



Interpreting a Green Scene: the Bronx Zoo's Eco-restroom

by Sonal Bhatt

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The Wildlife Conservation Society (WCS), headquartered at the Bronx Zoo, manages national and international conservation projects as well as research and education programs in New York City and 60 nations worldwide. The mission of WCS is to save wildlife and wild lands through careful science, international conservation, education, and the management of the world's largest system of urban wildlife parks. It is through these activities that we believe we can change attitudes toward nature and help people imagine wildlife and humans living in sustainable interaction on both a local and a global scale.

At the parks, this means helping our visitors find caring relationships with nature and ways of living that are mindful of the needs of nature. Helping visitors understand what it means to be green and how to be conservationists in their own lives has been increasingly important. In order to accomplish this goal, we are constantly looking for novel ways to share green practices with our audience.

New Opportunities

In the spring of 2005 the Bronx Zoo's Bronx River Park entrance had aging bathrooms that were in dire need of repair. With an outdated septic system, and limited to no access to city sewer lines, we needed creative solutions. For the institution, the best solution had to be both ecologically and economically efficient.

Stats on the Project

The Eco-restroom project is a multi-part experience that embodies our mission of conservation. The most substantial component is bathrooms for both men and women. Containing 12 toilets and six sinks for women,

and two toilets, four waterless urinals and four sinks for men, it features composting toilets designed by Clivus Multrum of Lawrence, Massachusetts. This 1,200 ft² "green" restroom incorporates sustainable design and economically efficient strategies: maximizing the use of the daylight; minimizing electrical use; and utilizing environmentally friendly materials and composting toilets. The building is situated to minimize impact on existing trees and landscape.

The sinks have water saving faucets that allow visitors to use water judiciously. Eco-power faucets with sensors turn on when someone is ready to wash his hands, but rather than relying on electrical power or battery, the faucets recharge as water runs through them. The used water from the sinks is used to water a specially designed grey water garden outside the building. The restroom is stocked with bio-compatible soap that is not harmful to the plants of the grey water garden or the native animals that use the garden. This specially designed garden creates a natural system where soil and plants work as a self-sustaining biological filter for the grey water. Another garden abutting the restroom collects storm water run off from the roof in a rainwater barrel. This water is used to water the plants in the garden, designed to withstand the erratic watering.

Teaching Green

Located at one of our busiest park entrances (60% of our 2 million yearly visitors enter here), this bathroom is just as well visited as any of our exhibitions. Although this was not a traditional exhibition space, we felt that we had a unique opportunity to interpret the green bathrooms and give visitors practical guidance on how they can be green in their own lives.

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The subjects of being green and conserving water can sometimes be quite dry and technical. The eco-restroom is designed to be interactive, humorous and fun, informative, and easily accessible to visitors of all ages.

Water Conservation

As visitors approach the Eco-restroom area, they encounter wildlife gardens. The grey water garden and the rainwater garden are examples of how water can be repurposed. Rotating water droplet signs are placed along the pathway describing various actions that visitors can take at home to conserve and repurpose water.

“Use leftover drinking water on plants, its fine for them and saves tap water.”

“Soak dirty dishes in a tub of soapy water first, and you’ll use less water overall.”

Consoles describe how grey water gardens and rainwater gardens work. They explain how green spaces function as natural filters for ground water as well as discuss our relationship to underground water sources.

“About 95% of the total supply of freshwater in the U.S. comes from groundwater.”

Water, Water Everywhere? Not Really!

Upon entering the restrooms, visitors encounter information about the relative paucity of fresh water in the world.

“Water, Water Everywhere? But it’s mostly not to drink. Only 1% of the Earth’s water is available for all our daily needs. The rest of it is either saltwater (97%), or freshwater in glaciers, ice caps, and snow.”



The Eco-restroom project, located at one of the Bronx Zoo’s Park entrances, includes eco-friendly bathrooms, a grey-water garden, rainwater garden, and an extensive interpretation program. Photo courtesy of WCS.

Signs by the sink offer more tips on simple water conservation.

“You Can Save Water – Keep water in the fridge instead of running the tap for cold water. Over two gallons flow from the tap in just one minute!”

“You Can Save Water – A four minute shower uses between 30 and 40 gallons of water. Try taking shorter showers and turn off the water while you apply soap and shampoo.”

And signs near the faucet explain the connection between the sinks in the bathroom and the grey water garden outside.

“Water from this sink will be a plant’s drink! This water will go down the sink to the gray water garden outside.”

A Little Bathroom Reading

Although they look like normal toilets, the composting toilets flush with foam instead of water, an important water-saving feature. These toilets do not send waste to a sewage system but instead to a tank where temperature, invertebrates and bacteria do the work of processing the waste.

Visitors are provided “bathroom reading” with a series of signs in each stall that describe not only the practical information about how to use the foam toilets and the technical description of

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Signs that connect bathroom sinks to the grey-water garden outside are placed at heights good for young audiences. Photo courtesy of WCS.



Signs in bathroom stalls explain how toilets work and offer fun facts about the value of poop. Photo courtesy of WCS.

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how they work, but also the ecological benefits of the system, e.g. composting toilets translate into a considerably diminished amount of waste. And of course, who could resist a little poop trivia? Each stall includes a different fact about the amazing purposes of poop in the natural world.

“THE POWER OF POOP: IT’S A COURTSHIP GIFT—A male dung beetle gives a female a ball of poop 30 times her size. If she likes her gifts, she climbs on top and they roll off together.”

Or

“THE POWER OF POOP: IT’S NUTRITIOUS—Rabbits eat plants that are really hard to digest. Eating their poop gives them a second chance to get nourishment from their food.”

In the men’s room, signs at the waterless urinals sing the praises of these water saving features.

“Urine Here Again?—On average people pee four times a day and poop once. A standard toilet uses five gallons of water per flush; a standard urinal uses two. This urinal uses none.”

Helping Visitors Measure their Greenness

As part of our front-end evaluation for this

project we interviewed our visitors about what green actions they take in their own lives. We were able to create a set of standards that describes our visitors’ actions, i.e. do you visit green spaces? “All the time.” Do you take short showers? “Planning to.”

We used this information to create an interactive game for the Eco-restroom area. This eco-abacus asks visitors to answer the same questions that we asked groups in the front-end evaluation. Visitors can move abacus pieces along a series of pipes to answer the questions and then turn a flip to see how they personally compare to the zoo averages. In some cases visitors exceed the actions of the average visitor and in other cases they learn that others are doing more to be green than they are.

What Do Our Visitors Think?

The Eco-restroom was an immediate hit with both the media and the public when it opened. Seen as an unexpected educational experience, it remains a favorite for discussion in newspapers, media outlets, and visitor blogs,

In summative evaluation, when asked, “What did you think of the Eco-restroom?” 90% of visitors gave a positive response.

“It is good for the environment,” “It was a good idea,” “It saves water!”

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When asked, “What does the Eco-restroom make you think of the Bronx Zoo?” 78% of visitors gave answers that let us know our message is getting through.

“It’s great that the zoo is taking that action. It costs more up front, but is worth a lot more in the long run.”

“Build more of them!”

Visitors took away a number of new concepts related to poop and urine (fun facts and how human waste affects the environment); water and energy conservation; and the way the toilet works. Most visitors (78%) were able to describe some idea or concept read in the eco-restroom.

What We Learned

There Is Potential In the Spaces in Between

The Eco-restroom is a visitor amenity and not traditionally seen as an exhibition. The information was well-received in a space where visitors were not necessarily expecting to learn. Based on our success with this project, we are finding more of our “spaces in between” as places for sharing our mission in interesting and unexpected ways.

Practicing What We Preach Is Important

Our best behaviors were our best teaching points in the case of the Eco-restroom. Through describing our efforts, we showed visitors our commitment and built conservation relationships with them. Where we could, we attempted to teach through example.

It Never Hurts to Ask

As we were investigating the content for this

project, we came across an amazing children’s book that had accessible illustrations and wonderfully witty content. *The Truth about Poop*, by Susan E. Goodman, with illustrations by Elwood Smith (2007), was the wonderful combination of seriousness and humor that we wanted our exhibition to represent. Luckily, we were able to connect with the author, publisher, and illustrator, all of whom were willing to work with us. They allowed us to use poop facts



The Eco-abacus allows visitors to gauge their own “greenness” and compare it to other Bronx Zoo visitors. Photo courtesy of WCS.

from this book and all the illustrations. We can’t possibly express how thankful we are for the generous use of their material.

Green Isn’t Always Cheap, but Building on Existing Projects Can Be Frugal in the Long Run

The Eco-restrooms were a considerable investment. At 1.6 million dollars, this was a large cost for the institution. Originally there



Interactive water droplets offer more conservation tips for the home, and consoles explain the importance of green spaces like the rainwater garden. Photo courtesy of WCS.

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References:

Goodman, S. (2007). *The truth about poop*. Illus. E. Smith. New York: Viking Penguin Young Readers Group.

You can see a 5 minute clip about the Bronx zoo's eco-restroom at: www.riverwired.com/video/poop-zoobronx-zoo's-eco-restroom

was little to no interpretation attached to this project. Had this project been completed without any interpretation it would still have been an important example of our commitment to conservation and green practices, but it would have been a missed opportunity for teaching the public. By building interpretation into an existing project, we were able to create an exhibition without creating a whole new project. The signs for this project were partially funded by a NOAA grant related to water conservation.

Scat Sells

There were some that felt that talking about poop might be offensive to visitors. Scat, feces, poop, whatever you call it, is an important part of our world. For us, it was a perfect entry point for sharing serious information in a humorous way. After we completed front-end evaluation, we discovered that our visitors were comfortable with scatological information. What can we say, poop worked.

We are making strides to ensure we are being good conservationists, and we are making sure our public knows about it.

How Are We Using What We Learned?

Since the opening of the Eco-restroom, there has been much more focus on interpreting our non-exhibition spaces. *Madagascar!* our latest exhibition, is anticipated to be the first LEED (Leadership in Energy and Environmental Design) certified historic landmark building. It includes water saving fixtures in the bathroom, energy efficient lighting, geothermal wells, fuel cells, and many other sustainable design features. The features of the building are interpreted for our visitors through bathroom signage and consoles much like the Eco-restroom.

The new campus headquarters of the Wildlife Conservation Society will be opening this spring as a LEED gold certified building. As our employees make their way to their desks, they will learn about sustainable furniture, repurposed materials, and green building features. We are making strides to ensure we are being good conservationists, and we are making sure our public knows about it. ☀