



Lyndon B. Johnson Space Center

roundup





At one of the recent monthly Strategic Management Council meetings with all senior managers, NASA Administrator Mike Griffin made the comment “I must get 150 e-mails a day.” Scott Horowitz, the ESMD (Exploration Systems Mission Directorate) Director, responded “I probably get 300 a day, but of course 150 of those are from you.” After the laughter died down, I started wondering if we’re not sometimes misusing a powerful communication tool. We will be coming out with an article in a future Roundup reminding everyone of proper e-mail protocol in great detail, as well as Freedom of Information Act requirements, but rather than make you wait for the complete story, I wanted to make a few points in this issue.

Sending someone an e-mail does not automatically relieve you of responsibility for an action or activity. Until you receive a confirmation acknowledging responsibility for the action, it still resides with you. You can’t just send and forget. Too many things can fall through the cracks when e-mails don’t get through or are inadvertently deleted.

You must assume that anything put into an e-mail can very likely show up on the front page of the newspaper (the “Washington Post test”). If that would embarrass you or the agency, don’t send it. NASA has received numerous requests for e-mails under the Freedom of Information Act recently, and we should all be reminded that we have very little “privacy” when we use government computers or Blackberries.

We are striving for an environment where everyone feels free to speak up and dissenting opinions are highly valued. However, if you want to send an e-mail to someone more senior in the chain of command—and you are certainly free to do so—common courtesy requires that you also copy the e-mail to the chain of command.

Finally, before I hit “Send,” I try to read my e-mails one more time to make sure I could explain it to my mother without being embarrassed. It’s amazing the amount of editing I do.

A handwritten signature in blue ink that reads "Mike". The signature is written in a cursive, flowing style.

On the cover

JSC employee Russ Fortson captures a perfect NASA “Earth Day” theme in his first-place winning photograph of Rocket Park. Read about the recent JSC photo contest and see more spectacular images on page 10.



A rose like no other

by Catherine E. Borsché

*“If the rose puzzled its mind over the question how it grew,
it would not have been the miracle that it is.”*

J. B. Yeats, 1871-1957

THE MEMORY of Max Faget, the late NASA icon and spacecraft designer, is immortalized at Johnson Space Center in one of the sweetest gifts nature has to offer—a rose.

Back in 2001, Mary Lee Steffensen of Walnut Creek, Calif., a good friend of Max Faget, decided she would like to honor him by creating and registering a rose in his name.

“My dad’s friend Mary Lee is very enthusiastic about nature and the environment, and she was always so thrilled about my dad’s accomplishments,” said Nanette Faget, manager of the Orbiter Vehicle Management Office in Space Shuttle Program at JSC. “She wanted to honor him in a unique way because he was such a unique individual.”

Steffensen, an avid gardener, felt that creating a hybrid tea rose for her friend would be a special, personalized gesture.

“My dad was not a rose aficionado, or even a gardener, but his friend was,” Nanette Faget said. “She very much liked roses and became aware of an opportunity through Jackson and Perkins, where you could commission a commemorative rose and name it after a certain individual.”

Through the Jackson & Perkins Custom Rose Program, new varieties of roses are given an identity after several years of hybridization, testing and evaluation.

“Each year, we select the finest varieties from thousands of new roses,” said Bill Michel, senior vice president of marketing and merchandising for Jackson & Perkins. “Then it’s time to name them.”

The namesake will join others who have been immortalized by Jackson & Perkins’ world-renowned roses. Some award-winning roses currently bear the names of well-known figures such as Diana, Princess of Wales; Billy Graham; and Ronald and Nancy Reagan. The Max Faget Rose is also a member of this illustrious list.

Max Faget was aware of Steffensen’s efforts, and was happy to be an integral part of the process.

“It was a very exciting and fun thing to do—to go out to the area in California where they cultivate the roses. We learned all the processes, and my family was with him when he actually selected the particular rose,” Nanette Faget said.

Max Faget also had a hand in deciding where some of the roses would go.

“He very much wanted some of them to be here at JSC, Louisiana State University, his alma mater, and also at the Houston Garden Center,” Nanette Faget said. “The others were distributed among family, friends and neighbors.”

The rose the legendary NASA icon chose is one that the center would be very proud to display.

“The rose is a very beautiful red flame color, and I would say it has a pink tint to it. It’s very fragrant,” Nanette Faget said.

JSC was lucky enough to receive 40 of the rose plants.

“The rose bed is located south of Building 110, closest to Second Street,” said Ginger Gibson, Support Services Specialist for JSC Center Operations. “They are on your right as you enter the main gate, just outside the hedge line.”

That particular location was chosen so that the roses would survive JSC’s thriving deer population.

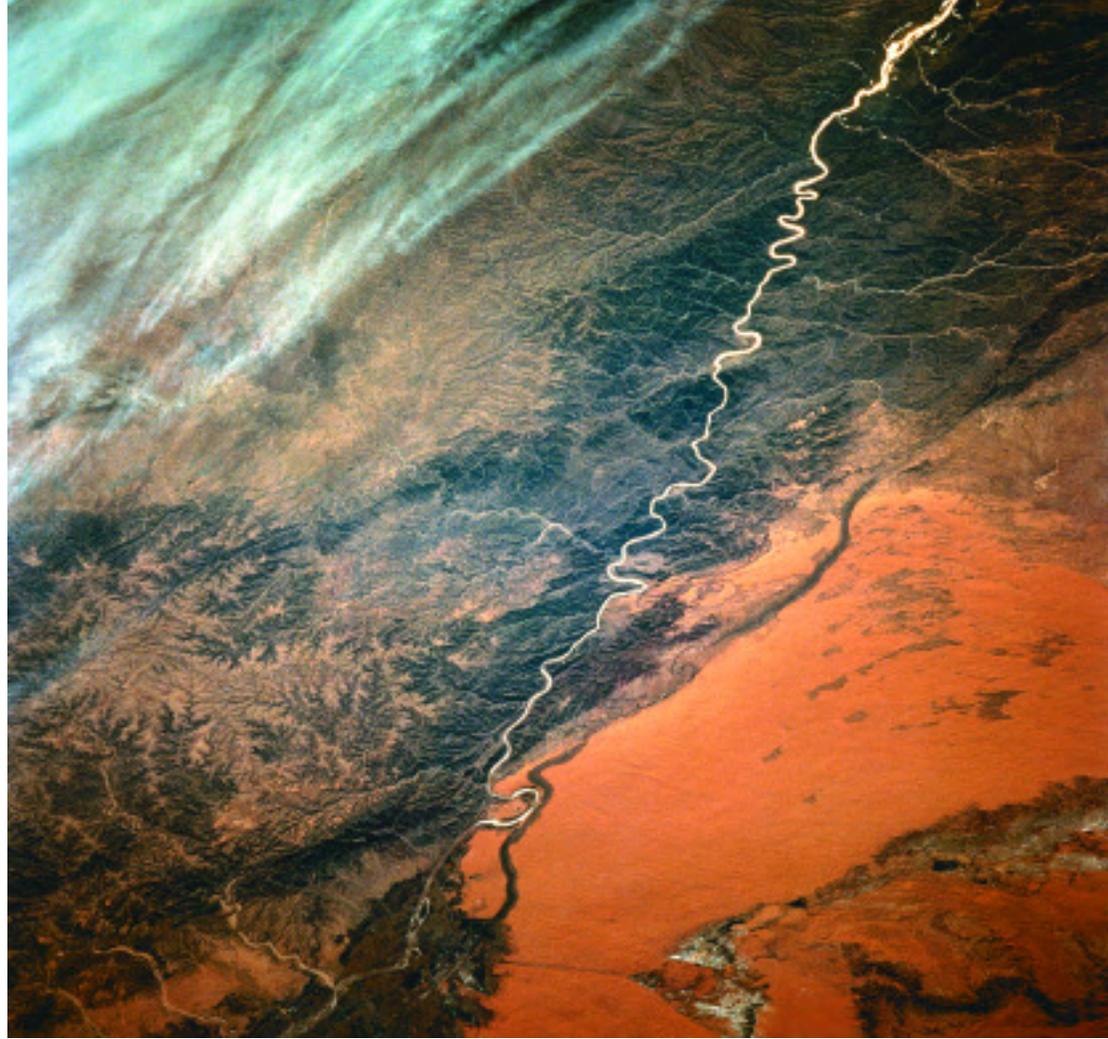
Since the initial planting, “there are now two other rose beds out in same area, but these two beds are closer to the Astronaut Memorial Grove. They are the same breed, but pink,” Gibson said.

Although the roses were commissioned when Max Faget was living, they now also serve as a beautiful tribute to the man who dutifully served the space program with a career spanning four decades. He designed the original spacecraft for Project Mercury, and is credited with contributing to the designs of every U.S. human spacecraft from Mercury to the space shuttle.

“Max Faget was truly a legend of the manned spaceflight program,” said Christopher Kraft, former JSC director. “There is no one in spaceflight history in this or any other country who has had a larger impact on man’s quest in space exploration. He was a colleague and a friend I regarded with the highest esteem. History will remember him as one of the really great scientists of the 20th century.”

And although Max Faget helped us in getting off this precious planet, the roses will continue to be a presence on the blue marble for generations of explorers and scientists.

Earth Day turns 37!



Remember when people used to routinely discard their empty cigarette packs, Coke cans and used tissue by just tossing it out the window of the car? This was done daily without giving it so much as a second thought. In those days, our roads and highways were thought of as just a giant landfill. Certainly some of that still happens today, but at least now people generally feel bad about it.

That little voice inside your head, which makes you save the trash in your car until you get home, was born 37 years ago, even if you weren't. Thanks to Earth Day and many other environmental programs, we don't take our natural surroundings for granted as much anymore.

Earth Day, April 22, 2007, marks the 37th birthday of the modern environmental movement. Among other things, 1970 in the United States brought with it the Kent State shootings, the advent of fiber optics, the Simon & Garfunkel song "Bridge Over Troubled Water," Apollo 13, the Beatles' last album, the death of Jimi Hendrix and the birth of Mariah Carey. It was into such unsettled times that the very first Earth Day was born.

On April 22, 1970, 20 million Americans took to the streets, parks and auditoriums to demonstrate on behalf of a healthy, sustainable environment. Dennis Hayes, the national coordinator, and his young staff organized massive coast-to-coast rallies. Thousands of colleges and universities organized protests against the deterioration of the environment. Groups that had been fighting against oil spills, polluting factories and power plants,

raw sewage, toxic dumps, pesticides, the loss of wilderness and the extinction of wildlife now suddenly realized that they could share a common goal.

Earth Day founder Gaylord Nelson, then a U.S. senator from Wisconsin, recalls his motivation for proposing the first nationwide environmental protest.

"The objective was to organize a national demonstration of concern for the environment so large that it would shake up the political establishment and force this issue onto the national agenda. It was a gamble, but it worked," said Nelson.

Earth Day 1970 achieved a rare political alignment, enlisting support from republicans and democrats, rich and poor, urban dwellers and farmers, management and labor. The first Earth Day led to the creation of the United States Environmental Protection Agency and the passage of the Clean Air Act, the Clean Water Act and the Endangered Species Act.

Senator Nelson was awarded the Presidential Medal of Freedom, (the highest honor given to civilians in the United States) for his role as founder of Earth Day.

Prior to 1970, Americans were slurping leaded gas through massive V-8 engines. Industry belched out smoke and sludge with little fear of legal consequences or even bad press. Air pollution was commonly accepted as "the smell of prosperity." *Environment* was a word that appeared much more often in spelling bees than on the evening news.

Earth Day 1970 changed all that.

What do you do for the environment?

In honor of Earth Day, we asked JSC team members to participate in a Roundup article to highlight what they do to help the environment, here or at home. We heard from a variety of people and departments throughout JSC and are proud to display the results—enjoy! Please go to JSC Features to see more at <http://www.jsc.nasa.gov/jscfeatures>

Sandra Parker

Environmental Office, Center Operations
Directorate

I work in the JSC Environmental Office. Protecting “our home planet” is my passion. I drive a hybrid car, recycle, work on projects to clean up contamination. With support from Center Ops director, I’m planting wildflowers and native grasses in five pilot areas. I am also working with the Houston Zoo to save the endangered Attwater’s prairie chicken.

Stephanie Walker

NASA
System Manager, Flight Crew Equipment

At home, I collect recyclables and take them to Ellington. Kitchen waste goes to the compost heap. At work, I started a plastic bottle recycling program in Building 7A. At both, I am a trained, permitted wildlife rehabilitator, caring for injured wildlife, bringing them back to health and returning them to the wild.

Sandy Peck

Educational Outreach
Robotics Development & Testing Branch

As past president of the Board of Trustees at Armand Bayou Nature Center (ABNC). I have volunteered time to support the stewardship and educational programs, summer camps, scout programs, birding and historic farmhouses, hiking trails and promote to the public that ABNC is home to over 370 species.

Jane Krauhs

Wyle Laboratories Life Sciences Group
Senior Scientist

At work and at home, I use both sides of paper as much as possible and recycle desktop printer cartridges. At home, last year I converted some lawn into a “prairie habitat” garden with butterfly weed, Echinacea and coreopsis. I have been rewarded by seeing several monarch butterfly chrysalises!

William Maass

United Space Alliance
Engineering Staff IV

I use an electric mulching lawn mower and recycle aluminum cans, newspapers, glass, steel cans, clear plastic bottles, plastic milk jugs and cardboard.

Dennis Hehir

NASA
AST Mission Support Requirements
and Development

To protect Mission Control Center critical equipment from power disturbances, there is a requirement to run diesel generators at Building 48 during inclement weather. In 2001 they produced in excess of 20 tons of nitrous oxide emissions. Emissions were reduced by 12 tons recently and will be reduced by another six tons in 2007.

Vladenka Oliva

Jacobs
Technical Editor

To help reduce trash and the need to recycle, my family exchanged plastic bags for canvas bags. Before we began using canvas bags, my family collected approximately 25 plastic bags weekly; now we collect around three. The plastic bags that we have now are used to line our garbage cans.

Helen Lane

NASA/JSC
Manager of University Research and Affairs

I do radio-monitoring of the high-endangered Attwater prairie chickens at the Texas Nature Conservancy in Texas City. I am also working with the Houston Zoo on caring for the prairie chicken breeding project here at JSC. I assist with Christmas bird counts and facilitate the count on site.

Denise Barrett

Jacobs Technology Inc.
Administrative Assistant

I confront junk mail at one source—telephone marketers. I softly interrupt, saying, “Is this for a magazine?” When they respond, I say, “We are not accepting any magazines in our department.” Also, when unwanted magazines do arrive, we recycle into “shiny paper” bins.

Matthew Nelson

United Space Alliance
Co-op

To help protect our environment, I minimize my carbon emissions by driving a hybrid vehicle and using a pollution-free energy source. I do my best to recycle and reuse any possible materials. I also take my time to encourage others to reduce their negative impact on our amazing planet.

Jack Baston

United Space Alliance
Computer Science Staff IV

We have several small fish pond water gardens in our backyard that provide homes for fish, frogs and other little creatures that help control the insect populations in our neighborhood. The flowers that grow there also provide food for the bees and butterflies that pollinate the flowers and fruit trees in our neighborhood.

Pamela J. Daley

Wyle Laboratories
OMOH Contract

On my Tuesday trash pick-up in League City, I recycle newspapers, cardboard, plastic, etc. We recycle magazines, large cardboard items, boxes, etc., at our local school’s recycling bin. We also recycle the plastic bags from the grocery store. They can be recycled at HEB and Wal-Mart.

Elizabeth Blome

NASA
System Integrator

Recycle paper, plastic, glass and aluminum, even though I live in Nassau Bay and the closest recycling facility is at Ellington Field.

Pat Doerr

Lockheed Martin IT
ODIN Catalog JSC Site Rep

At work, I collect and recycle aluminum cans and plastic bottles. At home, I recycle paper and have incorporated energy-saving measures in my house. I drive a hybrid car. On some weekends, I lead trail walks or do demos at the Armand Bayou Nature Center to educate people about nature.

Roy Lee

United Space Alliance
Shuttle Flight Controller

Switched from Reliant Energy to Green Mountain Energy for electricity provider. Planted over 20 trees in backyard (mostly hardy plants and native species). Removed rear seats from back of car (improved gas mileage by about 33 percent). Replaced 60-watt incandescent bulbs with 100-watt equivalent fluorescent bulbs (23-watt actual) throughout house.





by Joanne Hale

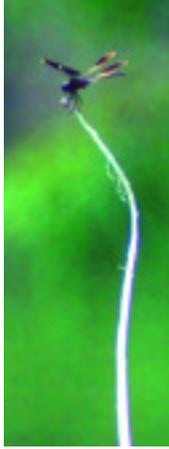
AT NASA, where the universe, black holes and worlds yet to be discovered are our everyday focus, it seems that Mother Earth can get lost in the big picture. However, this is not the case here at Johnson Space Center, where our planet and its preservation is number one on the minds of many.

Recycling Coordinator Michelle Fraser-Page of the JSC Environmental Office oversees many different recycling activities across the center and is always looking for more ways to help employees better their environment at work and at home.

“It’s my belief that we have a responsibility to preserve and protect our environment for ourselves and our children, and that responsibility doesn’t stop when you go home at night,” she said. “However, I also realize that we are human, and while we want to do the right thing, it has to be easy and convenient. My goal at JSC is to keep improving the recycling program and, in my small way, improve things for JSC, our local community and the planet.”

Fraser-Page works with several different contractors to coordinate the center’s recycling efforts into five major programs:

- 🌀 **Office products**—which include paper, cardboard, toner cartridges and aluminum cans
- 🌀 **Construction and demolition**—that handles concrete, soil, sand, scrap metal, scrap aluminum, scrap wiring and wooden pallets
- 🌀 **Industrial solid waste**—that takes care of batteries (lead acid, nickel metal hydride, lithium ion), fluorescent lamps, used oil and ozone-depleting substances
- 🌀 **Redistribution and utilization**—that oversees excess property, equipment, non-paper office products, tires, electronics (excluding ODIN-supplied computer equipment) and space program items
- 🌀 **Miscellaneous**—including volunteers who recycle plastic beverage containers and groundskeepers who take care of compost and mulching



One of the biggest challenges that Fraser-Page says she faces is to build environmental awareness into all the programs and processes at JSC—which runs the gamut from wildflowers to the Crew Exploration Vehicle (CEV).

“We want to look at integrating a holistic or (an) environmental viewpoint into our space program and that is a big challenge,” she said. “We would like people to take a life cycle look at whatever they are doing—whether it is building a house, planting a garden or even building the CEV. We want to make sure that as we go

The Leadership in Energy and Environmental Design (LEED) group oversees a 2002 NASA Headquarters Executive Order (13123) “Greening the Government” that provides specific instruction for incorporating sustainable design principles for all new facilities.

The first facility built under the new code was the Astronaut Quarantine Facility, which was completed in June 2005. The STS-114 crew was the first to “break in” the facility, which was built using environmentally sustainable methods and materials.

The special materials used include recycled structural steel framing; recycled rubberized flooring; highly efficient heating, ventilation and air-conditioning systems; energy-monitoring

control systems and more. Landscape features included a retention pond to minimize runoff from heavy rains, use of native trees and vegetation and black stone gravel driveways.

Another major related program is the Environmental Management System (EMS). JSC became EMS certified in December 2005 as part of a NASA requirement for all of its field centers. EMS requires that the centers look at all activities and determine which ones have major environmental impacts. Based on those determinations, JSC implemented programs to monitor and control the negative impacts: recycling/trash disposal, reducing ozone-depleting substance use, and reducing water and energy use.

In 2005, 10,000 pounds of ozone-depleting substances were removed from use at JSC. The reductions were made in the form of seven large cylinders of recovered refrigerant CFC-12 and more than 1,000 portable fire extinguishers with Halon 1211. Ozone-depleting materials, which include certain refrigerants, insulating foams and solvents, can damage the stratospheric ozone layer. JSC began to phase out these materials in 1995 by modifying several central chillers and continued in 2000 with the elimination of a cleaning solvent called CFC-113.

Fraser-Page said that JSC has set a diversion goal to reach 45 percent by 2010—which means we intend to divert 45 percent of our “trash” from going to the landfill by recycling, reuse or sale. Last year, we achieved a 42.5 percent diversion rate, so we are well on our way. The center also recycled 161,000 pounds of cardboard, 746,000 pounds of office paper and 1,359,000 pounds of scrap metal last year.

For more information on recycling at home and at work, go to the JSC Environmental Web site at <http://www6.jsc.nasa.gov/ja/ja13/index.cfm>.

“There are no passengers on Spaceship Earth. We are all crew.”

Marshall McLuhan, 1964

into (CEV construction) that we are not using materials that are going to be regulated out of existence—like Freon, which is currently used in the Space Shuttle Program. We are on the cutting edge, and we don’t want to take any chances.”

She added that the initial funding could present an obstacle, but points out that the investment can bring big rewards in the future.

“You are always trying to fight for money. When it is science vs. the environment, a lot of times the environmental considerations cost more in the beginning, but they pay for themselves over the life cycle,” Fraser-Page said.

The Environmental Office offers employees a fun venue in which to share their recycling ideas in an informal setting through their monthly brown bag environmental discussion group. The group meets the first Tuesday of each month from noon to 1 p.m. in Building 45, Room 751. Past group discussions have ranged from organic gardening to animal rescue and book reviews. The group represents people with a wide variety of backgrounds and interests.

“Whether people come from working on the shuttle or space station—they are all interested in the environment. They can talk to each other and bring their energy into the group and then take that energy out into the community as well,” Fraser-Page said.

One member of the brown bag group, Bill Hartwell, Space Station’s Russian Elements Integration manager, said he got involved in caring for the environment by advocating for high-performance green schools because he felt that he owed it to his community to help lead the way to a sustainable and high-quality future. Green schools are designed specifically to provide comfortable, productive and healthy learning environments while simultaneously reducing the impact on the Earth and saving resources, including money.

There are several other JSC groups with related environmental missions including the JSC Sustainability Committee, which is composed of employees from Center Operations and Engineering whose mission is to look for and implement sustainability projects at JSC.

The sustainability team has researched and discussed many technologies, from solar-energy-generated hydrogen to electric vehicles. Recently the team was instrumental in adding solar photovoltaic panels to three electric golf carts on site. They are also providing input for the JSC Master Plan and coordinating sustainability efforts with the City of Houston.



Recycling Coordinator
Michelle Fraser-Page

Johnson Space Center's commitment to a sustainable environment has never been stronger, as demonstrated by the items below. These are just a few of the center's recent efforts, events and initiatives aimed at keeping JSC clean and green.

by Kendra Phipps

JSC'S environmental 'greatest hits'

THE ENVIRONMENTAL OFFICE AND THE PHOTOGRAPHIC TECHNOLOGY LABORATORY worked together to install a unique "zero-discharge" system that recycles all of the photographic waste materials and produces deionized water that is then reused in the lab. As a result of installing this system, JSC's largest volume of hazardous waste was eliminated. The system was awarded an honorable mention for the prestigious White House Closing the Circle award in the Waste Prevention category.

ON MARCH 10, VOLUNTEERS installed a 462-foot-long snake-proof fence along the Attwater Prairie Chicken pens' perimeter. The fence is three feet tall and leans outward from the enclosure at an angle of 30 degrees, making it impossible for a snake to climb. It includes two 32-square-foot viewing blinds so that people can observe the birds without disturbing them.



THE TWO PONDS at the southernmost portion of JSC's mall area were completely drained in 2005 as part of their regularly scheduled maintenance. The ponds are cleaned to help identify cracks and holes in the bottom that need to be patched, and also to control algae growth, since algae can be detrimental to a pond's

fragile ecosystem. During the maintenance, the Japanese Koi fish were moved to another JSC pond, then redistributed after the work was complete. Center Operations strives to ensure that the work is completed without any adverse consequences to the wildlife. Aquaculture specialists oversee the ecosystems during the process.



JSC'S ETHANOL FUELING FACILITY, the first one in Houston, opened in 2004. Installation of the 1,000-gallon unit near Building 417 brought JSC into compliance with the Energy Policy Act of 1992 and Presidential Executive Order 13149. The agency currently has more than 50 flexible fuel vehicles (FFVs), most of which are located at JSC. An FFV can run on many combinations of fuel—from 100-percent gasoline to an 85-percent ethanol blend called E85. Distilled from corn, 2.7 gallons of ethanol are produced per bushel of the vegetable, leaving behind nearly all the valuable nutrients for use in other products.



JSC'S PRAIRIE CHICKEN FACILITY officially opened in September, giving a secluded home to these endangered birds. Shortly after the ribbon-cutting ceremony, workers noticed that the chickens and their eggs were not adequately protected from local snakes. United Space Alliance (USA) employee Andy Ideler spoke to Houston Zoo employees, who agreed that a fence was needed. USA agreed to fund the fence construction.



JSC EMPLOYEES have repeatedly participated in **NATIONAL BIKE TO WORK DAY**, which seeks to raise awareness of bicycling as a non-polluting, recreational alternative to driving.



JSC'S ENVIRONMENTAL OFFICE, GROUNDSKEEPERS AND KIDS AT THE CHILD CARE CENTER partnered up in honor of Earth Day 2005 to beautify the center by planting flowers and herbs.

A moment in time

The Office of Communications and Public Affairs held an employee photo contest in February asking employees to submit photos of nature around the center to honor Earth Day. The winning images were selected based on composition, technical quality and artistic vision. Russ Fortson of Paragon Space Development Corporation was the first-place winner whose winning photo is on the cover of this issue; the second-place runner up was NASA employee Thomas Reynolds and the third-place runner up was SAIC employee Linda Milam.

Please go to JSC Features at <http://www.jsc.nasa.gov/jscfeatures> to see all of the spectacular entries.

Photography can invoke many different reactions from many different people. The evaluation of artwork is subjective and photography is no exception. Ask 10 people their opinion about a photograph and you will receive 10 different answers.

The JSC photo contest resulted in many good entries and the judges had many different opinions about each of the photographs. So, why were these three images chosen as the winners of the photo contest? At first glance, they met the technical requirements of proper exposure, focus, graphic composition, etc. However, photographs are not judged to be great based on technical requirements alone. Today, many of these conventions are even tossed aside for the sake of artistic expression.

In a contest such as this that directs the photographers to a particular location and has a theme (in this case “Earth Day”), the photograph should draw the viewer in towards the theme of nature and the environment. A successful photograph should have the power to engage the viewer and to share the photographer’s experience. As artistic observers, we see their unique perspective and a moment in time that captures the natural beauty that surrounds all of us.

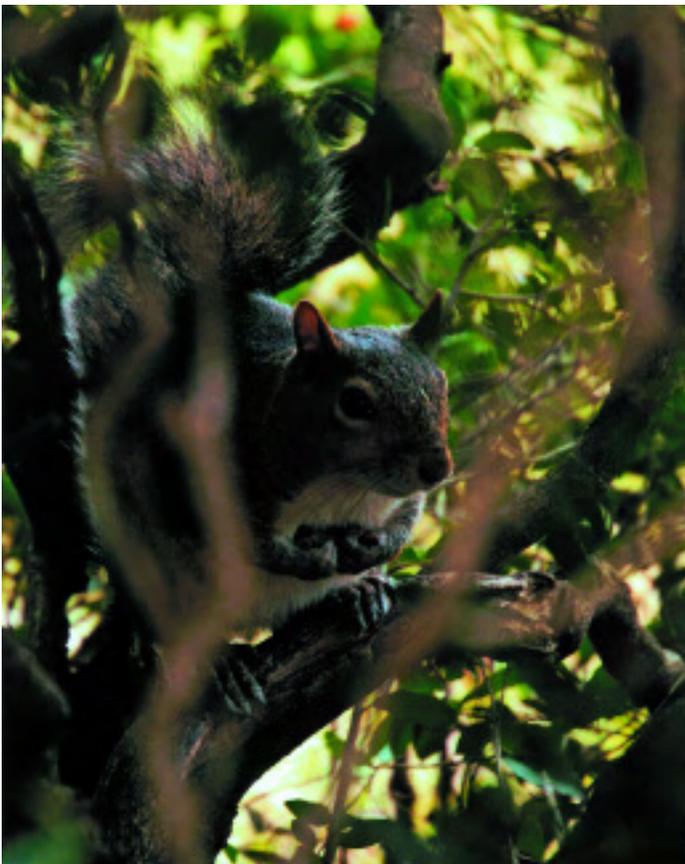
The winning photographs were chosen because they invited all of us to take a closer look at the natural environment that is intertwined with our work environment at Johnson Space Center. They reach out and teach us that if we stop and take a moment out of our workday, we can capture that same gift nature has given us. That is what these photographs did for the judges, and that is why they were chosen as the winners.

Mark Sowa
Imagery Acquisition Group
Supervisor for Photographic Acquisition



“I find inspiration in a wide variety of places. I love reading about photography and looking at the works of others. It felt great to win! I used to consider myself just some guy with a camera. Now I’m some guy with a camera that’s won a contest. To me, that’s pretty nice!”

Russ Fortson



“The fog and the tree in the foreground really symbolize how as a human race we are all connected to each other. In reality, it is like a large family tree.”

Thomas Reynolds



“To me, Earth Day means a chance to focus on how we treat our planet, and what we can do to make it better, or at least to lessen the impact.”

Linda Milam

Live in the sunshine, swim the sea, drink the wild air.

Ralph Waldo Emerson



NASA/Blair JSC2006E40276



NASA/Geeseman JSC2006E34849



Space Center Roundup

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