



Sustainability Opportunities



Let us know if you'd like more information. (Red font = JSC internal event)

Here are your **June 2015 Sustainability Opportunities** at the Johnson Space Center and in the greater Houston area. Please participate, and contact JSC-Sustainability@mail.nasa.gov with additional opportunities.

Get this electronically at <http://www.nasa.gov/centers/johnson/about/sustainability/index.html>

Within this notification:

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A Look Back before we Look Ahead...

Climate Preparedness Challenge at 3rd Annual City of Houston Hack-a-thon



Do you know what will be different in 10, 20, or 50 years in our region? Mayor Annise Parker challenged over 200 participants to work on challenges to make our city a better, safer, and even more accessible place to live. Three teams addressed communicating climate impact data and strategies. If you live in Houston, you'll want to understand what's coming. Details will be presented at this month's Environmental Brown Bag with Dr. Will Stefanov (Jun 9th 12PM). See next page for details and learn more at:

<http://houstonhackathon2015.challengepost.com/submissions>

<http://www.nasa.gov/centers/johnson/about/sustainability/index.html>

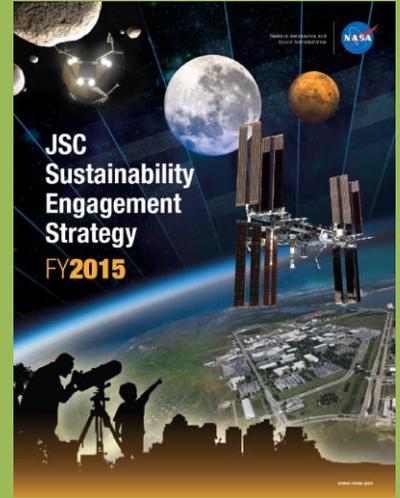
2015 Monthly Sustainability Focus Areas

- Jan - Feb = **LAND**
- Mar - Apr = **WATER**
- **May - Jun = PEOPLE**
- July - Aug = **AIR**
- Sept - Oct = **ENERGY**
- Nov - Dec = **MATERIALS**

Every Month
Join the Fun &
Educational Sustainability
Activities related to our
JSC Sustainability Model

Check out all the
Red Font activities on
the following pages!!

Do you know what "Sustainability" actually means? Read our **JSC Sustainability Engagement Strategy!!**

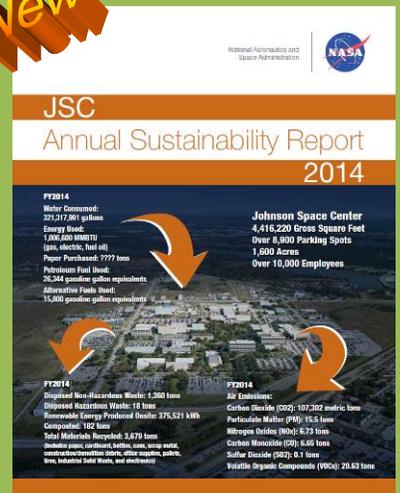


In our JSC Sustainability model, there are 6 natural resources we're trying to protect. Employees can find out more at our internal **JSC Sustainability Webpage!**



You're making a difference in our **JSC Annual Sustainability Report!!**

New



FY2014		FY2014	
Waste Generated:	271,217,861 gallons	Disposed Non-Hazardous Waste:	1,260 tons
Energy Usage:	1,600,000 MWh (gas, electric, fuel oil)	Disposed Hazardous Waste:	18 tons
Paper Purchased:	7777 tons	Renewable Energy Produced Onsite:	375,521 kWh
Potassium Fertilizer Used:	25,344 gallon/gallon equivalents	Compost:	182 tons
Alternative Fuels Used:	15,800 gallon/gallon equivalents	Total Materials Recycled:	21,870 tons
		Perfluorinated Polyether Sulfone (PFES) used:	16.5 tons
		Polystyrene (PS) used:	5.73 tons
		Carbon Monoxide (CO):	6.65 tons
		Sulfur Dioxide (SO2):	0.1 tons
		Volatile Organic Compounds (VOC):	20.63 tons



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Upcoming Events

- **Every Saturday or Sunday: Enjoy the Armand Bayou Nature Center**
 - From Breakfast on the Bayou to Nature Hikes, from Farm Life Demonstrations to Canoe Trips, check out this local gem for a weekend of nature-filled fun!
 - <http://www.abnc.org/things-to-do.html>
- **Jun 2nd – 4th: JSC APPEL Introduction to Green Engineering**
 - 8:30AM – 4:30PM
 - JSC B12
 - [Click here to Register](#); [Click Here for Course Information](#)
- **Jun 3rd: The Market-Moving Link Between Sustainability & Wellness**
 - 8:30AM – 11:00AM
 - Location Green Building Resource Center, 1002 Washington, room 2D
 - POC: Houston's Green Office Challenge, Lisa Lin
- **Jun 4th: World Environment Day at Schlumberger**
 - We are inviting you to participate by coming to our facility with displays, hand-outs to promote the great work you are doing through, air, water, ground or rescue missions with wildlife. This year's theme is "Sustainable Lifestyles" at Schlumberger we would like to say "Improving the Space Around Us".
 - 1:00PM – 4:00PM
 - Schlumberger's Houston Manufacturing Center (CHPC), 7030 Ardmore
 - <http://www.ktb.org/get-involved/calendar.aspx?pageid=2800>
- **Jun 9th: JSC Environmental Brown Bag "Climate Science" with Will Stefanov**
 - 12:00 – 1:00PM
 - B45 R751
 - POC: Michelle Fraser-Page
- **Jun 10th: JSC Sustainability Partnership Team (SPT) Meeting**
 - 3:00 – 4:30PM
 - B45 CR 751
 - POC: Mike Ewert or Chantel Whatley
- **Jun 11th: JSC Environmental Management System (EMS) Liaison Meeting**
 - 10:00 – 11:30AM
 - B12 CR 138
 - POC: Alan Amor or Amber Wisber
- **Jun 22nd: EPA brings CREAT train the trainer workshop to Houston**
 - CREAT = Climate Resilience Evaluation & Awareness Tool
 - City of Houston's Green Building Resource Center, 1002 Washington Ave.
 - POC: Laurie Peterson
- **Jun 24th: Green Building Resource Center "Shipping Container Buildings II"**
 - Education Seminar and Facility Tour
 - 5:00 – 6:00PM
 - 1002 Washington Ave, Houston TX 77002
 - <http://www.codegreenhouston.org/>

Find more opportunities and contribute to the [Citizen's Environmental Coalition](#) and weekly recurring events at <http://www.greenhoustontx.gov/events.html>.



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Featured Story "What's so Green about Engineering?"

Join us for the 4th annual NASA JSC Green Engineering Course (June 2nd – June 4th, 2015)

This course is designed as graduate-level seminar for engineers, scientists, project managers, and others who design products, processes, or systems and want to understand, quantify, and reduce the associated environmental impacts. It provides an introduction to the topic of green engineering, a tool for reducing the environmental impact of products, processes, and systems and making them more sustainable. From a NASA perspective, green engineering is an engineering best practice that considers environmental impacts as another design risk for mission success.

"This course got me to understand the importance of considering the entire product life cycle in order to assess its potential environmental impact."

Upon completion of this course, participants will be able to:

- Identify and communicate NASA engineering challenges with respect to environmental impacts as well as future risks, requirements, and potential solutions.
- Explain the different phases for a product, process, or system over the entire life cycle and give examples of potential environmental impacts and risks in each.
- Describe and apply basic life-cycle assessment (LCA) techniques for engineering projects.
- Develop an inventory of inputs/outputs for products/processes/systems.
- Develop a simple streamlined LCA template for use in their job function.
- Identify best practices and resources for continued learning and application of sustainability principles to NASA projects.
- Employ environmentally conscious designs, materials selection, and manufacturing techniques—enhanced through interdisciplinary teamwork.
- Design and develop materials, products, processes, hardware, and systems that are inherently safer, generate less waste, and use energy efficiently.
- Practice minimizing impacts associated with environmentally-driven risks, especially through an understanding of policies, regulations, and other external requirements (U.S. and international).
- Use available green engineering and sustainability tools and resources, along with NASA expertise, within system design and development efforts.
- Explain their role in fostering a sustainability culture within NASA.

"The 12 principles of green engineering helped me understand that green engineering is not just about buildings, but about doing good engineering period."

Sign up today! [Click here to log in to SATERN and Register](#)

Find information on all [NASA JSC Sustainability effort on the external homepage](#) (Click hyperlink, scan this QR code, or Google "NASA JSC Sustainability").



"My goal as the JSC Center Operations Director is to create a working environment where JSC employees feel happy, comfortable, and productive to support our mission. Similarly, my vision for sustainability is that it's something we don't even think about; it's ingrained in our thinking. We just do it."
- Joel Walker, JSC Center Sustainability Officer



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How can I be more sustainable?

Calculate your ecological footprint! How many Earth's does it take to sustain your lifestyle if everyone in the world lived like you?

<http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/>



Internal NASA Links

JSCs Internal Sustainability Webpage

(also accessible via the JSC Internal Homepage → Around JSC → Sustainability Initiatives)

<http://jsc-web-www6.jsc.nasa.gov/ja/ja13/capp.cfm>

JSC Photos of JSC's Earth Day, Natural Champions Meet Up, and local wildlife

<http://io.jsc.nasa.gov/app/browse.cfm?cid=60440> (new)

<http://io.jsc.nasa.gov/app/browse.cfm?cid=56553&ord=4>

<http://io.jsc.nasa.gov/app/browse.cfm?cid=59636&ord=4>

<http://io.jsc.nasa.gov/app/browse.cfm?cid=55905&ord=4&&pn=3&rpp=25&ct=1>

<https://io.jsc.nasa.gov/app/browse.cfm?cid=49948>

<https://io.jsc.nasa.gov/app/browse.cfm?cid=51063&&pn=1&rpp=25&ct=1>

How do I monitor the energy usage in my JSC building?

<http://ebiem:8080/idashboards/?guestuser=guest>

JSC Environmental Brown Bag Presentations

<http://jsc-web-www6.jsc.nasa.gov/bbs/scripts/>

(Scroll down to "Environmental Brown Bag")

JSC Environmental Newsletter Archives

<https://jsc-web-www6.jsc.nasa.gov/ja/ja13/greenside.cfm>