Fiscal Year 2022 Johnson Space Center

Sustainability Snapshot

About This Report

NASA's Johnson Space Center (JSC) operates with the understanding that every journey to space ends back home on Earth. As such, we aim to foster a culture at JSC that wholeheartedly embraces and integrates sustainability at every level of the organization, a mentality that aligns with Executive Order 14057. This report articulates our sustainability initiatives in the context of Executive Order 14057 to celebrate our ongoing efforts to make sustainability a central component of JSC's operations.

Water tasting event to compare safe drinking water to reduce bottled water consumption

Greenhouse Gas Emissions

Reduce scope 1, 2, and 3 greenhouse gas emissions from federal operations

Sec 202

- The combined heat and power plant at JSC eliminated **10.7 million kWh** worth of electricity losses from grid inefficiencies
- Revised commuting policy to permit electric bikes, increasing zero-emission mobility options for employees at JSC

Energy and Water Efficiency

Reduce scope 1 and 2 emissions by improving energy efficiency and water conservation

Sec 206

- Energy audits conducted for eleven buildings at JSC and Ellington Field identified **$63,000** in potential annual energy savings
- Conducted a thermal comfort analysis in JSC buildings to identify bliss temperature points for energy savings

Renewable Energy

Increase carbon pollution-free energy usage

Sec 203

- Secured renewable energy credits totaling **2,900 MW,** which covered **7.5%** of purchased on-site electricity
- Generated **77,000 kWh** of geothermal and solar energy, equal to the annual electricity consumption of **seven** American homes

Sustainable Buildings

Increase campus facilities that are net-zero and meet green building standards

Sec 205

- Broke ground on a science annex and emergency operations facility, designed to meet green building (LEED) standards
- Established a working group to maximize energy savings through cross-team communication

With the support of local bike shops and businesses, JSC resumed hosting an annual Bike to Work Day. This event invited JSC employees and the local community to integrate cycling into their commute.

Native tree planting event around the Astronaut Jogging Trail

Waste Management

Reduce waste, prevent pollution, and divert waste from landfills

Sec 207

- Composted and recycled the equivalent weight of **2.5 International Space Stations (2.4 million pounds)** in materials
- By recycling **99% (about 670,000 pounds)** of construction and demolition materials, JSC created a cost avoidance of **$55,000**

Sustainable Acquisition

Acquire products and services according to federal green purchasing requirements

Sec 208

- About **$2.2 million** was spent on products made with recycled or bio-based content, replacing fossil fuel-based materials
- Through the Redistribution & Utilization (R&U) Warehouse, about **$1.6 million** worth of JSC property was reused by other teams

Fleet Management

Improve fleet efficiency and transition to zero-emissions vehicles

Sec 204

- Designed and selected electric vehicle charging stations for government and personal vehicles for installment in 2023
- Installed telematics equipment in **50%** of all government-leased vehicles to enable data-driven fleet management

Greening and Restoring Our World (GROW) began its inaugural year in 2022, making JSC the **first** NASA center to approve an Earth stewardship-focused Employee Resource Group. GROW fosters an action-oriented workforce culture by inviting employees to unite to protect our planet.

GROW, along with other local groups, led a community campaign to encourage plastic film recycling, which reached **10,500 people**. This action diverted **1,867 pounds** of plastic material, the equivalent of **137,000 bags**, towards a productive use.

Center Operations staff piloted the Department of Energy's *Energy Treasure Hunt* checklist to identify potential no- and low-cost energy savings. The pilot identified unreported issues and generated awareness among JSC employees.

For inquiries about this report please contact JSC-Sustainability@mail.nasa.gov or visit the NASA sustainability website at https://www.nasa.gov/emd/sustainability