



# GreenLine

## 'Winter Cleaning' Your Hazardous Materials

It may be the off-season for many concessioners, but it is an ideal time to assess the chemicals used and managed onsite. Hazardous materials storage and management are perhaps the most common findings identified during environmental audits of concession operations. Most hazardous materials findings require only minor adjustments in order to comply with regulations.

Hazardous materials are generally labeled by the manufacturer with the words "CAUTION," "WARNING," "DANGER," "POISON," or the skull and crossbones symbol. The management of hazardous materials is regulated by the Occupational Safety and Health Administration (OSHA) under Title 29, Part 1910 of the Code of Federal Regulations (CFR).

Here are a few tips to keep in mind when managing hazardous materials onsite:

**1** Don't use hazardous materials if possible – research alternatives. If you must use hazardous materials, then purchase and store only what you need. Inventory what you currently use in your operations, then remove and

properly dispose of unnecessary hazardous materials (see side box).

**2** Always store flammable materials away from sources of heat and ignition. This includes eliminating sources of vapors and making sure that possible sources of ignition, like smoking, are conducted elsewhere.

**3** Store incompatible materials separately (e.g., bleach and ammonia). A useful site for identifying incompatible materials is [www.safetycenter.navy.mil/training/aids/files/In-compatibleMaterials.pdf](http://www.safetycenter.navy.mil/training/aids/files/In-compatibleMaterials.pdf).

**4** Store flammable and combustible materials in flammable storage cabinets. Ensure that storage cabinets are labeled correctly, that no more than three cabinets are located in one fire area, and that the amount of flammable or combustible liquids stored do not exceed regulatory thresholds.

**5** Provide secondary containment (e.g., tubs or pans) that can hold 110 percent of the capacity of the largest container. In the case of flammable storage cabinets, do not place items directly on the bottom of the cabinet as this is the containment area (you can place a shelf right above the bottom to increase storage).

These may all seem like common sense approach items, but they are often overlooked. Be sure to educate your staff and don't hesitate to ask questions. You may be saving a life!

### How do I properly dispose of hazardous materials?

Before disposing of hazardous materials, you must determine whether or not the waste is hazardous. Read the label on the product or its Material Safety Data Sheet (MSDS) for information on proper disposal techniques, which may indicate whether or not it is hazardous. If disposal directions are not provided, determine if the product is corrosive, toxic, ignitable, or reactive, indicating that it is likely a regulated waste.

Wastes that are considered hazardous cannot be thrown in the trash or disposed of down the drain. The requirements for properly disposing of hazardous wastes depend upon the quantity being generated. If you are considered a Conditionally Exempt Small Quantity Generator (CESQG)<sup>1</sup>, you may be able to dispose of your hazardous wastes at a local Household Hazardous Waste Drop Off facility. Call your local facility to determine if there are special business collection days, if there is a fee involved, and whether or not there are specific local requirements for properly disposing of hazardous waste.

<sup>1</sup>CESQGs generate 100 kilograms or less per month of hazardous waste, or 1 kilogram or less per month of acutely hazardous waste. CESQGs may not accumulate more than 1,000 kilograms of hazardous waste at any time.



A large male elk in Rocky Mountain National Park tries to decide which branch to nibble on.

## Ask Dr. Ima Park



**?** *I am a new NPS Concessioner and I have heard a lot about Environmental Management Systems (EMS). I was wondering if you can explain what an EMS is and how it is intended to help me as a concessioner?*

**Dr. Ima Park:** Great question! An EMS is a system or framework to help you manage or reduce your environmental footprint and move beyond compliance with environmental regulations. The EMS framework includes a listing of your environmental impacts, specific goals to reduce those impacts, staff roles and responsibilities, and methods to monitor and measure progress towards achieving your goals. The intent of an EMS is to incorporate an environmental conscience into your daily operations. This will not only help you reduce and prevent negative environmental impacts, but it will also enhance your company's operating efficiency.

responsibilities. Finally, your EMS will identify any environmental data that must be reported to regulatory agencies (including the park), as well as when the information is due to ensure that your company meets established deadlines.

An Environmental Management Program or EMP (another term for EMS) is a requirement included in all new Category I and II contracts. While there are specific elements required in an EMP, it should be appropriate to the size and scope of your operation – don't make it more complicated than it needs to be! Remember, your EMP (or EMS) is intended to be a useful, living document that is reviewed and updated annually.

For more information on how to develop an EMS, visit the Environmental Protection Agency's EMS guidance webpage at [www.epa.gov/EMS/](http://www.epa.gov/EMS/).

In developing your EMS, be sure to identify specific, achievable, and quantifiable environmental goals for your operation. You should describe how you will measure success and the effectiveness of your program. To help you in meeting your goals and objectives, be sure to train all employees on the aspects of your EMS, including their

### 515 DM 4, Environmental Management Systems (EMS)

The Department of Interior released Departmental Manual 515 DM 4 on August 13, 2008, to support the EMS requirements of Executive Order 13423 – "Strengthening Federal Environmental, Energy, and Transportation Management." The Departmental Manual requires all bureaus and offices, including the National Park Service, to develop, implement and maintain an EMS equivalent to the ISO 14001:2004(E) standard at appropriate organizational levels and facilities. Concessioners should stay tuned on the applicability of this policy to their operations.

## GreenLine

*GreenLine* is an official publication of the National Park Service Commercial Services. The newsletter provides a forum in which the NPS can share information with NPS staff and concessioners about the NPS Commercial Services, current environmental requirements, and best management practices; it also identifies resources available to improve concessioner environmental performance and highlights success stories.

Guest articles have been reviewed by the NPS Commercial Services and, if required, edited in collaboration with the original author.

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Notice: This newsletter is intended as an educational tool for businesses providing visitor services in national parks. Every effort has been made to ensure the information presented is accurate. However, the content does not constitute a complete reference to federal, state, or local laws nor does it constitute National Park Service rulemaking, policy, or guidance. Relying solely on the information in the newsletter will not guarantee compliance with applicable regulations. Strategies, procedures, and proposed solutions for compliance issues should be discussed with the appropriate federal, state, and/or local regulatory agencies; it remains the sole responsibility of operators to determine compliance with regulations. Inclusion in the newsletter is not an endorsement of a particular operator, product, or strategy.



*GreenLine* is printed using vegetable-based inks on 100% post-consumer recycled/recyclable, acid-free, Green Seal- and FSC-certified paper by a 100% wind-powered printing facility.

## Three Concessioners Recognized for Outstanding Environmental Success!

In October, three concessioners were recognized for their environmental programs by the 2008 Department of Interior (DOI) Environmental Achievement Award (EAA) committee. The NPS Commercial Services Program congratulates the following concessioners for their outstanding achievements, which will be discussed in the spring edition of the *GreenLine* Newsletter.

**Delaware North Company (DNC)** received an honorable mention for the recycling practices implemented at Yellowstone and Yosemite National Parks. In 2007, DNC achieved between 34 and 38 percent waste diversion rates at both parks through its GreenPath® Environmental Management System (EMS), employee involvement, guest awareness, and business partner awareness.

**Big Bend Resorts** received an honorable mention in recognition of its recycling practices at Big Bend National Park, which resulted in approximately 62,000 pounds of materials being recycled in 2007.

**Guest Services Incorporated** received an honorable mention for the construction of two kiosks in the National Mall and Memorial Parks that use seventeen 400-foot deep computer-controlled geothermal wells. The kiosks are adjacent to the Lincoln Memorial, and use a closed loop geothermal system for heating, air conditioning, walk-in freezers, refrigerators, and ice machines (see the Concessioner Highlights for more information).

To learn more about the Honorable Mentions and their environmental programs, visit <http://concessions.nps.gov> and click on the "News" link.



# Give Your Wallet a Break This Winter

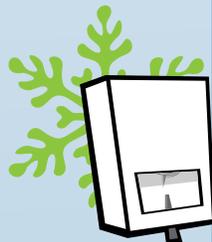
Winter is typically the most expensive season for energy costs. In this article we discuss a variety of ways to reduce your energy use, and potentially help save you money!

An excellent place to start is the EPA's Energy Star Portfolio Manager on-line. There you can establish a baseline for your operation's energy use. The Portfolio Manager will help you set goals, track energy performance, compare your building's energy use to similar building types, and calculate cost savings from implementing energy-efficiency ideas and techniques. Visit [www.energystar.gov/index.cfm?c=evaluate\\_performance.bus\\_portfoliomanager](http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager) to learn more about this free program.

Once you have established a baseline for your business you will find that saving energy this winter is easier than you thought. Listed below are different categories of energy efficient techniques that you could consider:

## Change Behaviors:

- During the day keep curtains, shades, and blinds open on south-facing windows. This allows sunlight to stream in and warm the space, while providing natural lighting.
- Turn the thermostat down 10-15 degrees overnight and save an estimated 10 percent a year on heating costs.
- Experiment with lowering the thermostat and ask employees to bring sweaters or sweatshirts to help them stay comfortable.



## Make Use of Easy Technology:

- Install a programmable thermostat to automatically adjust the heating system to standard temperatures set for the season.
- Add building insulation. For insulation recommendations visit the Department of Energy's Zip Code Insulation Program at [www.ornl.gov/~roofs/Zip/ZipHome.html](http://www.ornl.gov/~roofs/Zip/ZipHome.html). When shopping for insulation remember, the higher the R-value (the resistance to heat flow rating) the more effective the insulation.
- Insulate water heaters and water heating pipes. Purchase pre-cut jackets or blankets designed for electric water heaters.
- Have the heating system serviced and regularly change furnace filter to maximize heating efficiency.

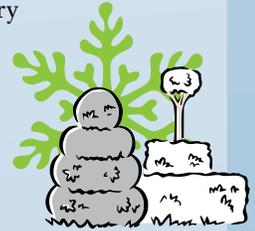


## Make Building and Area Improvements:

- Replace windows, doors, and electricity-consuming equipment with those that have the ENERGY STAR® label<sup>2</sup> or meet the Fed-

eral Energy Management Program's criteria. If replacement is not possible, consider re-sealing windows (often referred to as 'glazing') to block air from entering or leaving buildings.

- Create an insulating space of "dead air" between the building and cold winter winds by planting shrubbery five feet away from buildings. For a longer term solution, plant evergreen tree windbreaks in an "L" or "U" shape around the north and northwest corners of the building. Remember to consult the NPS before planting any shrubs or trees.



For some concessioners, saving energy may be required if your concession contract references Executive Order (EO) 13423, "Strengthening Federal Environmental, Energy and Transportation Management." Requirements for energy savings in EO 13423 include:

- Improve energy efficiency and reduce greenhouse gas emissions 30 percent by the end of fiscal year 2015;
- Obtain at least half the renewable energy currently purchased from new<sup>3</sup> renewable sources;
- Enable the ENERGY STAR feature on computers and monitors, and purchase ENERGY STAR products. See [www.energystar.gov/](http://www.energystar.gov/); and
- Purchase computers, monitors and notebooks that are certified under the Electronic Product Environmental Assessment Tool (EPEAT) program. EPEAT evaluates electronic products in relation to 23 required and 28 optional environmental criteria; to become certified, the product must conform to at least all 23 required criteria. Visit [www.epeat.net/](http://www.epeat.net/) for more information.

Remember, saving energy is a good idea year-round, not just for winter. Consider having a professional energy audit to help identify areas where you can save energy and money in your operation throughout the year.

<sup>2</sup>ENERGY STAR is a joint program between the Environmental Protection Agency (EPA) and the Department of Energy (DOE). The ENERGY STAR label identifies energy efficient products and practices. To learn more visit [www.energystar.gov/](http://www.energystar.gov/).

<sup>3</sup>New renewable energy sources means those sources placed into service after January 1, 1999.





## Leading the Way in Energy Conservation

The EPA awarded Evelyn Hill, Inc. the 2008 Energy Star Small Business Award for exceptional performance in energy conservation for its retail and food service operations at Statue of Liberty National Monument in New York City. In 2005, as part of its ISO14001 certified environmental management system, Evelyn Hill developed

and implemented a complete energy conservation program called Greensponsible®. This program incorporates employee education, as well as operational, maintenance, recycling, and procurement modifications to achieve an annual energy savings of approximately 15 percent.

### Energy Conservation

To reduce electricity use, Evelyn Hill installed several energy efficient devices and de-lamped non-critical fluorescent fixtures. High-efficiency compact and linear fluorescent lamps,

as well as electronic ballasts, replaced incandescent and magnetic ballasts for indoor lighting; LED fixtures were installed for spot lighting and exit signs; and timers were installed to automatically power-down outdoor security lights once visitors leave Liberty Island. In addition, Evelyn Hill established a policy to purchase Energy Star appliances and electronic equipment wherever possible as part of the existing environmental purchasing program.

### Training and Maintenance

Evelyn Hill's Greensponsible® program incor-

*(continued on next page...)*

## Using the Earth for Heating and Cooling

Guest Services, Inc. provides food and retail concession services at the Lincoln Memorial in the National Mall and Memorial Parks. In 2006 and 2007, Guest Services replaced the Lincoln Memorial Snack Bar with two 4,600 square foot kiosks, and used the opportunity to further its environmental management initiatives by installing an energy-efficient geothermal system for heating, air conditioning, walk-in freezers, refrigerators, and ice machines.

The geothermal system consists of 17 computer-controlled geothermal wells that are 400 feet deep. The innovative system uses heat pumps with closed-loop, vertical pipes and earth-coupled heat exchangers to provide heating and cooling for the kiosks. The pumping system operates at 96 percent efficiency by using variable frequency drives, automatic balancing, and isolation valves, all of which reduce the overall costs of pumping.

Each kiosk uses approximately 36 percent less energy for heating and cooling as compared with a conventional heating, ventilation, and air conditioning (HVAC) system. In addition, each kiosk saves approximately 2.1 million gallons of fresh water each year thanks to the system's utilization of a closed-loop system to cool the ice machines. Taking into account the reduced maintenance costs associated with

scroll compressors - estimated to be less than half of a conventional HVAC system - Guest Services is saving thousands of dollars every year!

The use of a geothermal system has also helped Guest Services protect air quality. By expanding its original system plans to include refrigeration equipment and ice machines, Guest Services was able to reduce the amount of refrigerant necessary for its air conditioning systems, coolers, and freezers by 40 percent compared to conventional systems. In addition, the company's use of a closed-loop system for heating needs eliminated the need to burn fossil fuels for onsite space heating, thereby reducing greenhouse gas emissions.

A side benefit of the geothermal system is that it helps maintain the natural beauty of the National Mall and Memorial Parks by eliminating unsightly outdoor condensing units and exhaust from a conventional furnace. This accomplishment, coupled with the energy and water savings, protection of air quality, and reduction in greenhouse gas emissions has resulted in the company considering application for the Leadership in Energy and Environmental Design (LEED) silver certification for its green building practices.

To learn more about Guest Services, Inc. and their environmental achievements, please visit: [www.guestservices.com](http://www.guestservices.com)



Guest Services, Inc. installed an energy-efficient geothermal system at Lincoln Memorial National Mall and Memorial Parks. A geothermal heat pump system is a heating and/or cooling system that uses the Earth's ability to store or dissipate heat. Because ground and water temperatures are more constant year-round (e.g., warmer in winter and cooler in summer), geothermal heat pumps are more efficient than conventional HVAC units.





Bradford A. Hill, President of Evlyen Hill Inc., visits his company's award-winning visitor services at Liberty Island.

## Leading the Way in Energy Conservation

*(continued from previous page)*

oporates employee training initiatives to ensure that the company's energy policies are fully integrated into its operations. Each employee is delegated specific responsibilities for reducing energy use and receives routine training throughout their employment. The company's Greensponsible® policies are also communicated to employees and guests through signs, labels, handouts and posters located in both public and work areas.

Evelyn Hill has also implemented a Computerized Maintenance Management System (CMMS) which automatically activates work orders according to preventive maintenance and cyclic maintenance schedules based on manufacturer's recommendations. Regularly scheduled preventative maintenance helps ensure that equipment runs as efficiently as possible, resulting in energy and cost savings.

Through its energy conservation efforts, Evelyn Hill has reduced its energy usage by 100,000 kilowatt hours (kWh) annually at an estimated cost savings of approximately \$16,000.

To learn more, please visit:  
[http://www.energystar.gov/index.cfm?c=sb\\_success.sb\\_successstories2008\\_evelynhill](http://www.energystar.gov/index.cfm?c=sb_success.sb_successstories2008_evelynhill)

## Keeping an Eye on Sustainability While We Eat

Drake's Beach Café is a food and beverage concession operation located at Point Reyes National Seashore. Although the restaurant is small, it has had a large impact on the way we perceive organic cuisine and 'green' business practices. In addition to the organic contents of the menu, the café promotes conservation and sustainability by implementing innovative waste reduction and procurement policies.

### Supporting Local Organic Farms and Ranches

Drake's Beach Café supports its local community by striving to purchase only locally produced foods from Marin County and the State of California. In addition to being local, the produce served at the café is always certified organic and in-season. Meat purchases for the café are from a local, all-natural and hormone-free cattle rancher. In an effort to educate customers about what they are eating, the café includes information about local farm products in its dinner menu. In addition to the café's organic cuisines, it also offers other locally produced, organic items such as ice cream; bottled teas; chocolates; and shade grown, fair trade coffee.

The café recently gained public recognition after three of its organic cuisine recipes were published in 'Organic Marin.'

### Waste Reduction Efforts

Drakes Beach Café has made significant efforts to reduce the amount of waste it produces by incorporating a number of creative diversion

techniques. Leftover food scraps from food preparation are given to the owner's goats as feed, and the café is currently looking into a composting program for leftover table scraps. In addition, the café provides biodegradable takeout containers, uses bulk condiments in place of single-serving options, and diverts used kitchen grease from the landfill by having it picked-up and converted into biodiesel.

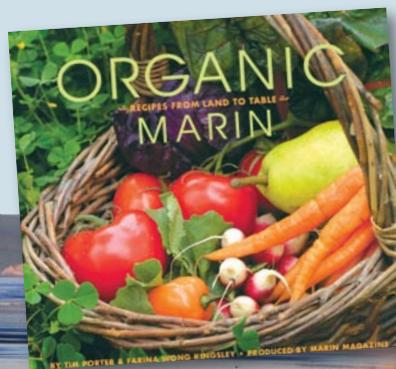
### Reduce, Reuse, Recycle

The furnishings of the Drakes Beach Café serve as a model of sustainability. Table and counter tops are made from Richlite®, a paper-based fiber composite manufactured out of environmentally sustainable resources harvested from certified managed forests in North America. The café chairs were rescued from an out-of-business restaurant, and the outdated National Park Service interpretive signs from the Visitor Center are slated to become additional tabletops for the café.

### Energy and Water Conservation

The restaurant has supported energy and water conservation efforts by installing an energy efficient ice machine and refrigerator; high-pressure, low-flow water sprayers; and compact fluorescent bulbs throughout the café. When closed during weekdays the café turns off the stove's pilot lights to conserve natural gas.

If you are interested in visiting Drake's Beach Café, you can find them at 1 Drakes Beach Road in Point Reyes National Seashore, California, or they can be contacted at (415) 669-1297.



Point Reyes National Seashore concessioner Drake's Beach Café recently gained public recognition after three of its organic cuisine recipes were published in "Organic Marin."

## Eating with the Seasons

Seasonal eating, it's simple, just offer what's in season in your area. Using watermelon and berries in the summer, baking apple pies and squash in the fall, and making stew in the winter are all examples of seasonal eating. When you purchase local foods in-season, whether for cooking at a restaurant or selling in a convenience store, you reduce the environmental damages caused by shipping foods thousands of miles. The transportation of food over long distances uses more gasoline and generates more greenhouse gases per calorie of food on your plate, than does the transportation of the same food over shorter distances. The Sustainable Table website, founded by Diane Katz, shows how seasonal produce also provides an exciting opportunity to try new foods, experiment with seasonal recipes, and support one's local economy.

Support for seasonal eating has recently grown among park and concession staff as a way to support the NPS's mission to protect natural resources. Some concessioners see seasonal eating as part of a broader effort to support local agricultural producers and become more environmentally sustainable. In addition, most parks encourage or require concessioners to purchase locally and regionally produced foods and retail items in an effort to expand sustainable practices within the park. In either case, a shift to food operations based on locally produced, seasonal items can be seen throughout park operations.



Making seasonal eating a reality at your operation requires a team effort and a strong commitment. The first step is to conduct research to find local suppliers, distributors, and farmers and to check on the availability of products, pricing and quantity. Chefs often have a great deal of influence with their suppliers and can request, or even require them to source local or regional products. In some cases, such as remote locations, it may be possible for concessioners to band together to purchase local, seasonal products from distributors. Providing chefs and kitchen staff with training on seasonal foods and menus can also improve the likelihood of maintaining sustainable food operations over time.

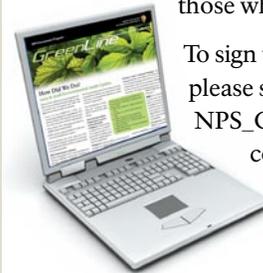
Choosing to offer menu and convenience items based on seasonal eating not only supports the environment and local economy, but it also provides visitors with the health benefits of eating fresh, unprocessed fruits and vegetables. If you are interested in furthering the sustainability of your food operations, consider offering local, seasonal items that have been organically grown and that come from farms where both animals and workers are treated fairly and humanely. Don't forget to share your efforts to purchase locally grown produce and offer sustainable food choices with your guests.



- To learn what is in season in your area, visit the Natural Resources Defense Council's Eat Local website - [www.nrdc.org/health/foodmiles/](http://www.nrdc.org/health/foodmiles/). Select your state and the time of year and you will be provided a list of in-season produce. If you want to stay ahead of the curve, Field-to-Plate has a colorful seasonal guide for each season - [www.fieldtoplate.com/product\\_listing.php?cat\\_id=46](http://www.fieldtoplate.com/product_listing.php?cat_id=46).
- For tips on cooking with seasonal produce, Sustainable Table offers a variety of recipes ([www.sustainabletable.org](http://www.sustainabletable.org)) and the Eat Local website (see above) offers a recipe of the month to whet your seasonal appetite.
- For information about farms, community-supported agriculture (CSAs), and farmers' markets located in your area, visit the Local Harvest website ([www.localharvest.org](http://www.localharvest.org)) or the Sustainable Table website (see above).

## GreenLine Goes Electronic!

In our last issue, we announced that the NPS Commercial Services Program will be publishing future issues of the *GreenLine* Newsletter electronically – including this one. Since our last update, several subscribers have opted to go the electronic route. If you have not already done so, please consider eliminating hard copy receipt of the *GreenLine* by adding yourself to the e-distribution list. Participants in e-distribution are notified via email when the latest issue of the newsletter is available online. We are hoping to achieve 90 percent e-distribution by the end of 2009; however, hard copies will be available to those who prefer them.



To sign up for e-distribution, please send an email to: [NPS\\_GreenLine@nps.gov](mailto:NPS_GreenLine@nps.gov) or contact Gabrielle McDonald at 303-987-6909.

## Environmental Considerations for Winter De-icing

Winter in many national parks requires the use of salt and other deicing agents to ensure visitor and employee safety. The most common material used for deicing roadways and sidewalks is salt, including sodium chloride (also known as "rock salt," NaCl), magnesium chloride (MgCl<sub>2</sub>), and calcium chloride (CaCl<sub>2</sub>). While salt is an economical and effective way to remove ice, it can also have a negative impact on the environment. For example, salts can contaminate surface and groundwater, and inhibit or desiccate vegetation growth next to roadways. It can also attract wildlife to the roadside which increases the potential for accidents.

This winter consider using an environmentally preferable alternative to conventional salt deicers, such as calcium magnesium acetate (CMA). This biodegradable material is made from limestone and acetic acid, so it causes less damage to the environment as well as to corrosion-sensitive structures such as concrete and bridges. If alternatives to salt are not an option, try to eliminate the use of rock salt and limit applications of MgCl<sub>2</sub> and CaCl<sub>2</sub> to areas of high importance.

# Global Warming in Winter

Evidence of climate change during winter can be seen throughout the national parks. According to the NPS Climate Friendly Parks (CFP) program, melting glaciers can be seen in Glacier National Park; decreasing populations of cold-water fish can be seen in Yellowstone River; and rising sea levels can be seen in Everglades National Park. Understanding how climate change affects where you live and work is important in helping to protect our national parks into the future.

The Intergovernmental Panel on Climate Change (IPCC)<sup>4</sup>, a neutral intergovernmental body established by the United Nations to assess scientific literature on climate change, recently reported that, because greenhouse gases act like a blanket on the earth, one of

the many impacts of climate change is “less extreme winter cold in northern cities.” In the *Climate Change 2007: Impacts, Adaptation and Vulnerability report*, the IPCC provides a number of documented impacts of climate change observed in North America (see below). It is possible that you have noticed similar phenomena occurring in your park.

## What Can I Do To Reduce Greenhouse Gas Emissions?

Minimizing your greenhouse gas emissions (also referred to as your carbon footprint) can be achieved by reducing fossil fuel use within your operations. Specific actions you may want to consider to reduce your carbon footprint include implementing a carpooling program for employees; purchasing hybrid or fuel-efficient vehicles for your operations; buying goods from local or regional vendors; and using biofluids, such as biodiesel or soy-based oils, in place of petroleum-based products. Energy efficiency measures such as upgrading your lighting systems, purchasing Energy Star<sup>®</sup> appliances, installing appropriate amounts of insulation, and glazing strate-

gies will not only help you reduce emissions but can also save you money in energy costs. Finally, renewable energy technologies such as solar thermal and photovoltaic applications can also help you reduce your carbon footprint.

The NPS CFP program offers a number of useful tools and resources for assessing your operation’s carbon footprint, as well as identifying ways to reduce emissions. Visit the CFP website at [www.nps.gov/climatefriendlyparks/](http://www.nps.gov/climatefriendlyparks/) to determine if your park is a partner in the program. If so, contact the park to learn how to become involved. If your park is not already involved, talk to park officials about collaboratively joining the program.

Reducing your business’s greenhouse gas emissions is important year-round, even when it is cold outside. For additional resources and steps that you can take to minimize your environmental impacts related to climate change, refer to Volume 7, Issue 2 of the *GreenLine Newsletter*<sup>5</sup>.



<sup>4</sup>The IPCC reviews data from published, peer-reviewed articles by scientists around the globe that are studying trends related to climate change.

<sup>5</sup>To view previous issues of the *GreenLine Newsletter*, visit [www.nps.gov/concessions](http://www.nps.gov/concessions).

## Impacts of Global Climate Change on North American Winter Phenomenon as reported by the IPCC in *Climate Change 2007: Impacts, Adaptation and Vulnerability report*.

Description of Natural Phenomena	Reported Direction of Trend
In the regions of winter snow, the amount of annual precipitation falling as rain rather than snow	Increased in 74% of weather stations in the western mountains of the U.S., as measured from 1949 to 2004
Streamflow peaks - the date when the volume of water flowing is at its peak, typically associated with spring when winter snow melts	Occurring earlier by one to four weeks in snowmelt-dominated western mountains in the U.S., based on 1948 and 2002 measurements
Break up of river and lake ice	Occurring earlier across North America by 0.2 to 12.9 days as measured over the last 100 years
Severe winter storms and winter coastal erosion, winter ice typically provides seasonal shore protection	Increase in number of storms and decrease in ice in coastal areas in North America, from San Francisco to Alaskan villages and Great Lakes towns, since 1950
Insects geographic range	Expanding into areas previously too cold for suitable habitat, as seen with the Mountain Pine Beetle in British Columbia, Canada
Susceptibility of trees to insects	Increased when multi-year droughts degrade the trees’ ability to generate defensive chemicals, and light snowpacks harbor organisms typically suppressed by winter weather. Seen in aspen stands in Alberta, Canada which were sequentially hit by tent caterpillars, wood-boring insects and fungal pathogens
Winter thaws and early season frost	Increasing risk in U.S. agricultural regions especially as growing season is expanding for agricultural areas

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## Branch Chief's Corner

In the spirit of the season, this issue of the *GreenLine* Newsletter focuses on topics related to environmental management during the winter. In light of the fuel cost increase earlier this year and the current economic downturn, it seems timely to discuss ways your business can conserve resources and money, especially during these colder months.

A number of articles in this newsletter, such as Saving Money and Energy in Winter, Seasonal Eating, and Global Warming in Winter, focus on ways you can conserve energy and money during winter months. To bring it all together, we identify on-the-ground examples of seasonal eating, reducing greenhouse gas emissions, and energy conservation in the Concessioner Highlights.

To further help conserve energy and resources, I encourage each of you to sign up for the *GreenLine* Newsletter e-distribution (see sidebar on page six for more information). Transi-

tioning to an electronically distributed newsletter will help the NPS Commercial Services Program do its part in reducing our environmental impact. Thanks to each of you who have already signed up - the response has been outstanding!

On a final note, I want to thank Wendy Berhman for developing the *GreenLine* Newsletter and tirelessly managing it for the past eight years. Although she has recently chosen to focus her energies elsewhere within the NPS, she has been instrumental in advancing environmental management within the NPS Commercial Services Program. With that, I leave you with a quote from Margaret Mead, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has."

Deb Harvey  
Acting Contract Management Branch Chief,  
NPS Commercial Services Program

### GreenLine

### ASSISTANCE

If you require technical assistance on environmental issues or want to learn more about the NPS Commercial Services, contact us:

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Email:  
NPS\_GreenLine@nps.gov



Website:  
concessions.nps.gov,  
click "CoEMP"



## We've Changed our Name!

Recently, the NPS Concession Program underwent a name change. The new title—NPS Commercial Services Program—was chosen to better reflect the comprehensive nature of the program within the Business Services Directorate of the NPS. The Business Services Directorate oversees concessions, leasing, and commercial use authorizations.