



**Statue of Liberty  
National Monument  
& Ellis Island**

The newsletter of  
sustainability efforts  
and environmentally  
preferable alternatives at  
the Statue of Liberty  
National Monument

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# Patina

PERHAPS the greatest example of sustainability in our park (maybe even in the entire Federal Government) is the Statue itself. Its exterior needs no cleaning, scraping, waxing, polishing or applications of chemicals to maintain it. Can you imagine the impact on the park's budget if this weren't so? Can you imagine the potential safety hazards to maintenance professionals if she needed a periodic "touch up"? Yet she has stood in New York Harbor for over a hundred years exposed to salt spray and all the conditions that the weather could hurl at her needing nothing! A truly great example of sustainable design thanks to her creator's choice of copper as the building material. Copper develops an extremely durable protective coat forming what is known as a patina.

**To highlight the Statue's simple yet highly effective mechanism for sustaining itself this newsletter takes on the name: *Patina*.**

Patina will focus on our park's efforts to provide leadership in developing and implementing green or environmentally preferable practices to preserve our park's resources. It is hoped that Patina will help promote a more sustainable environment beyond our park too, as it will contain information that individuals can take home with them to make environmentally preferable choices in their homes, communities and ultimately the world. It has been rightly said that without global sustainability, the sustainability of our parks becomes more difficult. Hopefully our park will become a model demonstrating innovative sustainable alternatives for the Park Service and beyond.

By the way, it's the patina that makes the Statue appear green too. Did her creators know of the green movement way before it became a national trend?

# “One Thing, a Day”

A Word from the Superintendent

If we all took just one of the things that we ordinarily do in a day and did it instead with environmental awareness or environmental responsibility, what a different world we would make. The small things add up and have a great impact on conserving our resources. For example, taking only enough napkins that you need at the concessions stand or using a re-usable ceramic mug for coffee in the office or maybe using the double sided feature on the copy machine when making copies.

I am committed to making environmental awareness an important consideration in all phases of all operations that take place in the Park.

I encourage you to take the initiative to review what you do in your job and determine how you can build a sense of sustainability or environmental awareness into it. I encourage you further to build this same sense into other areas of your life-at home and in your community. Our National Parks are examples of the tremendous gifts



Superintendent Diane H. Dayson

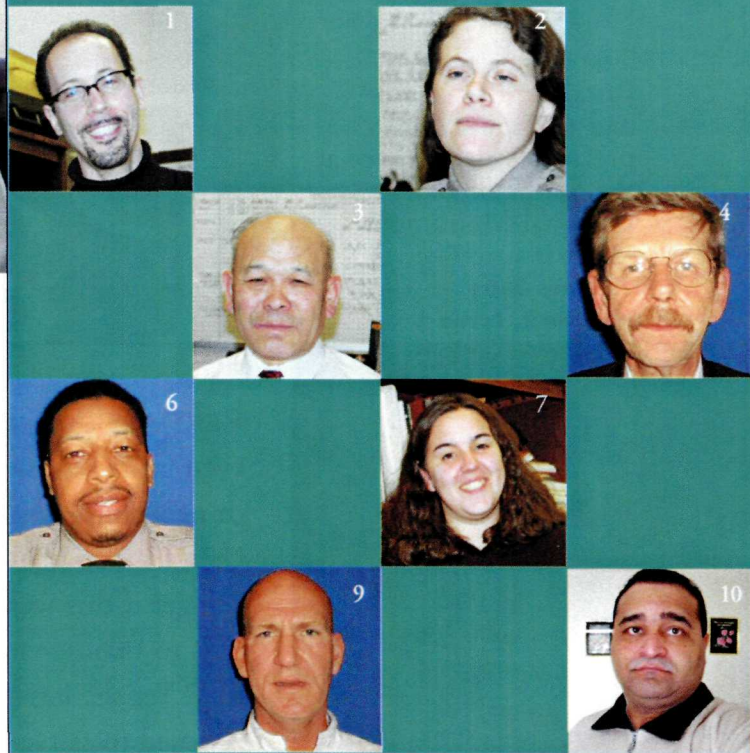
that our country has been blessed with. It's up to all of us to recognize these gifts and go that extra mile to “leave them unimpaired for future generations.”

## Sustainability: What does it mean?

One of the simplest definitions as used by the National Park Service is as follows:

*Meeting the present needs without compromising the ability of future generations to meet their own needs.*

This is directly related to the Organic Act of the National Park Service which makes it clear to us what our mission is. You've heard it before. To conserve our nation's resources such that we leave them unimpaired for future generations. It takes on a broader meaning these days to touch upon just about



every operation in our park and to the extent possible what we can do outside our park.

A few simple examples of sustainable or green practices are things such as the following:

From selecting light bulbs and appliances that are energy efficient to using janitorial products that are non-toxic.

From driving alternative fueled vehicles to using low flush toilets.

From writing on paper having recycled fiber content to educating our visitors on issues of sustainability.

And from recycling paper, wood, & metal to reducing sources of garbage and making purchases of products & services that support the green industry.

**These are just some of the many ways that sustainable or “green practices” will be applied in helping us to carry out are mission in an environmentally responsible way.**

### Your help is needed.

#### Ideas and Suggestions

Send any ideas that you have for making our park greener i.e., more sustainable or environmentally friendly to Al Farrugio in the Maintenance Division (Al\_Farrugio@nps.gov) or speak to any of the members of the Green Team. We may even interview you and mention your idea in one of the future issues of Patina.

## The Statue's Green Team

A new work group has been approved by the Superintendent to be the parks official “Green Team.” The mission of the work group shall be as follows:

To explore areas in the Park where sustainability issues can be improved or expanded and to determine how to go about doing that.



To establish short term and long term sustainability goals.



To develop mutually beneficial partnerships outside the park that promote environmentally preferable operations.



To make park staff, partners and visitors aware of sustainability principles and have them become involved in supporting the parks sustainability goals.

The Green Team is composed of the following people:

- 1 Al Farrugio, Chairperson
- 2 Kathy Craine
- 3 Pyong Ko
- 4 Mike Conklin
- 5 Brad Hill
- 6 Danni Brown
- 7 Michele Ermilio
- 8 Pete O Dougherty
- 9 Robert Foley
- 10 Bill Rivera

The members of the Green Team will change over time based on the issues and areas of expertise needed. Let us know if you have an interest in joining us.

## Horizontal Directional Drilling on Liberty Island Saves Our Resources

Last spring Liberty Island underwent a remarkable process in order to install approximately 650 lineal feet of fuel line pipes. Rather than the conventional method of trenching the entire length, laying the pipe in the ground, backfilling and then repairing surface damage, a procedure known as horizontal directional drilling was employed. Horizontal directional drilling (HDD) is a procedure which tunnels under the ground to create a void through which flexible pvc conduits & ducts can be pulled. The net result is that no surface damage occurred.

For Liberty Island this procedure meant that paving in the

arrival mall did not have to be broken and restored and that visitor traffic flow did not have to be interrupted or detoured—an important consideration. Even more important was the fact that by using HDD the historic trees and shrubs on the southwest lawn did not have their root systems torn apart. If the more conventional trenching method had occurred as much as 60% of the trees' and shrubs' roots would have been killed. This would have had a negative impact on the plants and would have led to expensive replacement costs for those plants that would have died from that kind of treatment. HDD created a tunnel below the roots of the trees, shrubs and grass. They never “knew” anything was going on around them. As a result of selecting this environmentally



friendly procedure the park's present needs were met (new fuel line installed) and it was done with thoughtful consideration of leaving our park's resources (in this case historic plants, pavements, and archeological resources) unimpaired for future generations. An excellent project using a sustainable alternative by the Maintenance Division.



Above left Drilling machinery on Liberty Island creating a tunnel for the new fuel line.

Above Above ground there is no disturbance to lawns, pavements, or visitor use during drilling operations.

# A Drop in the Bucket

Paper Recycling at the Statue of Liberty National Monument & Ellis Island

In 1991 a paper-recycling program was initiated in our park. Thanks to our recycling efforts the park to date has recycled nearly 18 tons of paper. As of a few months ago our paper-recycling program has expanded to include colored paper. You should have at your desk or nearby in your office a blue bucket with a black saddle attachment. Clean white paper goes into the blue basket and colored paper goes into the saddle attachment since we must send the paper to the recycling company sorted.

Our recycling efforts are our contribution to help save our nation's resources and prevent pollution. Check this out!

- Each ton of recycled paper saves 3.3 cubic yards of landfill space from being used and saves 17 trees.
- Up to 64% less energy is required to produce paper from wastepaper instead of virgin wood pulp. Every ton of office paper that is recycled saves 3 barrels of oil! Paper made from used paper instead of trees produces 60% less air and water pollution!

*For more information on our recycling efforts and to volunteer to help make our program successful please get in touch with Al Farrugio at ext. 141.*

So, remember the slogan:

## reduce, reuse, recycle!

Here are the guidelines for our office paper-recycling program:

- Do Recycle in Blue Container:** clean white office paper (with any color ink) including computer printout, memos, note paper, copy machine paper, envelopes (no plastic windows).
- Do Recycle in Saddle Attachment:** colored paper, post it notes, copy paper wrappers.
- Don't Recycle:** paper cups, facial tissue, paper towels, glossy paper brochures.

## Did You Know?

Cardboard, crankcase oil, batteries, scrap metal and wood, and the aluminum cans from the Ellis Island lunch room are other materials that get recycled regularly in our park. We are looking to further expand our recycling program in the near future to include: tin cans, plastic bottles, glass, and newspapers.

## The Environmentally Friendly Home

You can become more environmentally aware at home too. Take a close look at all the chemical cleaners under your kitchen sink. Do you absolutely need them? Are they labeled "non toxic"? If not, very likely you are exposing yourself and family to harmful fumes or other agents. Consider using non-toxic, non-polluting alternatives that are safe and do not produce any toxic waste. Let us know what you find and how you've changed your chemical inventory for a safer, non-polluting home environment.

## Look for these topics in future editions of Patina:

*The Northeast Region Pilot Green Program and the Statue of Liberty National Monument*

*Removal of Toxic Chemicals from Our Park: Keeping Our Work Place Safe*

*The Statue's Lawn Becomes the Nations First "Sustainable Lawn" by Feeding the Soil!*

*In the Harbor and Beyond: Our Neighbors and Partners*

## Patina Volume 1, Issue 1

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