



Southampton Hospital
Environmental Assessment:
MOU SemiAnnual Report
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Environmental Protection Agency
Region 2

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Accomplishments

Reductions of 4,243 MTCO₂e



Memorandum of Understanding

On November 15, 2010, Southampton Hospital signed a Memorandum of Understanding (MOU) pledging to become an environmental steward by implementing a number of green initiatives that would reduce its carbon footprint and further improve our planet's environment. This partnership with the United States Environmental Protection Agency (EPA) and Southampton Hospital has resulted in reducing energy, water and solid waste production across hospital operations.

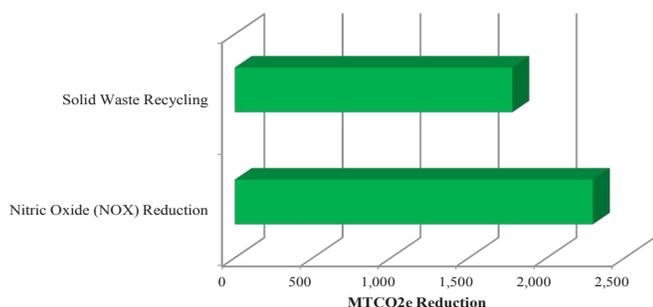
Reduction in Environmental Footprint

This is the fourth update for Southampton Hospital and its green initiatives. The EPA has analyzed the submitted information and generated an environmental footprint for the hospital. Due to the progressive green efforts of the organization, the hospital has managed to reduce its carbon footprint by 4,243 MTCO₂e* and saved an estimated \$94,700 in operating expenses.

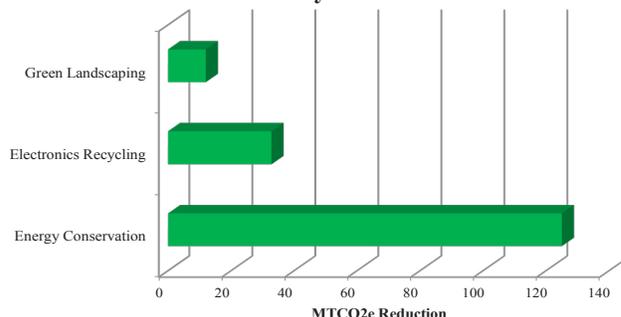
Environmental Metrics	Total Sector (MTCO ₂ e)
Energy Conservation	125.0
Solid Waste	1,778.7
Green Landscaping	12.0
Electronics	32.8
Nitric Oxide (NOX) Reduction	2,294.8
Total (MTCO ₂ e)	4,243.4

*Metric Ton Carbon Dioxide Equivalent

Primary Initiatives



Secondary Initiatives



Measurement and Continuous Improvements

EPA uses these environmental conversion models to calculate metric tons of carbon dioxide equivalents:

Greenhouse Gas Equivalencies (GHG) Calculator converts GHG reductions into scenarios that can be easily communicated to the public.

eGRID Version 1.1 (2007) which converts standard metrics for electricity, green energy, fuel use, chemical use, water use, and sustainable materials management into MTCO₂e.

The EPA WARM Model which helps calculate GHG emission reductions from several different waste management practices, including source reduction, recycling, combustion, composting and landfilling.

The EPA Pollution Prevention (P2) Cost Calculator that estimates cost savings associated with GHG reductions.

Certain environmental data points cannot be converted to MTCO₂e because scientific models do not currently exist.

As methodologies improve, environmental assessments will be updated to include any new GHG reduction estimates.

Accomplishments

Reductions of 4,243 MTCO₂e

Greenhouse Gas Equivalencies

What does the reduction of 4,243 MTCO₂e represent ?

The organization's effort is equivalent to any one of the following:

- Annual greenhouse gas emissions from 832 passenger vehicles



- Carbon dioxide emissions from 475,717 gallons of gasoline



- Carbon dioxide emissions from 9,868 barrels of oil consumed



- Carbon dioxide emissions from the energy use of 367 homes for one year



- Carbon dioxide emissions from 176,808 propane tanks used for home barbeques



- Carbon dioxide emissions from gasoline carried by 56 tanker trucks



- Carbon dioxide emissions from burning 23.1 railcars' worth of coal (over 1/3 of a mile long)





Environmental Metrics	Nov 2010 MOU	May 2011 Update	Nov 2011 Update	May 2012 Update	Nov 2012 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Energy Conservation/Energy Star							
Total Savings (MTCO2e)	15.4	30.9	30.9	30.9	30.9	125.0	\$22,613
Miscellaneous Energy Conservation	24,344 kwh	48,688 kwh	48,688 kwh	48,688 kwh	48,688 kwh	125.0	\$22,611
Web Based Energy Competition							
Motors and Transformers							
Lighting Project Fixtures (bulbs and ballast)		3.8 kwh	3.8 kwh	3.8 kwh	3.8 kwh	0.0	\$2
High Temp Hot Water Pipe Replacement							
HVAC, Chiller & Electrical							
Bulb Replacement (CFLs)							
Bulb Replacement (LEDs)							
Gas Savings							
Fuel Oil Savings							
Steam Savings							
Alternative Energy							
Total Savings (MTCO2e)						0.0	\$0
On-Site Solar							
On-Site Wind							
On-Site Geothermal							
On-Site Combined Heat and Power							
Purchase of Green Energy/Green Power							
Water Conservation/WaterSense							
Total Savings (MTCO2e)					0.0	0.0	\$9
Miscellaneous Water Conservation							
Low Flow/Hands Free Faucets (18)					4500 gal	0.0	\$9
Low Flow Toilets							
Low Flow Shower Heads							
Low Flow Urinals							
Waterless Urinals							
Solid Waste Recycling							
Total Savings (MTCO2e)	546.8	232.6	232.6	63.5	703.1	1,778.7	\$70,705
Mixed Recyclables (includes Wastewise)		4910 lbs	4910 lbs		182.44 tons	537.7	\$7,494
Pallets Waste Avoided / Wood Recycled		390 pallets (7.8 tons)	390 pallets (7.8 tons)			38.4	\$624
Steel Recycled Offsite during Deconstruction							
Concrete / Asphalt Recycled during Deconstruction							
Recycled C&D Waste (construction waste)							
Cardboard (construction/non-construction/sharp containers)	165 tons	18.91 tons	18.91 tons	18.84 tons	21 tons	752.3	\$9,706
Mixed Metal (construction/non-construction)							
Paper, Mixed		1.5 tons	1.5 tons		31.2 tons	120.0	\$1,368
Plastic, Mixed (bottles,construction/non-construction,sharp containers)	45,000 lbs	6000 bottles + 750 5gal bottles + 9082.3 lbs	6000 bottles + 750 5gal bottles + 9082.3 lbs			49.5	\$1,320
Can / Bottle Recycling					300 lbs	1.1	\$6
Blue Wrap Waste Reduction		5000 lbs	5000 lbs	5000 lbs	5000 lbs	15.0	\$400
Mixed Organics							



Environmental Metrics	Nov 2010 MOU	May 2011 Update	Nov 2011 Update	May 2012 Update	Nov 2012 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Food Donation (Waste diversion)							
Biosolids and Food Waste Recycling / Composting							
Fluorescent Bulbs		3292 (approx 2100 lbs)	3292 (approx 2100 lbs)	345 lbs		0.3	\$91
Ceiling Tiles Recycled							
Carpet Recycled							
Waste Oil Recycled		100 gal	100 gal			2.4	\$34
Magazines / Third Class Mail							
Newspapers							
Office Paper	107,500 sh (215 reams approx 1075 lbs)	90909 lbs	90909 lbs			260.6	\$3,658
Phonebooks							
Textbooks							
Dimensional Lumber							
Fly Ash							
Aluminum Cans				200 lbs		1.4	\$4
Glass							
HDPE							
LDPE							
PET							
Appliances							
Non-Ferrous Metals							
Fats, Oils, Grease							
Instrument Recycling							\$5,000
Medical Device Reprocessing							\$41,000
Green Procurement							
Total Savings (MTCO2e)						0.0	\$0
Re-Use/Purchase of Materials with Recycled Content							
Purchase / Use of Compost Socks							
Use of Recycled Steel during Construction							
Use of Recycled Iron during Construction							
Use of Recycled Plastic during Construction							
Use of Recycled Aluminum during Construction							
Use of Recycled Concrete / Asphalt during Construction							
Use of Coal Combustion Products							
Green Landscaping							
Total Savings (MTCO2e)		3.0	3.0	3.0	3.0	12.0	\$667
Green Roofs							
Porous Pavement							
Grass							
Low / No Mow Area		6000 sq ft	6000 sq ft	6000 sq ft	6000 sq ft	12.0	\$667
Green Space							
Re-use of Collected Stormwater							
On-Site Use of Compost / Mulch							
Moisture Sensing Sprinklers							
Number / Acres of Trees							



Environmental Metrics	Nov 2010 MOU	May 2011 Update	Nov 2011 Update	May 2012 Update	Nov 2012 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Reflective Roof							
Synthetic Turf							
Native Plants							
Leaves Composted							
Electronics/EPEAT							
Total Savings (MTCO2e)		13.9	13.9	3.3	1.7	32.8	\$410
Recycling of Electronics		6248 lbs	6248 lbs	4000 lbs	2171 lbs	14.9	\$373
Re-Use/Donation of Used Computers							
Toner/Ink Recycling and Use of Recycled Ink		875 lbs	875 lbs			17.9	\$35
Battery Recycling				80 lbs		0.1	\$2
Purchase of EPEAT Products							
Mass Transit							
Total Savings (MTCO2e)							
Miles Avoided							
Transportation							
Total Savings (MTCO2e)						0.0	\$0
Hybrid Vehicles							
Electric Vehicles							
Biodiesel Vehicles							
Clean Construction Vehicles							
LNG Vehicles							
Alternate Fuel Vehicles (Zipcar)							
Smartway Transporters							
Bike Racks		2	2	2	2		
LEED Projects							
Total Savings (MTCO2e)							
Silver - 10%							
Gold - 17%							
Platinum - 20%							
Misc. - Further Clarification							
Total Savings (MTCO2e)		573.7	573.7	573.7	573.7	2,294.8	\$367
NOX (equipment only)		2.04 tons	2.04 tons	2.04 tons	2.04 tons	2,294.8	\$367
NOX (includes vehicles)							
MTCO2e Savings							
Total (MTCO2e)	562.2	854.1	854.1	674.4	1,312.4	4,243.4	\$94,771
Energy	15.4	30.9	30.9	30.9	30.9	125.0	\$22,613
Water	0.0	0.0	0.0	0.0	0.0	0.0	\$9
Solid Waste	546.8	232.6	232.6	63.5	703.1	1,778.7	\$70,705
Green Landscaping	0.0	3.0	3.0	3.0	3.0	12.0	\$667
Electronics	0.0	13.9	13.9	3.3	1.7	32.8	\$410
Misc. - Further Clarification	0.0	573.7	573.7	573.7	573.7	2,294.8	\$367



2012

Southampton Hospital Additional Green MOU Accomplishments and Cost Savings

Southampton Hospital has received the 2011 Environmental Excellence award from SterilMed for superior accomplishment in reducing environmental impact and improving overall healthcare sustainability through medical device reprocessing and recycling.

Southampton Hospital is one of the leading U.S. hospitals in restoring and recycling medical devices. In 2011, their reprocessing program diverted higher than average medical waste from landfills and achieved above average savings because of the hospital's dedication to reprocessing.

Southampton Hospital has been recognized as one of the nation's "Most Wired - Small and Rural" hospitals, according to the results of Health Forum's 2012 Most Wired Survey released in the July issue of Hospitals & Health Networks magazine. Healthcare information is a Board-level priority and a critical part of Southampton Hospital's strategic plan to build a more robust healthcare system for its communities that will enable the Hospital to integrate existing physician offices, testing and treatment facilities. The hospital is creating a paperless care environment that relies on digital information for all of its care records.