Sustainability Program

MUSC
ENGINEERING & FACILITIES
Sustainability Program

Go Green

Overview

- MUSC Enterprise
  - University/Research
  - Hospital
  - MUSC Physicians/Outpatient
- Basic Stats
  - 7.8 million Sq Feet
  - 82 acre campus
  - 709 licensed beds in 3 Hospitals
  - over 800 Research Labs
  - 12,000 employees and 3,000 students
  - Economic Impact of more than $3.4 Billion 2013

Urban Farm, compost demonstration area

Why Recycle?

- Save $$$$ on reprocessing or reusing
- Make money on materials: paper, cardboard, e-waste, metals, toner cartridges, surplus
- Reduce waste expenses
- Reduce liability
  - Keep material confidential, both paper and e-waste
- Regulation compliance
- Employee engagement
- Town and gown

Reduce

- Electronic Medical Record
- Telecommuting/Telemedicine
  - Stroke experts exam patients and brain images virtually
  - Virtual TeleConsult Clinic
- Learning on-line, Webinars, Sim Labs
- My Fax

Reuse

- Reusable Office Supplies
  - Two locations on-campus
  - All items free to students, faculty & staff
  - Pens, pencils, calculators, staplers, staples, scissors, notepads, rubber bands, envelopes, paperclips, small desk top accessories
  - Laser toners and ink jet supplies
  - 3-ring binders, folders, notebooks, file folders
- Surplus Department
- Reuse building materials work with contractors

Reprocess

- Medical devices from OR's & procedure areas
  - Catheters
  - Cables
  - Biopsy forceps
  - Pressure bags
  - Pulse oximeters
  - Scalpels
  - Bits, blades, burrs
- Savings can be in millions

Reprocess

- Medical devices from PACU, recovery rooms & patient rooms
  - Cerebral-somatic sensors
  - Blood pressure cuffs
  - SCD/DVT sleeves
  - Pulse ox sensors
  - Stethoscopes
  - ECG leads
  - Pneumatic tourniquets
  - Patient privacy curtains
  - Infusor bags
  - Fall alarms
  - Splints
  - Masks

Somatic Sensors

Infuser Bags

Pulse Ox Probes

SCD Sleeves

Blood Pressure Cuffs

Recycling

- Single Stream for County residential areas

- Dual Stream at MUSC

Paper Recycling Bin Location

- Copier/fax/printer
- Nurses station
- Nurse Carts
- Mailroom
- Labs
- OR
- Small bins deskside

Special Concern

NFPA Fire Code 19.7.5.5: Trash receptacles shall not exceed 32 gal. No more than 32 gals per 64 ft^2 area. Mobile receptacles over 32 gal can be located in an area with 1 hr fire rating.

- Get to know your hospital compliance officer

Paper Shredding & Recycling

- Education and Training
  - On-line mandatory HIPPA training for all staff
  - MUSC Information Security policies & procedures: www.musc.edu/security
  - Recycling staff sign confidentiality statement
  - Recycling staff receive on-going training
  - Anyone with a key signs confidentiality statement

Special Concern

HIPPA PHI definition:

- PHI can be defined as any individually identifiable information, whether in oral, written or electronic form, and relates to the past, present, or future physical or mental health or condition of an individual; or the past, present or future payment for the provision of health care to an individual.

Paper Shredding

- We shred all paper
  - Patient, research, finance, HR
  - Human error
  - Efficient: one trip
- We own two shred trucks
  - Savings 1st year over $100K
  - Control size of shred
  - Provide high level of service
  - Integrate with all recycling: cost of all recycling decreases

Cardboard & Paperboard

- Cardboard/paperboard flattened (tissue, glove boxes, etc.)
- Placed next to trash container
- Housekeeping collects cardboard when they pick up trash

Mixed Plastic, Glass & Metal

- Clinical, hospital and lab environment three areas of recycling
  - Food related
  - Lab related
  - Clinical related

Food Related Plastic, Glass & Metal

- Break room
- Next to beverage machine
- Classroom/meeting room
- Patient waiting rooms
- Cafeterias/lobbies

Lab Recycling

- Plastic
  - Clean rigid plastics #1-#7 only
  - X NO Styrofoam
  - X NO plastic wrap
- Glass
  - Clean brown glass
  - X NO ceramics, NO plate glass, NO tempered glass (Pyrex)
- Metal
  - Metal trays (foil) and any item or container made of aluminum
  - Steel
  - Lead pigs & lead aprons w/ letter from rad safety
  - Mercury & silver contractor collection

OR/Procedure Rooms

- Recycling done during room set-up
- Each OR/procedure room has 24 gal PGS
- Paper: 5 gal bin under computer cart
- Paperboard: 24 gal bin in sterile core, trash room, glove boxes, suture supply boxes
- Glass: BSS bottles

Special Concern

Glass medication bottles considered sharps at MUSC:

- Drugs disposal policy: https://www.musc.edu/medcenter/policy/Med/C155.pdf
- Risk injury when taking the metal/rubber piece off bottle
- Create possible opportunity to divert drugs

OR/Procedure Rooms

- Rigid Plastic: 1- 7
- No soft plastic –tubing, tyvek, IV bags, foam, bags
- Metals: Aluminum disposable laryngoscopes: disinfected then recycled by Anesthesia, lead aprons, lead pigs (Nuclear Radiation)
- Blue Wrap:
  - Market
  - Bag separate in large clear bag
  - Add layer of blue wrap bags to OCC compactor
    - Last layer in bin
    - Call recycling center when bin on way
- Create bins for areas that don't have space (ex. tube feed cans)

Special Concerns

- HIPPA
  - Pill bottle labels, IV bag labels, medication boxes with labels
  - All labels with patient identifiers must be removed before recycling

OR/Procedure Rooms

- Education and Training
  - Site specific

Universal Waste: Fluorescent Tubes

- Fluorescent tubes and CFL bulbs contain mercury which is released when they are broken
  - Store in container such as box it was shipped in
  - Closed securely
  - Labeled as “Universal Waste – Lamps” *
  - Dated (when the first bulb is placed in the container)

Universal Waste: Batteries

- Batteries
  - 100's of locations
  - High volume areas: Bioengineering, Communications, Telemetry
  - Create free recycling bins from plastic containers we receive from pathology & Env Services
  - Give bins away at all public events, presentations, on-call
  - Accept lead acid, Li-Ion, Ni-Mh, Ni-Cad, Alkaline
  - Batteries Plus collects for free

Special Concern

- Once batteries are collected they are kept in a fireproof cabinet

Electronics

- E-Waste
  - Collect small items: CD's, floppy disk, cords, plugs, calculators, speakers, printers, phones, random scientific equipment
  - Surplus collects large items: monitors, CPU's, tagged property
  - Bins emptied as needed
  - Gaylord boxes, various styles of bins
  - High volume areas: Hospital near cafeteria, library lobby, Radiology, IT, research bldg loading dock
  - Revenue for various materials
  - State contract vendor

Special Concern

- All cell phones go back to communications for confidentiality
- All hard drives must be cleaned for confidentiality

Toner Cartridges

- Toner Cartridges
  - Sign up, go to the OfficeMax website: https://www.maxcartridgerewards.com/login/locationregister.aspx?id=2211
  - Get a username and password
  - Download FREE shipping labels
  - Fill the box
  - Tape up the box and schedule a free UPS pick up
  - Recycle a single toner cartridge
    - Drop off locations

Bin Management

- Veri-Shred Software
  - Customer, Building
  - Room #, Bin type
  - Barcode, Reports
- Mobile ASI Software on Intermec Unit
  - Receive & view service orders
  - Scan bins
  - Enter notes & volume
- Billing
  - Monthly billing
  - Could use system like Quick Books for accounts receivable

Recycling Results

FY 13	Tons
Office Paper	520
Cardboard	379
Yard Waste	120
Scrap Metal	101
Electronic or E-waste including Toner Cartridges	56
Plastic, Glass & Steel	48
Food Compost	47
Wooden Pallets	36
Books	12

	Tons
Fluorescent Tubes	5
Batteries	4
Medical Products	4
Restaurant Grease	4
Chemicals	4
Oil & Oil Filters	2
Tires	1
Radiology Film	1
Total	1,342

$30,000 savings in CY 13 on waste

Resources

- MUSC http://www.musc.edu/gogreen
- Lab recycling at Johns Hopkins http://www.sustainability.jhu.edu/pdfs/Guidance_Document_for_Recycling_Materials_in_Laboratories.pdf
- Stanford empty container decision tree http://www.stanford.edu/dept/EHS/prod/enviro/lab_bottle_recycling.html
- Yale lab recycling http://recycling.yale.edu/lab-recycling
- Practice Greenhealth waste page http://practicegreenhealth.org/topics/waste
- Healthcare Plastics Recycling Coalition http://www.hprc.org/
- Medical Equipment and/or Supplies Donation Remedy: http://www.remedyinc.org/default.asp
- Stryker http://sustainability.stryker.com/
- Medical product reprocessing http://www.ascenths.com/
- Tennessee Dept of Health http://health.state.tn.us/environmental/climatechange.htm
- Recycling PETE animal cages http://www.disposablecages.com/disposable-cages-sustainability.php

Sustainability & Recycling Staff

Christine von Kolnitz Cooley
Sustainability Manager
843-792-1804
vonkolnc@musc.edu

Pete Rock
Operations Manager
843-792-4668
rockp@musc.edu

Caroline Davila
Communications
843-792-9745
davilac@musc.edu

Kathy McKay
Administrative Assistant
843-792-2723
mckaykat@musc.edu

Equipment Operator Staff:

Michael Peavy
Jerome Frazier
Robert Turner
(open position)

GoGreen

How to reach us:

Phone number: 843-792-4066
Email: recycle@musc.edu
More information:
http://www.musc.edu/gogreen