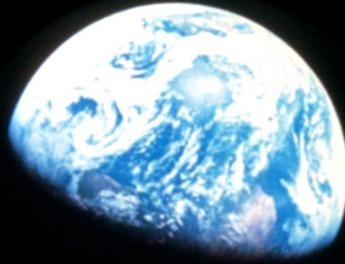
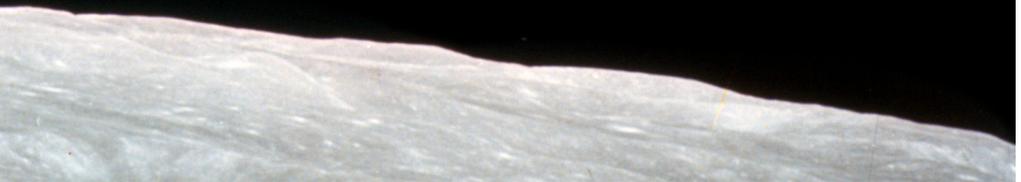


National Aeronautics and Space Administration



NASA 2012 BLUE
MARBLE
AWARDS
PROGRAM

May 2012



May 2012

Congratulations!

The Environmental Management Division (EMD) of the NASA Headquarters Office of Strategic Infrastructure (OSI) is pleased to announce the 2012 recipients of the NASA Blue Marble Awards.

The Blue Marble Awards Program recognizes excellence demonstrated in environmental and energy management in support of NASA's mission. Since EMD is not hosting a conference this year, Headquarters will be presenting the awards to the recipients at their Center.

Please join us in congratulating the 2012 award winners. We also appreciate all the individuals and groups who were nominated and thank them for their contribution to NASA's environmental leadership and stewardship.



Olga M. Dominquez
Environmental Executive and
Assistant Administrator
OSI, NASA Headquarters



James Leatherwood
Director
Environmental Management Division
OSI, NASA Headquarters

Category I

NASA Environmental Quality Award

This award is presented to one individual and one group based on accomplishments made in greening the Government, environmental management, conservation, environmental remediation, or environmental communication.

Individual Award: Bryon Maynard, Stennis Space Center (SSC). . . 4
New Artificial Reefs for the Mississippi Gulf Coast

Group Award: Sustainable Demolition Team, Langley Research Center (LaRC) 6

Category II

NASA Excellence in Energy and Water Management Award

This award is presented to one group based on accomplishments made in energy efficiency, water conservation, or renewable energy.

Group Award: New Town Phase I Design-Build Team, LaRC. . . . 8

Category III

NASA EMD Director’s Environment and Energy Award

This award is presented by the Director of the Environmental Management Division (EMD), Mr. James Leatherwood, in recognition of exceptional leadership and professionalism in implementing NASA’s mission and vision of “understanding and protecting the home planet” and “improving the quality of life on Earth.”

Individual Award: Denise Thaller, KSC. 11
Agency’s First Center Sustainability Plan at Kennedy Space Center (KSC)

Individual Award: Keith Peacock, Glenn Research Center (GRC). 13
Decommissioning of the Plum Brook Reactor Facility

Group Award: Shuttle Transition and Retirement Environmental Team, KSC. 15

<http://www.nasa.gov/agency/nepal/bluemarble.html>

Category I

NASA Environmental Quality Award—Individual

Bryon Maynard

Lead System Engineer
Engineering and Test Directorate
Stennis Space Center (SSC), MS

Recognized for the environmental innovation and success of creating fish habitats that had been lost from Hurricane Katrina by reusing SSC tanks.

As a result of Hurricane Katrina, nearly 100 percent of the artificial reefs off the coast of Louisiana and Mississippi were destroyed or significantly damaged. Since then, the Mississippi Department of Marine Resources (DMR) has been committed to the redevelopment of the artificial reefs. An economic study conducted in Mississippi showed that these reefs have an annual economic impact of \$78.4 million to the state, thus DMR is continually looking for environmentally ready structures for the rejuvenation of the Artificial Reef Program.

A 37-foot-diameter Liquid Hydrogen Catch Tank from the Apollo Saturn-5 Program (affectionately known as the BRT—“the Big Round Thing”) was located within the Stennis Space Center (SSC) A-Test Complex. At the beginning of 2011, Bryon Maynard discovered that the BRT was scheduled for demolition midyear. Maynard, being a devoted scuba diver and aware of the environmental and economic benefits of the artificial reefs, took it upon himself to propose, organize, and follow through with converting the BRT into a new component of the Mississippi Artificial Reef Program.

After formal transfer of ownership to the DMR, the BRT was prepared and removed from its original site and placed on a DMR-provided barge in June 2011. The DMR completed setups, and the BRT was deployed in the Gulf of Mexico by Matthew Brothers, Inc., of Pass Christian, MS, in October 2011 at coordinates of 3000.442/8831.424 at a depth of 85 feet. The deployed BRT is already attracting baitfish that ultimately will attract more predators like red snapper, mangrove snapper, grouper, and triggerfish. Additionally, two other smaller NASA SSC tanks, which were “artificial reef ready,” were deployed alongside of the BRT.

The BRT project, cost wise, broke even with the demolition option. However, the public and the commercial fishing industry get to enjoy the new benefits it is providing. The marine program went out approximately 4 months after the initial deployment of the tanks (February 2012) to look at the condition of the BRT. The structures now have aquamarine life already starting to bond, and numerous fish species are populating around all the tanks.

The reuse of the tanks as artificial reefs will continue to benefit the ecology and the economy of the coast for many years to come and will serve as a permanent reminder of NASA's focus on the well-being of the planet. This effort has directly supported NASA's mission to drive advances in innovation, economic vitality, and stewardship of Earth, while maintaining a commitment to NASA's core values of safety, integrity, teamwork, and excellence.

Maynard's NASA ingenuity, scuba experience, ecological awareness, and devotion to the community and environment all lead to a profound, long-lasting contribution to Mississippi's Artificial Reef Program at no additional cost to SSC.



Two of the three SSC tanks are dropped into the Gulf of Mexico to create artificial reefs.

Category I

NASA Environmental Quality Award—Group

Sustainable Demolition Team

Langley Research Center (LaRC), VA

Team Members

George Finelli, Director of Center Operations, NASA

Chris Mouring, Team Lead, NASA

Cheryl Allen, NASA

Bruce Bishop, NASA

Caroline Diehl, Science Applications International Corporation (SAIC)

Mary Gainer, NASA

Bryan Haas, NASA

Rodney Harris, NASA

Alan Henderson, NASA

Sherry Johnson, NASA

Kristen Poultney, NASA

Tom Quenville, NASA

Kim “Skip” Schroeder, NASA

Recognized for effectively reducing the Center’s environmental footprint through sustainability-based planning and demolition: “Out with the Old, In with the Green.”

“Revitalization through sustainability” has become the cornerstone to Langley’s success in reducing the Center’s environmental footprint, building high-performance green buildings, and making the Center a walkable community. At Langley, sustainability is more than a buzzword, it is the foundation for all facility-related activities, even demolition. The master plan was recently updated with a clear focus on sustainable development of facilities and infrastructure while reflecting on the Center’s dedication for stewardship of its cultural heritage.

This refocused planning effort blossomed into an array of concepts and plans exemplified by the Center’s New Town campus concept. The plan called for the demolition of over 780,000 square feet of underutilized, inefficient buildings and the renovation of 72,000 square feet of occupied space. The need for a sustainable deconstruction program as well as teamwork and intensive stakeholder communication was paramount. Redevelopment planning took into consideration the effects on the

local community, including Langley Air Force Base (owner of several of the demolished buildings), Hampton, VA, and Poquoson, VA.

While the addition of new green buildings fits into the Center's new sustainability focus, taking down buildings in an environmentally conscious manner while preserving the history of Langley presented challenges. The Center was able to incorporate aggressive recycling and diversion metrics into contracts. In addition to the New Town Project, over the past 2 years the Wind Tunnel Demolition Project consisted of the demolition of four large, historic wind tunnels and numerous supporting structures. Salvaged materials from recent demolition projects included fan blades, signage, scales, a Regadyne Adjustable Speed Drive, fan hubs, airfoils, an original cut-away drawing from the 1940s, various models, and a 1958 Pioneer Engineers Plaque. These components have found homes across the Nation.

Artifacts have been integrated within new construction projects at LaRC, or passed on to local universities, schools, Langley Air Force Base, museums, and research groups. They all now have a piece of LaRC history. LaRC also worked with the Smithsonian Institution to showcase components of these demolitions. LaRC even sold some demolition materials such as fan blades at recent U.S. General Services Administration (GSA) auctions. Langley also established contracts to maximize recycling efforts so that it would ultimately make a profit. Commodities that were salvaged included concrete, brick, and metal (precious and nonprecious) with diversion rates up to 99 percent.

Sustainability has been incorporated into Langley's mission and even changed the way Center decisions are made.



Hallway with fan blades from a Langley wind tunnel integrated into the ceiling.

Category II

NASA Excellence in Energy and Water Management Award—Group

.....

New Town Phase I Design-Build Team

Langley Research Center (LaRC), VA

Team Members

George Finelli, Director of Center Operations, NASA

Tom Quenville, Team Lead, NASA

Jim Beckett, Hill International

Bruce Bishop, NASA LaRC

Cathy Castiglione, GSA

Tony Dell'Arciprete, GSA

Ginny Dyston, AECOM

Ron Eisenberg, Whiting-Turner

Lauren Ford, Cooper Carry

Dennis Hunter, Whiting-Turner

Ken Jordan, Hill International

Tom Lyman, GSA

Bill McGhee, H.F. Lenz

John Morrell, GSA

Eric Murphy, Whiting-Turner

Dana Pomeroy, Whiting-Turner

Ted Reffner, H.F. Lenz

Chris Reilly, Hill International

Ron Runnion, Hill International

Jennifer Silkensen, GSA

Steve Smith, Cooper Carry

Tony Teti, GSA

Jamie Tilghman, AECOM

Karen Trimbach, Cooper Carry

Khrysti Uhrin, Cooper Carry

Suzanne Verzella, GSA

Ed Weaver, AECOM

Mark Woodburn, AECOM

Andy Woodring, GSA

Recognized for the success and environmental innovation of the Design/Build Leadership in Energy and Environmental Design (LEED) Certified Platinum Building Project, New Town.

The New Town team at NASA Langley Research Center (LaRC) designed and built one of the best buildings in the Agency for energy efficiency, water efficiency, and use of renewable energy resources. This project was awarded the LEED Platinum Certification by the U.S. Green Building Council (USGBC) in June 2011. The team's approach in designing and building the new headquarters building has created a template for sustainability across NASA Langley. Sustainable concepts are becoming guiding principles in all aspects of operations at NASA Langley, and the New Town Phase I project was the impetus for this shift in culture.

The \$26 million NASA Langley headquarters building in Hampton, VA, is the first large office building to be constructed on LaRC's campus in 35 years. It is the most visible component of the Center's New Town Program Plan, a long-term facilities modernization program. This program involves not only new construction but also the consolidation of office spaces, laboratories, and research systems; closure; and demolition of the Center's aging portfolio of buildings. The goal of the New Town Program is to reduce energy and water consumption, lower operations and reactive maintenance costs, and strengthen the LaRC campus by focusing development in the New Town core area. The New Town Phase I project constructed a modern, sustainable, 79,000-square-foot office facility and demolished 148,000 square feet of old, inefficient space, yielding a 69,000-square-foot net increase in green space. Demolishing a large quantity of inefficient space and then replacing it with smaller, more efficient space significantly impacts the Center's infrastructure costs. The new building uses 31.5 percent less energy than the comparative new office standard used by the USGBC to measure performance and uses 75 percent less energy than an average LaRC office building. The building reduces potable water use by 41 percent and uses a green roof and water retention area on the north side of the building to minimize water runoff. All of the building's heating and cooling needs are met by using a geothermal heating and cooling system. In addition, there are photovoltaic solar panels on the penthouse roof providing 3 percent of the electrical power and a prototype photovoltaic solar film on the skylight window. All of these features contribute to the overall sustainability goals of the Center, saving or avoiding \$2.5 million per year in operations and maintenance costs.

Having sustainability as the number one priority for the project and executing this goal during all phases of the program demonstrated the team's high level of commitment. Sustainability has been incorporated in their mission and even changed the way Center decisions are made.



Lisa Roe, LaRC Center Director, receives the LEED Platinum Award at the June 2011 ribbon-cutting ceremony.



The New Town Phase I Langley Administration Building as seen during the June 2011 ribbon-cutting ceremony.

Category III

NASA EMD Director's Environment and Energy Award— Individual

.....

Denise Thaller

Chief
Medical and Environmental Management Division
Kennedy Space Center (KSC), FL

*Recognized for exceptional leadership in establishing the Agency's first
Center-sustainability plan, the 2012 KSC Sustainability Plan.*

Thaller currently serves as the Chief of the Medical and Environmental Management Division, where she leads the Aerospace Medicine and Occupational Health, Environmental Assurance, and Environmental Management Branches.

The role of an environmental leader is to inspire the idea of sustainability, to make the group or team want the vision, and to take action to achieve it for the promise of a greater sustainable working environment. Thaller's leadership embodies those qualities, which are evident in how she went about creating and deploying KSC's diverse teams. She led with the goal to unfreeze any preconceived notions about the Center's level of success and impact and to confidently state: KSC is Go for Green!

Communicating the vision and creating an awareness of what it means to incorporate sustainability into everyday practices establishes the beginning stages of ownership in the plan. In understanding this principle, she reached out to all of the Center's directorates, uncovering advocates for sustainability, identifying emerging environmentalists, and giving them a voice and a forum to say this work can be done.

There were multiple opportunities and forums for Center personnel to test their own assumptions of their processes and ask themselves the questions, "Why?" and "Where can we do better?" In establishing a baseline from the owners of the process, a perspective was necessary to understand the "current reality" of Kennedy Space Center's operations so that the gap between where the organization is now and where it would like to be in the future can be effectively identified.

In addition, Thaller found that leaning on the “best-of-the-best” currently established model programs at KSC—such as the Voluntary Protection Program (VPP) and LEED—sets the path for effective communication, collaboration, and consensus among the Center’s directorates. Integrating the elements of these concepts set a familiar, solid foundation in workplace understanding of what sustainability means in simple, concrete language supporting a natural, concise change in KSC’s culture.

Her dedicated leadership and carefully advanced planning resulted in a plan based upon many well-facilitated discussions, collaborations, and actionable targets and objectives for the workforce with strong management backing. And NASA is fortunate to have someone who is so committed to this sustainability initiative.

Category III

NASA EMD Director's Environmental and Energy Award— Individual

.....

Keith Peecook

Plum Brook Reactor Facility (PBRF) Decommissioning Project Manager
Safety and Mission Assurance Directorate
Glenn Research Center (GRC), OH

Recognized for outstanding leadership and management of the decommissioning of the Plum Brook Reactor.

PBRF is managed by GRC and consisted of two Nuclear Regulatory Commission (NRC)–licensed research reactors (60 megawatts, 100 kilowatts), seven hot cells, and eight major support buildings, as well as miles of interconnecting radioactively contaminated pipe. The plant was built from 1958–1961, operated until 1973, and held in safe, dry storage until 2002 when the NRC approved the decommissioning plan. Peecook was selected for the position of program manager in 2006.

Since that time, Peecook excelled in the area of open and honest communications as evidenced by the strong, trusting relationship he has developed and maintained with various project stakeholders. These stakeholders included Federal, state, and local regulators; local media; nearby community neighbors; and NASA Headquarters, senior GRC management, and congressional representatives. These stakeholders also included some exceptionally sensitive groups and these relationships were completely based on the information from the project being timely, honest, technically accurate, and complete. As an example, the communication of NASA's plans for continued sampling and future decontamination of the offsite radioactive cesium 137 in the Plum Brook Creek was so successful that this potentially inflammatory issue has been dealt with in a very calm and deliberate manner. His efforts assured the stakeholders that NASA has been and will continue to do the right thing.

Peecook has been driven to accomplish the decommissioning of the Plum Brook Reactor Facility in the most timely and cost-effective manner as possible, while still ensuring a safe and regulatory-compliant work environment. The focus of the project work under Peecook's leadership has shifted from "risk reduction" to actual targeted decontamination and site preparation for a final status survey checklist. Lessons learned in the past were effectively applied to carefully selected areas

that would provide the most significant progress available for the project's limited funding. The result has been to reduce the risk associated with the remainder of the project, allowing cost projections for project completion to be reduced by \$35 million.

The goal of the decommissioning project was to transform the reactor site into a greenfield, with all structures demolished to 3 feet below grade. To terminate the NRC licenses, the site needed to demonstrate that it had been cleaned to a point where someone living an agrarian lifestyle on the former reactor site would receive no more than an additional 25 millirem above background radiation exposure in a year. Thanks to Peacock, all these goals were accomplished while protecting the safety of the public, the environment, and the workers.

Plum Brook Reactor Facility Decommissioning Project



Inside the PBRF Containment Vessel: before (above) and after (below).



Category III

NASA EMD Director's Environmental and Energy Award— Group

.....

Group Award: Shuttle Transition and Retirement Environmental Team, KSC

Kennedy Space Center, FL

Team Members

Francis X. Kline, Team Lead, NASA Johnson Space Center

Dorothy Couch, Bridges BTC, Inc.

Amy S. Mangiacapra, United Space Alliance

Alice F. Smith, NASA KSC

Ann T. Williams, NASA KSC

Recognized for initiating and implementing sustainable practices into the Space Shuttle Transition and Retirement (T&R) Project.

Recently, KSC witnessed the end of one of NASA's largest and most successful projects—the Space Shuttle Program (SSP). With the T&R of the SSP, KSC is presented with the monumental task to disposition more than 30 years of documents and related office supplies. To meet the needs of this vast amount of paper and the overflow of office supplies, the T&R Environmental Project management team developed two new programs: the T&R Paper Destruction/Recycle Program and the Office Supply Collection and Donation to Public Schools Project.

The cost to the SSP T&R Environmental Project to shred the T&R records was estimated to be more than \$250,000. The T&R Environmental Project management team found a more sustainable and cost-effective way to destroy 30 years of sensitive Shuttle data and still be able to recycle the paper. This new recycling/data destruction process pulps the paper and removes the ink instead of mechanically shredding the paper. This allows KSC to sell this pulped material to paper mills, raising revenue to fund other environmental programs at KSC. One of the most sustainable aspects of the new process is that the paper can be processed directly into new white office paper, making it truly a cradle-to-cradle process.

The KSC workforce was downsized by more than 6,300 employees, and the related office supplies needed to be properly disposed of in

an environmentally friendly and cost-effective manner. The T&R Environmental Project management team zealously inspired a diverse group of employees in collecting, organizing, and distributing more than 9,000 cubic feet of office supplies. They separated out the material that could be reused and organized in an event where teachers and employees from public schools in the surrounding 50 miles, which included five counties, could come and receive the office supplies. It is estimated that the event saved the teachers over \$46,000 in out-of-pocket expenses. The office supply collection and distribution effort was a unique opportunity at KSC because of the downsizing of the workforce, but it was also a great outreach opportunity for the local area, and it was greatly appreciated by Florida's Space Coast community.

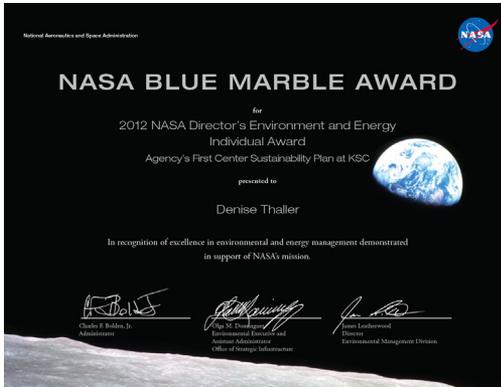


Left: People emptying a storage room in the Vehicle Assembly Building. Right: A mall storefront where KSC staff collected donations of T&R-related office supplies for local schools.

OSI and EMD would like to thank the 2012 Selection Committee members Elizabeth Walker, Linda Wennerberg, Calvin Williams, and Bob Clay for their time and contribution to this awards program.

Operating with the Environment in Mind.

The 2014 Blue Marble Awards call for nominations will be made in October 2013 and posted at <http://www.nasa.gov/agency/nepa>. This and past programs are also available on this Web site. For information on the program, contact the Blue Marble Award Coordinator, Tina Borghild Norwood, at tnorwood@hq.nasa.gov.



Notes:

**NASA 2012 BLUE
MARBLE
AWARDS
PROGRAM**
May 2012

