

Getting **eco**-engaged



PHOTOS:

Top left: Boeing employees from Mesa, Ariz., volunteered to help the U.S. Forest Service and the Arizona Trails Association maintain a portion of the 800-mile-long Arizona Trail. BILL POOLE

Bottom left: Frank Migaiolo (left), an Environmental Affairs manager in Everett, Wash., and Ross R. Bogue, vice president and general manager, 747 program and Everett site, review an environmental project plan while standing next to engineered wetlands on the north part of the Everett site. This area acts as a natural biofilter for stormwater runoff from the facility. GAIL HANUSA/BOEING

Right: Boeing employees picked up rubbish along the Florida waterfront after Tropical Storm Fay deposited debris on the beaches. Chris Rose, operations manager, Space Station processing, Kennedy Space Center, displays some of the trash he picked up at Shepard Park in Cocoa Beach, Fla. DAVID BRINKO/INDYNE

Employees across the enterprise are driving environmental action

By Bill Seil

Boeing employees in Everett, Wash., sign up to volunteer their time for environmental efforts around the community. People in St. Louis organize personal electronic equipment recycling events and clean-ups of area roadsides. Huntsville, Ala. teammates help the site earn recognition from the city for their energy-conservation and recycling efforts. Meanwhile, employees throughout Boeing are using an intranet site to share tips and information on how to be more environmentally conscious, both at work and away from it.

These instances are some of the many examples of how employee enthusiasm for environmental action is helping support Boeing's aggressive environmental strategy. The company is building new tools such as blogs, training, wikis and "green team" toolkits to make that enthusiasm as effective and widespread as possible.

The company's environmental engagement program, launched in April, was developed by the Environment, Health and Safety (EHS) organization, working in concert with a newly created Employee Environmental Advisory Council. It focuses on a package of environmental "enablers"—tools employees can access to find answers, share ideas and get involved.

"The employee campaign is a chance for Boeing people around the enterprise to get environmentally involved at work, at home, on the road and in their communities," said Mark Arvizu, enterprise environmental programs manager at EHS. "Employees are already doing great work across the enterprise, and we want to ensure initiative and ingenuity can be replicated from site to site."

The broad-based program will pay special attention to the com-



New 777 fueling stands at the company's Everett, Wash., plant are used to prepare airplanes to take on fuel for the first time. One benefit of the stands is reducing the amount of waste fuel generated during the initial fueling and testing. In this May 2008 image, John Donohue (left) and Jake Kaltbrunner—members of an employee involvement team that designed the stands—conduct a non-functional demonstration of this system. WILL WANTZ/BOEING

Boeing Frontiers and Page 20 of the March 2008 Boeing Frontiers).

"Here in Everett, I know of no other single subject that rallies us all together—irrespective of our role in the company—than our environmental stewardship," said Ross R. Bogue, vice president and general manager, 747 program and Everett site. "We are very conscious of our collective need to be a great neighbor in the community where we work, live and play."

“Opportunities appear every day for employees to be involved and engaged in reducing our consumption of natural resources, improving our recycling practices and reducing hazardous materials.”

—Ross R. Bogue, 747 program, vice president and general manager

pany's five-year targets for energy efficiency, recycling solid waste, and reducing hazardous waste and greenhouse gasses. Environmental engagement at work can range from recycling office paper to developing ways to remove hazardous materials from manufacturing processes.

ENGAGEMENT IN EVERETT

Environmental engagement has long been an important part of the culture at the Boeing Everett plant in Washington state, where widebody jetliners are manufactured. Everett was one of the first Boeing sites to earn ISO 14001 certification; this globally recognized certification signifies that Everett has an effective environmental management system to monitor and continually improve its environmental performance (see Page 25 of the February 2007

Bogue said Everett employees reacted enthusiastically to this year's EHS Fair. The event featured many outside not-for-profit agencies that channel volunteer support to community needs. Boeing continues to be a major source of volunteer help for environmental projects.

Employee inclusion is an important part of Everett's overall environmental strategy for the design and manufacture of its products, Bogue said. It's part of the total value stream that ends with Boeing products reaching its customers. Customers, too, are part of this process.

"Opportunities appear every day for employees to be involved and engaged in reducing our consumption of natural resources, and improving our recycling practices and reducing hazardous materials," Bogue said. "Awareness is important, but it's also



The EnviroWiki on the Boeing intranet is helping encourage employees to collaborate in developing environmental ideas online.

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—Mark Arvizu, Environmental, Health and Safety, enterprise environmental programs manager

directly tied to improvements in our production system.”

Terry Mutter, director, Enterprise Strategy for EHS, noted that while Boeing employees have a long history of environmental involvement, the employee program led by EHS is a strategic approach to embedding environmental stewardship into Boeing’s corporate culture. It has the full support of corporate leadership and uses multiple approaches to encourage participation and collaboration. Mutter sees it as a large-scale systems integration challenge—something Boeing is particularly skilled at handling.

Much is already being done by the company’s business units to develop environmentally progressive products, services and manufacturing processes. Most notably, in this time of high fuel costs, work is being done to improve the fuel efficiency of commercial airplanes which directly reduces greenhouse-gas emissions and improves their carbon footprint. Mutter said environmental efforts will grow as the company introduces new standards, processes and design tools that support its environmental strategy.

Opening doors for employees to participate is a priority. An online Environment Information Center on the Boeing internal Web (<http://ehs.web.boeing.com/enviro>) guides employees to a number of opportunities for environmental involvement, including enablers to help them get started. Compilations of frequently asked questions are growing, thanks to employee inquiries and the support of subject matter experts.

Alongside the environmental news and links, two key features of the information center are “EnviroTips” and the “EnviroBlog.” The tips help employees take action at home, at work and in the

community to protect the earth and its natural resources. The blog allows employees with an important environmental message to share it with colleagues across the enterprise and get their replies. Environmental leaders from across the company have already authored blogs.

Blogs are a growing online tool that are part of the new “social media” that also includes the wiki. Wikis feature written statements that can be modified by readers. They are collaborative tools that allow multiple participants to develop an idea.

Arvizu said an EnviroWiki (<https://wiki.web.boeing.com/confluence/display/envprog> on the Boeing intranet) recently was developed and already is seeing a growing community emerge that encourages employees to collaborate in developing environmental ideas online. The fact-based tool allows side discussions that can be restricted to individual teams or work sites.

“We quickly discovered that the enablers would have to be complementary,” Arvizu said. “They have to link to each other and support each other. That’s important to advancing the sociability and replication we’re hoping to achieve in the program.”

HANDS-ON ACTIVITIES

While virtual online collaboration is important, there’s much to

be said for meeting face-to-face and working toward a goal.

Boeing Employees for Environmental Protection (BEEP) (see <http://beep.stl.mo.boeing.com> on the Boeing intranet) was formed in 2004 to promote recycling awareness at Boeing facilities in St. Louis. Sponsored by Boeing Recreational Services, the club has organized ongoing recycling programs and committed volunteers to other environmental activities.

Tony Ham, a former director at the St. Louis site, recently became Mesa, Ariz., site director. His executive sponsorship of the BEEP program at St. Louis has made him a believer in employee environmental groups. He is eager to begin a similar program at Mesa.

Ham said he became involved with BEEP a couple of years ago when he was trying to get recycling bins moved inside buildings. With bins located outdoors, the recycling program was not as effective as it could have been. BEEP members had also been concerned about this problem, but they weren’t in a position to change policy. When Ham signed on as their executive sponsor, arrangements were made to bring the bins inside.

“I think it’s important for us as a company to demonstrate that we care about the environment and are willing to help clean it up,” Ham said. “We want future generations to enjoy this beautiful planet.”

Since it was created, BEEP has gone beyond recycling to take on many other environmental projects, including Earth Day and highway cleanup activities.

“Environmental issues have become very important to our customers, stakeholders and employees, and their calls for more aggressive programs have come at the same time.”

—Aileen Yankowski, EHS director of Compliance and Services

BEEP and similar organizations have set a standard for Site Green Teams—groups supported by the environmental engagement program to advance environmental efforts selected by the employees.

“A site green team can begin with something as simple as a town hall-type meeting where several employees come together with a common environmental interest,” Arvizu says. “We can help them to get organized and find an executive sponsor. This includes providing them with guidelines, best practices and key metrics for measuring their success.”

The number of site green teams has been growing, with groups active in St. Louis, Everett, San Antonio and Huntsville, Ala. They have already participated in some highly visible and successful projects. For example, the Huntsville Green Team played a key role in the site winning the 2008 Air Pollution Control Achievement Award from the City of Huntsville Air Pollution Control Board. Employees were involved in a range of energy conservation and recycling efforts at work and at home.

Arvizu said that the employee enthusiasm is by no means limited to the United States, and Boeing sites around the world are invited to participate. Employees in several nations—including Australia, the United Kingdom, Germany and Sweden—have contributed, and that is expected to grow.

And the tools used to share ideas and successes will also grow and change, he added.

“We know that in 12 to 18 months there will be new, very innovative and exciting enablers emerging from this environmental engagement program,” Arvizu said. “Using Lean+ continuous improvement principles, we will keep the program relevant for employees. If an enabler doesn’t get traction, we’ll need to make a decision whether it should be replaced.”

‘A PASSIONATE CONCERN’

The Employee Environmental Advisory Council holds virtual meetings each month to support the team from EHS. Arvizu said he’s been impressed by volunteers who have devoted considerable time to the development and testing of enablers. The council has a rotating membership to allow more employees to get involved.

“Many employees have a passionate concern about the environment,” Arvizu said. “Their commitment to environmental stewardship is helping to drive the program forward.”

In fact, having an effective corporate environmental program has become an important draw in attracting and retaining environmentally conscious workers.

Aileen Yankowski, EHS director of Compliance and Services, said the launch of the engagement program is well-timed, based on the widespread demand for corporate environmental leadership. It is a common expectation for companies the size of Boeing.

“Environmental issues have become very important to our customers, stakeholders and employees, and their calls for more aggressive programs have come at the same time,” Yankowski said. “They’re pointing us in the direction of a greener future.”

She said that much of the environmental work Boeing has been doing over the years has been handled in a low-key manner. Things like conservation, recycling and control of hazardous materials have been a basic part of doing business, but the company wasn’t making those actions visible enterprisewide.

Inviting action also puts added responsibilities on the shoulders of managers and the EHS organization, Yankowski added.

“Employees who make suggestions for environmental improvements are going to expect answers and, where appropriate, action,” she said. “It’s no longer good enough to reply, ‘Good idea!’, and put the idea on the back burner.”

Jeff Nunn, program manager for the SSG Conservation Initia-

Adopt-a-highway clean-ups are among the many projects taken on by Boeing Employees for Environmental Protection (BEEP) in St. Louis. Pictured in this cleanup are Tony Ham (from left), Elmer Dwyer, Cathy Butler, Bryan Kury and Tessa Baum.



ive, is a key partner in the EHS environmental engagement campaign and believes fully engaging all employees in this effort is vital to achieving our environmental targets. “Boeing’s employees and culture of continuous improvement will help drive environmental thinking and action into everything we do,” said Nunn. “Our goal is to embed conservation and environmental considerations into all our daily business processes so more and more it just becomes part of how we run our business.”

Mutter added that the senior leadership of the company has



At the KC-135 Program Depot Maintenance area in San Antonio, Alejandro Aguirre, non-destructive inspection technician, recycles cardboard boxes while Hope Gonzalez, environmental specialist, helps sort his recycle bin. LANCE CHEUNG/BOEING

also made environmental stewardship a priority, putting expectations in place for environmentally progressive products, processes and work habits. Internal environmental targets have been made public in the company's 2008 Environmental Report (see www.boeing.com/aboutus/environment/environmental_report).

"It supports our long-term growth and productivity initiatives, and responds to a changing business environment, where environmental policy is an important factor," Mutter said. "It also is consistent with Boeing's commitment to good corporate citizenship, of which environmental stewardship is a significant part."

Environmental expectations begin with such simple habits as recycling office paper and turning off the power to computer monitors after work. Even the smallest actions can add up in a company of 160,000 people.

The aerospace industry is highly competitive, but good environmental citizenship offers an opportunity for companies to work cooperatively. Just as manufacturers work together to improve safety, there are agreements in place to cooperate in protecting the environment.

Mutter noted that the environmental movement gained momentum in the 1970s following an experience shared by people worldwide. The Apollo 8 lunar mission in 1968 produced stunning images of Earth emerging over the moon's horizon. That inspired many throughout the globe to start thinking of Earth as a tiny island in the vast expanse of space—one with limited resources.

"The celebration of Earth Day began a short time later," Mutter said. "You could argue that the environmental movement has its roots in aerospace."

Boeing, which played a major role in the creation of the Apollo spacecraft and Saturn V launch vehicle, continues to explore new frontiers. Among those frontiers is the protection of our planet. ■

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To learn more about getting involved in environmental efforts at Boeing and in its communities, see Page 30.

Making a difference

For Boeing employees who are environmentally passionate, it's easy being green

Boeing employees from around the enterprise are taking part in efforts to make an environmental difference at work and in the community. Here's a look at three people who are involved in environmental activities.



RON BOOKOUT/BOEING

Cheryl Fieviet

Industrial engineer, St. Louis

Environmental activities: Fieviet serves as a director of Boeing Employees for Environmental Protection (BEEP) at the St. Louis site, a pioneering employee environmental group. It responds to benchmarking requests from other employees around Boeing who are thinking of forming site "green teams." BEEP is involved in recycling paper, cardboard, beverage bottles and cans, and wood, as well as conservation and clean-up projects. Fieviet participated in the EHS St. Louis key stakeholder workshop for environmental engagement in May.

“We do this on our own time because we believe it's the right thing to do. It's easy to get involved when you're passionate, and I'm very passionate about the environment.”



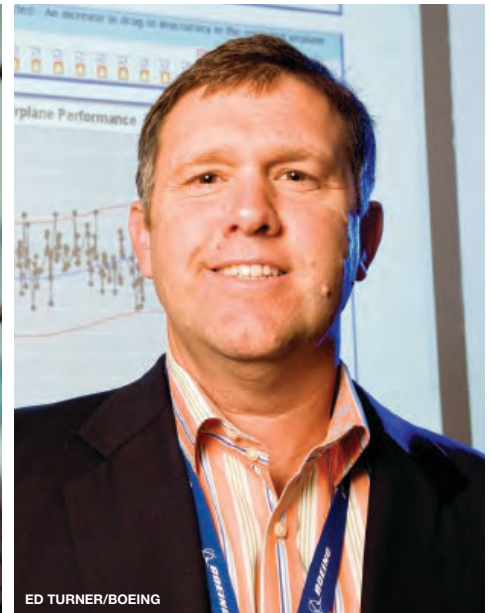
DAVID MOORE/BOEING

Jennifer Lao

Thermal Systems engineer,
El Segundo, Calif.

Environmental activities: Lao is a founding member of Green S13, a site green team formed earlier this year at the S13 building in El Segundo. The team works to implement green practices in the building and develops metrics to show the benefits. Green S13 recently held an e-waste collection day to recycle personal electronics equipment. Lao also has presented a business case for an enterprisewide purchasing standard for recycled content paper, a proposal undergoing feasibility tests. On May 12, Lao participated in the EHS Southern California key stakeholder workshop for environmental engagement.

“Groups like this help like-minded people collaborate on common goals and give them the support and motivation they need to influence change. It's a great feeling to know that I can help encourage sustainable practices for the good of the company and the environment.”



ED TURNER/BOEING

John Maggiore

Senior manager, Airplane Health
Management, Tukwila, Wash.

Environmental activities: Maggiore leads the Airplane Health Management program in Commercial Aviation Services (CAS), part of Commercial Airplanes. Airplane Health Management provides real-time decision support information via the MyBoeingFleet.com portal that helps airline customers keep their fleets operating at peak efficiency. This includes fuel and carbon dioxide performance monitoring, which are increasingly important to airline operations. Maggiore also is the Environmental Performance focal for CAS Technical Services; a role that involves him in the development and integration of customer-facing offerings that improve environmental performance.

“I really enjoy working in the environmental performance area, because it's a way to bring value to our customers, to shareholders, and to our industry as a whole.”

Dig in!

How you can get involved in Boeing environmental efforts

Ready to help take part in environmental activities at your worksite and your community? There's a wide range of opportunities available.



Top: Boeing employees from Mesa, Ariz., maintain the Arizona Trail in the Sonoran Desert, about 45 miles from the Mesa site. BILL POOLE

Above: The Environment Information Center on the Boeing intranet is a companywide one-stop resource for environmental stewardship.

ENVIRONMENT INFORMATION CENTER

The Environment Information Center, at <http://ehs.web.boeing.com/enviro> on the Boeing intranet, is an enterprisewide one-stop Web resource dedicated to environmental stewardship. Visit it to:

- Explore environmental areas where you can make a difference.
- Get quick access to Boeing's Environment Report, EnviroFAQs, the EnviroBlog, EnviroWiki and other key resources.
- Investigate tips for practicing environmental stewardship at home, at work, on the road and in the community.
- Explore new features and review a compilation of Boeing's internally published news on environmental activities.
- Make suggestions to improve the environment.

Many of the activities listed below start with a trip to this site.

EMPLOYEE ADVISORY COUNCIL

The Employee Environmental Advisory Council (EEAC) is an employee-led team designed to guide Boeing's environmental engagement program. The council was formed to broaden the base of employee involvement in program decisions. The EEAC promotes scalability, replication, best practices and process commonality.

Want to get involved? EEAC participation is voluntary. This is an ongoing effort and membership rotates to ensure maximum opportunity for participation. Visit the Environment Information Center to obtain a nomination form.

SITE GREEN TEAMS

To promote increased employee involvement and environmental stewardship, Boeing sites are encouraged to form employee-led Site Green Teams using an enterprise-supplied charter and toolkit. Leveraging lessons learned from green teams around the enterprise, sites are actively sharing and replicating best practices.

To get involved, visit the Environment Information Center for a PDF download containing a sample team charter, green team guidelines and best practices. Employees interested in forming a Site Green Team will find a wealth of knowledge from current Boeing green teams. Or send a note to the Environmental Engagement mailbox (GRP EHS Environmental Engagement in Outlook) and the environmental engagement program management team will provide more details.

ISO 14001

Boeing is committed to operating in a manner that promotes environmental stewardship. ISO 14001 is a global standard that helps Boeing continually improve environmental goals for reducing pollution and waste, increasing recycling rates and improving energy efficiency. Every employee at a site that is seeking ISO 14001 certification is expected to know Boeing's environmental policy.

To learn more about ISO 14001, visit <http://ehs.web.boeing.com/iso14001/training.asp> on the Boeing intranet and click on the link for ISO 14001 Awareness Training.

INITIATIVES DATABASE

The Initiatives Database supports Boeing's four growth and productivity initiatives. It allows employees to search for initiatives-related projects in the IDB (<https://initiatedb.web.boeing.com>) to find information, best practices and lessons learned that promote continuous improvement. The database facilitates replication of projects that can significantly reduce energy use, time and cost. It also is a helpful source to track the development of environmentally sound technologies.

If you have a potential environmental-related project success to share, contact your business unit IDB focal. Contact names are listed on the IDB Web site.

The screenshot shows the Boeing EnviroBlog interface. The main article is titled "Sustainable Business Success" and discusses the importance of environmental stewardship in business. It includes a sub-section "How Boeing is Making a Difference Today" with statistics such as "The 777 Environmental PPV achieves 1% Fuel-Burn Reduction" and "At AIG, 777 will save 1 million pounds reduction in fuel use per year". There are also sections for "Operational Efficiency" and "Fuel Efficiency and Fuel Conservation".

On the Boeing EnviroBlog, environmental leaders post updates and invite input from employees on eco-improvements.

SITE EVENTS

Site Green Events are sustainability-focused environment/ecology events that address recycling, commuting, energy and water conservation, sustainable transportation/biofuels, green business and other eco-related subjects. Earth Day, Bike-to-Work Day, Energy Awareness Month, Recycling Days and Site Fairs are examples of the environmental events sponsored by Boeing sites. These events are great opportunities to participate in environmental learning and stewardship. Employees with suggestions on volunteer opportunities should contact their local Global Corporate Citizenship focal (see <http://community.web.boeing.com/network> on the Boeing intranet).

ENVIRONMENTAL AWARDS

To celebrate success and recognize increased environmental stewardship, the Environmental Employee Engagement program is launching EnviroAwards, a recognition program, in 2009.

There will be three award categories: individual, team and site. For information on the nomination process, visit the Environment Information Center. The Employee Environmental Advisory Council will review nominations and announce award selections monthly.

ENVIROBLOG

Every other week a company environmental leader shares his or her perspective on the company's efforts to pioneer environmentally progressive technologies, reduce its environmental footprint and increase environmental efforts in the community. Read these posts at <http://environment.blog.boeing.com>.

To receive bi-weekly blog updates, join the EnviroEnthusiasts distribution list by sending an e-mail to EHSEnvironmentalEngagement@pss.boeing.com. Employees are welcome to join in the dialogue; ideas and suggestions are reviewed by enterprise subject matter experts and, if site-specific, forwarded to local site management for review.

CONSERVATION INITIATIVE

All of our choices make a difference. It's more important than ever that we use only what's needed, find ways to do more with less, and maximize recycling and reuse of materials. The Conservation Initiative offers suggestions for conserving energy and resources. Visit <http://energy.web.boeing.com> to explore critical issues such as energy conservation, renewable energy, sustainable site and building design, solid waste and recycling, water conservation, fleet management and alternative commuting. On this Web site you can join the Conservation Blog, learn who your conservation focals are by state, and access energy and water conservation tools.

—Christine Cranston