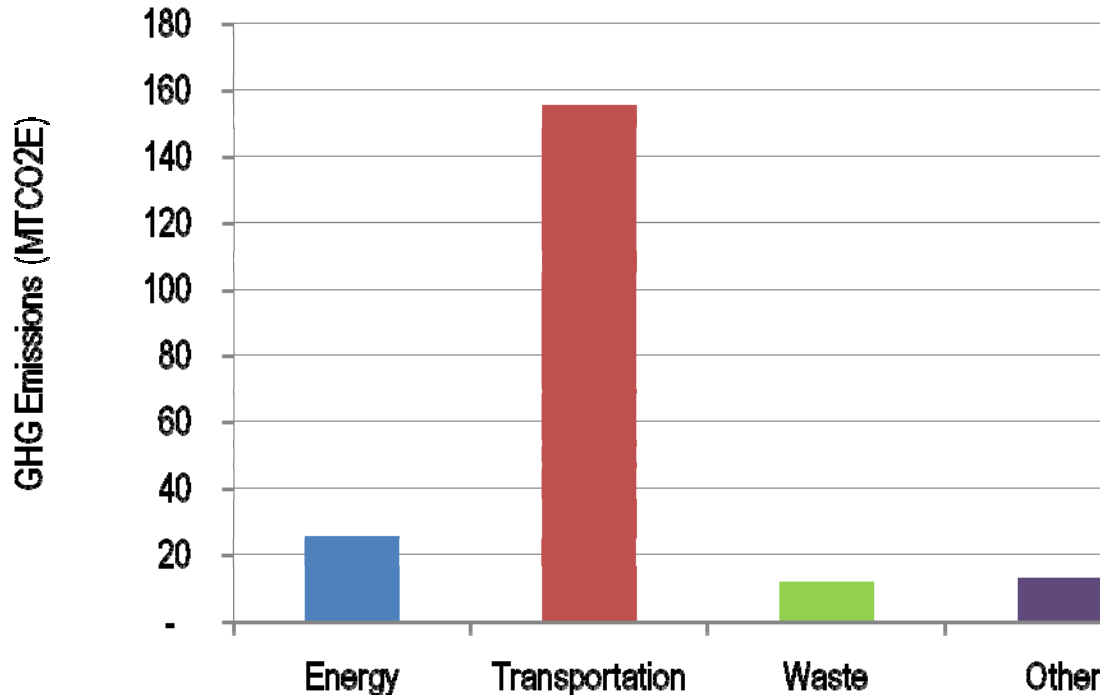
In 2007 GHG emissions within City of Rocks National Reserve totaled 207 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>E). This includes emissions from park and concessioner operations and visitor activities, including vehicle use within the Reserve. For perspective, a typical single family home in the U.S. produces approximately 12 MTCO<sub>2</sub> per year.<sup>3</sup> Thus, the combined emissions from park and concessioner operations, and visitor activities within the Reserve, are roughly equivalent to the emissions from the electricity use of 18 households each year.

The largest total emission sector for City of Rocks National Reserve is transportation, totaling 156 MTCO<sub>2</sub>E (see Figure 1 and Table 1). Transportation is also the largest emission section when considering only park operations at City of Rocks National Reserve (see Figure 2 and Table 2) at a total of 23 MTCO<sub>2</sub>E but energy is not far behind with 18 MTCO<sub>2</sub>E. The Reserve is primarily primitive public lands, with about 4,000 acres of private land used for grazing. Operational facilities and activities that support the Reserve are located outside the boundary on state park lands.

<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

*City of Rocks National Reserve 2007 Total Greenhouse Gas Emissions by Sector*



# TABLE 1

*City of Rocks National Reserve 2007 Total Greenhouse Gas Emissions by Sector and Source*

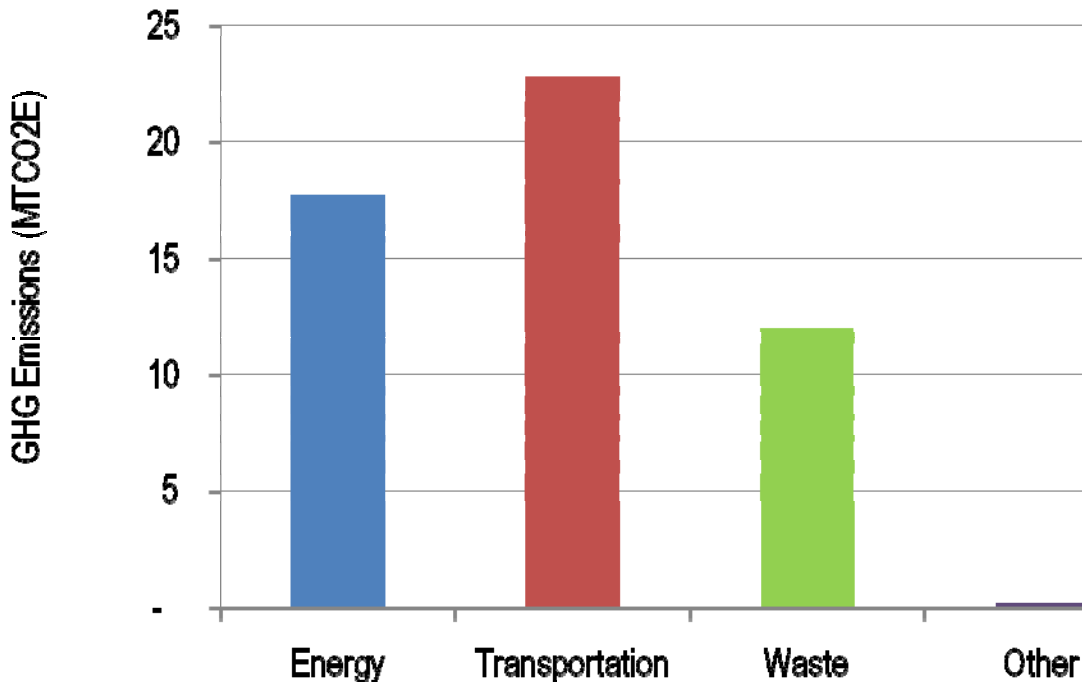
	MTCO2E
Energy	26
Stationary Combustion	26
Purchased Electricity	0
Transportation	156
Mobile Combustion	156
Waste	12
Landfilled Waste	12
Wastewater	-
Other	13
Refrigeration and Air Conditioning	2
Other	13
<b>Total</b>	<b>207</b>

Note - Totals may not sum due to rounding

Not applicable data sources represented by "-"

## FIGURE 2

*City of Rocks National Reserve 2007 Park Operations Emissions by Sector*



## TABLE 2

*City of Rocks National Reserve 2007 Park Operations Emissions by Sector*

	MTCO2E
<b>Energy</b>	<b>18</b>
Stationary Combustion	18
Purchased Electricity	0
<b>Transportation</b>	<b>23</b>
Mobile Combustion	23
<b>Waste</b>	<b>12</b>
Landfilled Waste	12
Wastewater	-
<b>Other</b>	<b>0</b>
Refrigeration and Air Conditioning	0
<b>Total</b>	<b>53</b>

Note - Totals may not sum due to rounding

Not applicable data sources represented by "-"

# City of Rocks National Reserve Responds to Climate Change

*The following actions were developed during the North Coast & Cascade and Upper Columbia Basin Climate Friendly Parks Workshop on February 9<sup>th</sup> and 10<sup>th</sup>, 2010, in order to meet the Reserve's climate change mitigation goals.*

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

City of Rocks National Reserve has developed a set of actions that the Reserve is committed to taking in order to reduce emissions from activities within and by the Reserve. 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 City of Rocks National Reserve 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 35 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 Reserve. Emissions inventory results indicate that 34 percent of the Reserve's GHG emissions from Park Operations are from energy consumption. Consequently, City of Rocks National Reserve identified actions it will take to reduce energy-related emissions. Presented below are the actions that are currently under way and which comprise the Reserve's progress to date, as well as those actions the Reserve intends to pursue.

### Progress to Date

#### Behavioral Changes

- Installed programmable lighting controls and instituted policy concerning manually controlled lighting.
- Installed programmable thermostats that control both heating – set to 67 degrees F and 55 degrees F in the unoccupied parts of the building.
- Constructed and installed a waste to energy system that reduces propane usage by 18%.
- Developed energy-saving training program that was implemented by the Chief of Maintenance.

#### Lighting

- Replaced all incandescent bulbs with compact florescent bulbs.
- Installed high efficiency ballasts.
- Installed low lumen outdoor lighting in the Reserve's security and high traffic areas.
- Installed occupancy sensors in every building and established an annual testing schedule for those sensors.

#### Heating, Ventilation, and Air Conditioning (HVAC)

- Established a Monthly HVAC maintenance program.





- Established an annual calibration program for the thermostats in occupied buildings including the Visitor Center, Maintenance Building and Conference Center.

#### Energy Efficient Electronics and Devices

- Established and implemented a procurement policy that meets and exceeds the Federal Energy Management Program guidelines, ensures that all new electronic/office equipment is energy efficient, and mandates that each device is used by the maximum feasible number of people to reduce redundancy. The most recent example is with the purchase of a plotter which is used by Administration, Visitor Services, Natural and Cultural Resources, Maintenance and Operations.
- Set the default setting on all computers and copies to double-sided printing.
- Installed Smart Strip power strips in all office spaces to reduce idle electricity use from electronics and office equipment not in use.
- Requested the funding for timers to be installed on current water heaters that would shut off the system when the building is not occupied.

#### Improving Building Envelope

- Installed high quality windows and shades and treatments.

#### Alternative Energy

- Installed PV panels in remote locations to operate such items as pumps and recharging battery banks for radio repeater.

## Energy Use Management – Planned Actions

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

- Reduce dependency on propane for heating.
  - Construct an efficient waste oil burner to replace a percentage of propane usage.
- Establish/revitalize operations and maintenance schedule.
  - Continue to optimize HVAC systems performance through proper monthly and annual maintenance.
- Ensure all computers' power management settings follow current ENERGY STAR recommendations.
  - Ensure all computers' power management settings follow current ENERGY STAR recommendations.

### 2 Upgrade lighting options



- Use daylighting.
  - Consider utilizing natural lighting in future building retrofits or new construction.

### 3 Switch to more efficient electronics and devices

- Install energy meters to measure energy use and monitor big consumers.
  - Explore the possibility of tracking and displaying the energy consumption of electronic devices to encourage energy-efficient use.
- Replace existing boiler or furnace with an energy-efficient model.
  - Install a higher efficiency model with passive solar units as a supplement.

### 4 Improve building structures and envelopes

- Weatherize state park buildings by adding R-values to improve insulation effectiveness.
  - Improve the R-value of building insulation.
- Replace old windows with new windows.
  - Replace old windows with new windows (e.g., spectrally selective glass, double-glazed, low-e systems, gas filled windows, and electrochromic windows) that provide better insulation and solar selectivity.
- Add window film.
  - Implement window films where applicable. Window films can be retrofitted to existing windows to reduce heat gain due to solar radiation and provide a low-cost cooling load reduction.

### 5 Utilize alternative energy sources

- Switch to biomass and biofuel instead of conventional fuel to heat park buildings.
  - Explore the use of bio fuels for construction equipment, including the motor grader, backhoe, loader, and wood chipper.

### 6 Measure energy use throughout the operation

- Partner with local universities on energy efficiency studies, audits, and building audits.
  - Explore partnerships with Universities in the area to increase state park energy efficiency.
- Incorporate energy efficiency criteria into new contracts for park and concessioner construction.
  - 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.
  - Complete an energy audit of all structures within the operation.

- Install building-level utility meters in existing buildings and in new major construction and renovation projects to track and continuously optimize performance.
  - Explore the possibility of installing building level utility “smart” meters that transmit data on existing building and new major construction and renovation projects to track and continuously optimize performance.

## Transportation Management

*Emission Reduction Goal: Reduce park operations’ transportation emissions to 30 percent below 2007 levels by 2016.*

Reducing vehicle miles traveled, improving vehicle efficiency, and using alternative fuels can significantly reduce City of Rocks National Reserve’s emissions. As the inventory results indicate, GHG emissions from transportation comprise 43 percent of park operations emissions and 75 percent of the Reserve’s overall emissions (including visitors, and concessioners). Accordingly, in addition to the Reserve operations emissions reduction goal, City of Rocks National Reserve set a goal to reduce overall transportation emissions by 25 percent below 2007 levels by 2016. Presented below are the actions that are currently under way and which comprise the Reserve’s progress to date, as well as those actions that the Reserve will pursue.

### Progress to Date

#### Visitor Vehicle Travel

- Maintain a program to track the number of visitors to the Reserve on a daily basis.

#### Vehicle and Equipment Replacement

- Established a fleet replacement program through the State of Idaho that incorporates the use of alternative fuel vehicles, looks for opportunities to right-size the fleet and increase vehicle fuel efficiency through replacement.

#### Vehicle Maintenance

- Established fleet maintenance program that keeps vehicles in top mechanical condition: rotate tires every 5000 miles, check tire pressure, don’t top off tank (which can cause the gas station’s vapor recovery system to operate improperly), and get regular tune-ups.
- The Reserve uses bio-based lubricants and greases and recycles used oil for all construction equipment (i.e., motor grader, backhoe, and loader).

#### Transportation Infrastructure

- Established a policy to use native and low maintenance plants in any new or retrofitted landscape or ground covering.

## Transportation Management – Planned Actions

### 1 Transportation-related behavioral change

- Reduce staff idling
  - Prohibit staff and visitor vehicle idling unless required for vehicle maintenance.
- Reduce meeting travel.
  - Continue to use webinars/conference calls to avoid excessive travel, both within and outside of the Reserve.

### 2 Reduce visitor vehicle fuel consumption

- Promote accessible front-country trails.
  - Continue to promote human powered park access through the construction and improvement of trails – allowing for a greater number of visitors to enjoy the Reserve.

### 3 Reduce NPS vehicle and equipment fuel consumption

- Convert from diesel to biodiesel.
  - Explore the feasibility of securing a regular supply of biodiesel vehicles to run on biodiesel.
- Promote efficient staff driving.
  - Send staff to a training on safe and efficient driving.
- Replace two-stroke engines.
  - Look for opportunities to substitute two-stroke with more efficient four-stroke engines in equipment.
  - Minimize or eliminate use of leaf blowers.

### 4 Implement appropriate vehicle maintenance procedures

- Operate all fleet vehicles using re-refined oil.
  - Use re-refined oil with a minimum 25% post consumer (PC) content.

### 5 Improve transportation infrastructure

- Use reclaimed materials for new roads and paving.
  - Continue to use recycled glass from the Reserve's recycling program in tent pads and road mix materials.

## Waste Management

*Emission Reduction Goal: Reduce park operations' waste emissions to 40 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 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 Reserve and its visitors consume in terms of products and packaging, the less energy is used and fewer GHGs are emitted.

City of Rocks National Reserve's park operation activities emitted 12 MTCO<sub>2</sub>E from waste management in 2007. The Reserve's waste stream will be reduced through increased recycling efforts resulting in less waste sent to landfills and decreased emissions. Presented below are the actions that are currently under way and which comprise the Reserve's progress to date as well as those actions that the Reserve will pursue.

### Progress to Date

#### Behavioral Changes

- Established recycling program including seven kinds of plastics, three kinds of paper, aluminum, glass, steel, and cardboard.

#### Waste Prevention

- Installed well marked water stations throughout the Reserve.
- Developed and implemented a policy to reduce our paper use resulting in 90% of the Reserve being paper free.
- Established a materials exchange program.
- Developed a construction waste to energy program that heats the maintenance shop.
- Made comfort stations paper towel free. Provided visitors with sanitizing gel which does not require towels or electricity for a dryer.
- Established a pack in/pack out program and implemented at Twin Sisters, Finger Rock, and Stines Creek Picnic Area. Recycling and garbage receptacles are located in Almo as visitors exit the Reserve.

#### Waste Diversion (recycling and composting)

- Established a recycling program for both Reserve employees and the public.
- Named the Chief of Maintenance as the Reserve's designated recycling coordinator.
- Established a propane cylinder recycling program.

- Established a program in which surplus outdated computers are sent for reuse to the State of Idaho Cassia County School District.
- Established a program in which the Reserve reuses oil to burn in our waste oil heater in our maintenance shop – reducing propane usage.
- Established a policy that ensures that asphalt pavement is recycled for road projects.
- Developed a comprehensive recycling program that featured co-located waste and recycling bins with clear signage at every trailhead and parking lot.

#### Reduce Wastewater

- Established a water management plan for the Reserve’s manicured areas that require irrigation.

#### Other Waste Management Actions

- Established a program for tracking our fuel usage and bulk trash trips.

## Waste Management – Planned Actions

### 1 Decrease waste through behavior change

- Train staff on green procurement practices.
  - Continue to procure as many environmentally friendly and recycled products as possible.

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

- Reduce waste generated at meetings and employee functions.
  - Continue to evaluate the need for bringing materials to meetings; utilize electronic communication for agenda and notes tracking (as opposed to printed materials), use durable, reusable utensils and mugs; buy materials in bulk; use items with reduced packaging; and provide easy-access to recycling receptacles.
- Eliminate non-recyclable Styrofoam/food serviceware.
  - Eliminate use of Styrofoam. Use biodegradable cornstarch utensils (Earthshell) and biodegradable foam “peanuts.” Some Styrofoam can be taken in for use at UPS Stores or local businesses that ship items.
- Work with concessioners to reduce packaging and material use.
  - Develop initiatives with concessioners to reduce material use and packaging where possible.
- Promote the use of recycled content products and materials procurement within the NPS.
  - Continue to purchase and promote recycled content products.

### 3 Implement recycling and composting practices

- Improve waste collection and transportation efficiency.
  - Construct tow in-house designed compactors to reduce the number of waste hauling trips as well as the bulk of the Reserve's waste stream.
- Start a comprehensive recycling outreach campaign aimed at park visitors.
  - Continue to inform visitors of recycling programs through the Reserve's website and kiosk postings.
- Practice environmentally responsible deconstruction.
  - Continue to recycle appliances and replace them with ENERGY STAR-rated appliances.
- Send used florescent bulbs to reclaim/recycle service center.
  - Continue to offer fluorescent bulb recycling to staff and the public.
- Measure the baseline solid waste generation (tons) at the Reserve.
  - Continue to record waste management data in the Reserve's Environmental Management Systems (EMS), or a spreadsheet tracking system (this practice has been in place since 2000).

### 4 Reduce waste through green procurement

- Purchase locally produced materials whenever possible.
  - Encourage local purchasing.
- Continually increase the recycled content of purchased materials.
  - Purchase office products that comply with green procurement SOP.
- Use post-consumer recycled paper in all park publications.
  - Encourage procurement that emphasizes post-consumer content whenever available.
- Adapt a list of pre-purchase questions for the Reserve.
  - Incorporate the following questions into the Reserve's green procurement SOP:
    - Is this purchase really necessary?
    - Can the existing item be fixed?
    - Can it be donated?
    - Are renewable resources used in its production?
    - Is it biodegradable? Biobased?
    - Durable/reusable?
    - Is it non-toxic?
    - Does it have simple maintenance?
    - Is it recyclable?
    - Is it made from recycled content?
    - Is it a CPG item?

- Is the product produced and sold locally?
- Develop a Green Procurement Plan.
  - Build off of the Pacific West Regions Green Procurement Guidelines to develop a park specific standard operating procedure (SOP) checklist regarding green procurement.
- Use carpet with high recycled content for any building projects.
  - Consider recycled content when purchasing carpet.
- Inventory and substitute all cleaning supplies with non-toxic products.
  - Conduct annual audits of cleaning supplies and checks for hazardous chemicals.
- Establish purchasing requirements for low/no-VOC insulation materials, carpets, paints, adhesives, etc.
  - Consider including environmental requirements including zero volatile organic compounds (VOC) emissions paint, adhesives, and carpets into Reserve purchasing requirements.
- Establish purchasing requirements for computers, fax machines, printers, scanners, and other electronic equipment.
  - Purchase ENERGY STAR equipment and appliances when replacing conventional equipment.

## 5 Reduce and reuse wastewater

- Replace toilets with low-flow models.
  - City of Rocks is aware of the management of water and is diligent in its use. In all new construction and retrofitting of facilities we always use low flow toilets.
- Reduce storm and groundwater runoff.
  - Use permeable surfaces and native plants to return storm water to natural water ways and man-made canals to better benefit rural irrigation in the community.
- Manage non-point wastewater.
  - Establish a program for the Reserve's rainsate and spill control disposal through the State of Idaho.
- Monitor, Manage, and Reduce point source wastewater.
  - Explore the idea of reusing grey water and rain runoff to be stored underground and used for irrigation.

## 6 Other waste-related actions

- Implement and enforce a construction waste management plan and job site recycling policy.
  - Implement and enforce the Reserve's construction waste management and job site recycling policy.
- Manage solid waste and recycling by developing an ISWAP (Integrated Solid Waste Alternatives Plan).



## STRATEGY 2: INCREASE CLIMATE CHANGE EDUCATION AND OUTREACH

Climate change is a complex and easily misunderstood issue. City of Rocks National Reserve 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. City of Rocks National Reserve recognizes that the greatest potential impact the Reserve can have on mitigating climate change is through public education. Thus, the Reserve sees public education as an end goal of any climate initiative. From increasing the efficiency of public transportation to developing a green purchasing program, actions the City of Rocks National Reserve 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 Reserve's progress to date, and those actions that the Reserve will pursue.

### Park Staff

#### Incorporate climate change into park staff training, events, and performance plans

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, City of Rocks National Reserve 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 Reserve and in their own communities. Potential actions include:

- Create a City of Rocks National Reserve climate change policy memo.
  - Work within the Reserve management to establish the Reserve's talking points on climate change and empower park staff to discuss the topic with the visiting public.
- Keep staff members that are part of the Green Team/Environmental Management Team informed about climate-related issues.
  - Continue to 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.
- Create visual reminders for Reserve employees with climate change information and tips on how employees can help reduce emissions.
  - Create visual reminders for Reserve employees regarding climate change and how employees can help reduce emissions.
- Train custodial staff in most efficient use of cleaning products and waste reduction practices.
  - Instruct custodial staff in the most efficient use of cleaning products and waste reduction.
- Disseminate information about climate-friendly actions the Reserve is taking at conferences, meetings, and regional workshops.
  - Develop an information handout about City of Rocks recycling program that can be made available at the recycling centers throughout the Reserve.

### Visitor Outreach



Understanding climate change and its consequences is essential to initiating individual behavioral change. City of Rocks National Reserve 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 Reserve is currently doing about climate change, and encouraging visitors to reduce emissions, City of Rocks National Reserve can play an important role in educating the public about climate change.

City of Rocks National Reserve staff recognize the many different audiences that visit the Reserve, including recreational and non-recreational park visitors, “virtual visitors” who visit the Reserve 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 Reserve’s efforts requires appropriately focused messaging. The Reserve has developed a number of strategies to reach these various audiences effectively. These strategies include:

- Educate visitors about climate change.
  - Develop interpretive programs to explain the Reserve’s efforts to address climate change.
- Create and distribute previously produced information on climate change and its effects on national parks in general and on your park in particular.
  - Develop interpretive programs that highlight the Reserve’s efforts to address the impacts of climate change.
- Incorporate climate change information into existing park brochures.
  - Develop an educational brochure that provides information about how climate change will impact the Reserve.
- Incorporate climate-friendly information into interpreter programs and talks.
  - Develop a climate change interpretive program and provide interpreters with the information needed to educate the public about climate change.
- Educate visitors about their recycling options at the Reserve and at home.
  - Make a handout about the Reserve’s recycling program available at the recycling centers throughout the Reserve.
- Develop a Do Your Part! kiosk in the visitor’s center.
  - Develop an informational flyer for “Do Your Part!” that will be distributed through informational kiosks.
- Create demonstration projects and exhibits to convey the Reserve’s sustainability message to visitors.
  - Information about sustainability will be provided to visitors about the Reserve’s sustainability efforts.

## Local Community Outreach

The gateway communities, agencies, vendors, and volunteers surrounding City of Rocks National Reserve can play a significant role in supporting the Reserve’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:

- Consider the local economy in procurement and other areas.



- Continue to consider buying local or in state before moving outward for purchasing considerations.
- Include community members in climate change discussions.
  - Work with Idaho Department of Park and Recreation (IDPR) to encourage efforts to discuss climate change issues in the Reserve.
- Plan a community event for Earth Day.
  - Plan an Earth Day event that includes messaging on the Reserve's activities to address climate change.

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

By taking the actions established in strategies 1 and 2 above, City of Rocks National Reserve plans to reduce its emissions to the specified goals. Achieving these goals will require an ongoing commitment by the Reserve, which may include subsequent emission inventories, additional mitigation actions, and reevaluation of goals. As part of this strategy, City of Rocks National Reserve 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.
- City of Rocks National Reserve will track climate-friendly actions through the environmental management system.

## CONCLUSION

City of Rocks National Reserve has a unique opportunity to serve as a model for over 100,000 recreational visitors annually.<sup>4</sup> This report summarizes the operational actions the Reserve commits to undertake to address climate change. Specifically, the Reserve realizes its ability to educate the public and serve as a valuable model for citizens. By seriously addressing GHG emissions within the Reserve and sharing its successes with visitors, City of Rocks National Reserve will help mitigate climate change far beyond the Reserve'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, City of Rocks National Reserve 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 City of Rocks National Reserve to the forefront of Climate Friendly Parks.

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<sup>4</sup> City of Rocks National Reserve: Park Statistics. Available online at: <http://www.nature.nps.gov/stats/viewReport.cfm>