

**1) Sustainability Hero Award** – This award recognizes a Federal employee who is a sustainability champion and an agent of change within his or her agency. The selected individual will demonstrate a history of outstanding performance in leading implementation of sustainable practices while reflecting a comprehensive approach to energy and environmental management through innovative strategies, practices, and outreach.

**4. The nomination narrative must meet the requirements listed below and be entered on the nomination form for the 2014 GreenGov Presidential Awards at FedCenter.gov:**

*\*For the Sustainability Hero Award, please respond to parts A, B, and C, below, as follows: respond to part A with a description of the work for which the individual is being recognized, part B with the results he or she has achieved, and part C with how he or she has mentored others.\**

a. **Describe the project**, including how the project (for the Sustainability Hero Award please reference the scope and body of the work) was conceived and implemented, what strategies and technologies were deployed, who was involved and an approximate project timeline. (max 750 words)

*(Sustainability Hero: part A with a description of the work for which the individual is being recognized)*

Sam McCord is the Recycling Coordinator for the Material Sustainability and Pollution Prevention (MSP2) program at Sandia National Laboratories/New Mexico (SNL/NM). Since Sam's arrival at SNL/NM nine years ago, the quantity and breadth of materials diverted from landfill disposal has skyrocketed. Sam's ability to identify and investigate material diversion opportunities, develop implementation and logistic strategies, coordinate and motivate participation and partnerships with members of the workforce and related programs uniquely qualifies him as a material Sustainability Hero.

SNL/NM has over 10,000 employees and contractors in over 300 occupied buildings, which makes implementing new material diversion streams very challenging. Prior to Sam coming to SNL/NM, materials readily recycled were limited to cardboard, white paper, aluminum cans, plastic bottles, and used toner cartridges. The following list highlights materials that are now recycled throughout SNL/NM, which Sam was able to identify, coordinate, and implement lab-wide:

- Alkaline Batteries
- Compact Disks (CDs)
- Cafeteria Food Waste (Composting)
- Electronics
- Foams (packing foams such as LPDE foam #4, EPS/PS [Styrofoam] #6, polyurethane; packing peanuts; Styrofoam cups)
- Frito Lay Snack Bags
- Glass Bottles
- Mixed Paper
- Exotic Metals & Alloys
- Shrink-wrap
- Transparencies

- Unique Plastics (ABS, Polycarbonate, Lucite®, Plexiglas®, and Teflon® )

Additional material sustainability projects which Sam created include:

#### **Toner Exchange/Full Circle Recycling (2005)**

Sam established the “Toner Exchange Program” in 2005. Sam discovered that when new copiers/printers would get purchased at SNL/NM, the new and unused toner cartridges for the replaced copier/printer would be sent to Property Reapplication where they would typically reside for a period of time and then be sent out for public auction to be sold for pennies on the dollar. Sam’s toner exchange program involved keeping all these unused toner/ink cartridges in an online inventory available for the workforce to order from. This program has saved SNL/NM between \$45k and \$75k every year since its inception.

#### **Electronics (2007)**

Sam is a computer person, and as a result became involved with the Federal Electronics Challenge program. Sam was able to work out the details with the SNL procurement organization and Just-In-Time vendors to ensure only [EPEAT](#) Silver or better computers and monitors were available to members of the workforce. Sam was also the driving force in implementing the electronics recycling program at SNL, which turns a net profit that gets reinvested into other recycling and solid waste management initiatives.

#### **Composting (2009)**

After attending a workshop for hospitality and restaurant industries, Sam looked to implement composting at SNL/NM. Sam worked with the contractor operating the Thunderbird Café (the largest cafeteria on the SNL/NM campus) to implement composting and a local vendor to collect the diverted food waste. As a result, compostable food waste has removed the majority of the wet component of the cafeteria’s daily trash. Based on the composting success at the Thunderbird Café, Sam has been able to expand the effort to Sodexo’s (Cafés operating contractor) “BBQ on Wheels” in which outdoor events can be made “zero waste” by using only utensils and to-go containers made from compostable materials.

#### **Foams (2010)**

Packing foams are a common component to the solid waste stream at SNL/NM as so many items (such as computers and monitors) are shipped with these materials to prevent damage during transportation. Sam devised a strategy to divert these packing foams from the solid waste stream, collect them onsite, and then process them through a foam densifier machine that was purchased using recycling revenues. The resulting densified foams are purchased by a material broker along with SNL/NM’s other plastic recycle materials.

#### **Lead Bank (2011-2014)**

SNL/NM’s Lead Bank Program was unfunded, minimally managed, and in dire need of an overhaul physically and operationally. Sam embraced the challenge of overhauling the Lead Bank program. Following decontamination of the Lead Bank bunker, unusable scrap was separated and shipped for

recycle. Revenue from the 88,796 pounds of recycled lead paid for the shipping, the bunker clean-out and abatement, and two Lead Bank revitalization projects. The first project eliminated the paper Transfer Request, and replaced it with an online system (recall Sam is a computer guy). The online system hosts a photographic inventory and shopping cart, and handles the workflow of lead coming into and out of the Lead Bank. The second project began replacing raw lead with epoxy-coated lead that would virtually eliminate lead oxidation and lead dust. One thousand epoxy-coated lead bricks were purchased from the lead recycling revenues. Improved customer service and response time through the website, introduction of epoxy-coated lead bricks, and an advertising effort has resulted in a phenomenal increase in Lead Bank utilization.

**b. Describe results and achievements to-date, focusing not only on outputs but also on intermediate and long-term outcomes, and anticipated future outcomes. (max 500 words)**

*(Sustainability Hero: part B with the results he or she has achieved)*

Many SNL/NM employees and contractors know that if they have a recycling or material diversion/disposition question, Sam is the go-to guy. This facilitates members of the workforce to be mindful of material sustainability opportunities in their area of work by knowing there is someone that can and will work through the details of bringing any feasible ideas to fruition.

To make recycle streams long-lasting and efficient, Sam is creating and maintaining contracts for certain materials to document the process and expectations from vendors. These include composting, wood recycling, exotic metals, and electronics. With over 300 solid waste and recycling dumpsters on campus, Sam has established a vendor contract used to maintain, upgrade, paint, arrange, and efficiently distribute the dumpsters. Sam even uses a geographic information system (GIS) to track and analyze distribution of waste and recycling containers.

Excellent quarterly data exists for each material stream since inception all the way back to 1999. Moving forward, Sam will be performing statistical analysis using this data which is anticipated to help guide labor and revenue investments. A revised and expanded waste characterization study is in the planning stage to augment a recycling opportunity assessment performed by Sam in 2013. Waste diversion in CY2005 when Sam joined the Pollution Prevention program was at 47%. Thanks to Sam's efforts and exceptional capabilities in developing fantastic teaming and support, diversion has increased steadily to 68% in CY2013.

Specific, quantitative results associated with the recycling streams Sam has implemented at SNL/NM are listed below on the basis of total quantities diverted from the solid waste stream from the data of inception:

- Alkaline Batteries
  - 9,355 lbs. since 2009

- Compact Disks (CDs)
  - 5,906 lbs. since 2007
- Cafeteria Food Waste (Composting)
  - 170,601 lbs. since 2010
- Electronics
  - 2,223,540 lbs. since 2007
- Foams (packing foams such as LPDE foam #4, EPS/PS [Styrofoam] #6, polyurethane; packing peanuts; Styrofoam cups)
  - 15,195 lbs. since 2009
- Frito Lay Snack Bags
  - 20 lbs. since 2011
- Glass Bottles
  - 1,640 lbs. since 2013
- Lead
  - 88,796 lbs. since 2011
- Mixed Paper
  - 891,106 lbs. since 2007
- Exotic Metals & Alloys
  - 63,700 lbs. since 2010
- Shrink-wrap
  - 6,996 lbs. since 2010
- Transparencies
  - 731 lbs. since 2006
- Unique Plastics (ABS, Polycarbonate, Lucite®, Plexiglas®, and Teflon® )
  - 56,223 lbs. since 2010

Of course Sam does not accomplish everything by himself, and SNL/NM has motivated, dedicated, and supportive management, staff, and programs (including Solid Waste Management, Property Reapplication, and Custodial Services) that are invaluable to the implementation of Sam's material sustainability ideas, projects, and activities. However, it is Sam's vision; initiative; ingenuity; leadership; technical skills; and ability to obtain the support and partnership of others that underlie these successes. Not easily captured in the descriptions of the work and results above is the intangible skills Sam brings to bear on the material sustainability projects, including webpage development, data management and analysis, GIS capabilities, outreach and awareness activities, organizational proficiencies, and a personality that motivates and encourages others to be involved.

**c. Explain how the project has been replicated or has a high potential to be replicated within the Federal government and has been shared with colleagues in other organizations/agencies. (max 250 words)**

*(Sustainability Hero: part C with how he or she has mentored others.\*)*

Sam is routinely involved with information sharing associated with his work in the MSP2 program. In addition, Sam mentors SNL/NM members of the workforce relative to recycling programs both directly and indirectly through awareness and outreach activities. Additionally, this will be the third year that Sam has been able to be a one-on-one mentor to a local high school student performing a full time research project over the summer for the MSP2 program.

SNL/NM's recycling program supports and shares experiences with local entities such as the Department of Energy local offices and contractors, and Kirtland Air Force Base (KAFB) on which SNL/NM resides. Through the relationship with KAFB, Sandia's recycling program is now used as a positive example nationally through the U.S. Air Force's integrated solid waste management training program out of Wright-Patterson Air Force Base.

Sam has presented topics in large venues such as: Zero Waste concepts at the NM Recycling Coalition conference; using procurement language to combine green purchasing with recycling to create closed-loop contracts at the DOE Environmental Symposium in Washington D.C.; and electronics stewardship through life-cycle management at the Federal GreenGov conference also in Washington D.C. He has presented on various regional and national teleconferences/webinars, is on the State of New Mexico Pollution Prevention Advisory Council, and is part of the NM Recycle Coalition's Organics Recycling Organization sub-committee.