



New York Mets - CitiField
Environmental Assessment:
MOU Annual Report
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Environmental Protection Agency
Region 2

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Accomplishments

Reductions of 52,602 MTCO₂e



Memorandum of Understanding

On March 13, 2008, the New York Mets signed a Memorandum of Understanding (MOU) for the construction and operation of CitiField, 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 the New York Mets - CitiField Stadium has resulted in reducing energy, water and solid waste production across their entire operations.

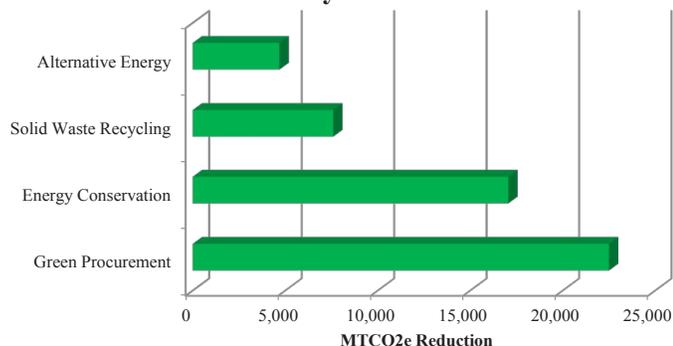
Reduction in Environmental Footprint

In the last six years, the New York Mets and CitiField Stadium have provided six updates documenting their green initiatives. The EPA has analyzed the submitted information and generated an environmental footprint for the organization. Due to their progressive green efforts, the organization has managed to reduce its carbon footprint by 52,602 MTCO₂e* and saved an estimated \$4.4 million in operating expenses.

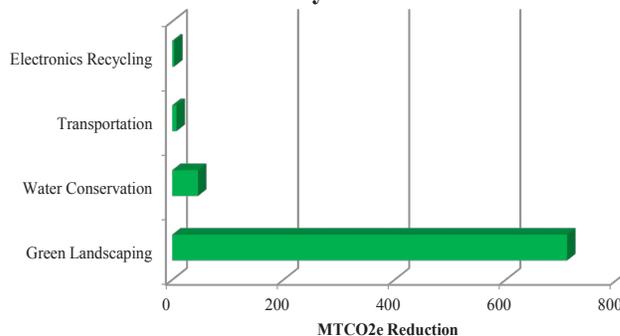
*Metric Ton Carbon Dioxide Equivalent

Environmental Metrics	Total Sector (MTCO ₂ e)	Cost Savings (est.)
Energy Conservation	17,057.7	\$3,753,132
Alternative Energy	4,686.8	(\$1,320)
Water Conservation	46.2	\$53,596
Solid Waste	7,590.1	\$100,424
Green Procurement	22,500.0	\$500,000
Green Landscaping	710.5	\$7,567
Electronics Re-use / Recycling	3.4	\$67
Transportation	7.7	\$4,210
Total (MTCO₂e)	52,602.5	\$4,417,676

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) and the EPA Pollution Prevention (P2) GHG Conversion Tool which convert 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 52,602 MTCO₂e

Greenhouse Gas Equivalencies

What does the reduction of 52,602 MTCO₂e represent ?

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

- Annual greenhouse gas emissions from 11,074 vehicles



- Carbon dioxide emissions from 5,919,039 gallons of gasoline



- Carbon dioxide emissions from 122,331 barrels of oil consumed



- Carbon dioxide emissions from the energy use of 4,799 homes for one year



- Carbon dioxide emissions from 2,191,771 propane tanks used for home barbeques



- Carbon dioxide emissions from gasoline carried by 696 tanker trucks



- Carbon dioxide emissions from burning 282 railcars' worth of coal (over 4 1/4 miles long)





Environmental Metrics	Mar 2008 MOU	March 2009 Update	March 2010 Update	March 2011 Update	March 2012 Update	March 2013 Update	March 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Energy Conservation/Energy Star									
Total Savings (MTCO2e)			2,849.3	3,877.1	3,906.8	3,833.3	2,591.2	17,057.7	\$3,753,132
Miscellaneous Energy Conservation			4,338,501 kwh	5,903,579 kwh	5,948,752 kwh	5,836,800 kwh	3,945,600 kwh	17,057.7	\$3,753,132
Web Based Energy Competition									
Motors and Transformers									
Lighting Project Fixtures (bulbs and ballast)									
High Temp Hot Water Pipe Replacement									
HVAC, Chiller & Electrical									
Bulb Replacement - CFLs									
Bulb Replacement - LEDs									
Gas Savings									
Fuel Oil Savings									
Alternative Energy									
Total Savings (MTCO2e)				1,351.1	1,833.0	1,095.1	407.6	4,686.8	(\$1,320)
On-Site Solar									
On-Site Wind									
On-Site Geothermal									
On-Site Combined Heat and Power									
Purchase of Green Energy/Green Power				2,057,280 kwh	2,791,071 kwh	1,667,520 kwh	620,560 kwh	4,686.8	(\$1,320)
Water Conservation/WaterSense									
Total Savings (MTCO2e)			9.9	10.5	9.8	9.2	6.8	46.2	\$53,596
Miscellaneous Water Conservation									
Low Flow/Hands Free Faucets			463,000 gal	489,185 gal	454,559 gal	428,616 gal	316,010 gal	4.7	\$5,408
Low Flow Toilets			314,000 gal	331,059 gal	307,626 gal	290,069 gal	213,862 gal	3.2	\$3,661
Low Flow Shower Heads									
Low Flow Urinals									
Waterless Urinals			3,800,000 gal	4,031,587 gal	3,746,215 gal	3,532,415 gal	2,604,376 gal	38.4	\$44,527
Solid Waste Recycling									
Total Savings (MTCO2e)			1,320.8	2,405.4	685.8	1,322.7	1,855.4	7,590.1	\$100,424
Mixed Recyclables (includes Wastewise)			236 tons	209 tons	171 tons	137.28 tons	353.28 tons	3,098.4	\$44,262
Pallets Waste Avoided/Wood Recycled									
Steel Recycled Offsite during Deconstruction									
Concrete / Asphalt Recycled during Deconstruction									
Drywall									
Recycled C&D Waste (construction waste)									
Cardboard									
Mixed Metal (construction/non-construction)				236 tons				936.9	\$9,440
Mixed Paper						164.1 tons	148.59 tons	1,100.7	\$12,508
Mixed Plastic (bottles,construction/non-construction,sharp containers)									
Blue Wrap									
Mixed Organics									
Food Donation (Waste diversion)							14,975 lbs	1.5	\$299
Biosolids and Food Waste Recycling / Composting						28.62 tons	28.33 tons	11.4	\$2,278



Environmental Metrics	Mar 2008 MOU	March 2009 Update	March 2010 Update	March 2011 Update	March 2012 Update	March 2013 Update	March 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Fluorescent Bulbs				1100 bulbs (700 lb)		967 lbs	230 lbs	0.1	\$38
Ceiling Tiles Recycled									
Carpet Recycled									
Waste Oil Recycled			55,000 gal	73,600 gal	17,250 gal	16,091 gal	15,765 gal	2,132.5	\$30,210
Magazines / Third Class Mail									
Newspapers									
Office Paper									
Textbooks									
Phonebooks									
Dimensional Lumber									
Fly Ash									
Aluminum Cans						18.2 tons	16.52 tons	308.7	\$1,389
Glass									
HDPE / LDPE / PET									
Appliances									
Non-Ferrous Metals									
Fats, Oils, Grease									
Copper Wire									
Tires									
Green Procurement									
Total Savings (MTCO2e)	22,500.0							22,500.0	\$500,000
Purchase of Materials with Recycled Content									
Purchase / Use of Compost Socks									
Purchase of EPEAT Products									
Use of Recycled Steel during Construction	12,500 tons							22,500.0	\$500,000
Use of Recycled Iron during Construction									
Use of Recycled Plastic during Construction									
Use of Recycled Aluminium during Construction									
Use of Recycled Concrete / Asphalt									
Use of Coal Combustion Products									
Green Landscaping									
Total Savings (MTCO2e)		45.9	45.9	115.0	115.0	115.0	273.8	710.5	\$7,567
Green Roofs		11,000 sf	11,000 sf	11,000 sf	11,000 sf	11,000 sf	11,000 sf	143.9	
Porous Pavement		65,000 sf	65,000 sf	65,000 sf	65,000 sf	65,000 sf	65,000 sf	11.7	
Grass		25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf	120.0	
Low / No Mow Area									
Green Space									
Re-use of Collected Stormwater									
On-Site Use of Compost / Mulch							63 tons	12.6	\$2,520
Moisture Sensing Sprinklers (65)							1,040,000 gal	2.3	\$2,614
Number / Acres of Trees				890 (4 acres)	890 (4 acres)	890 (4 acres)	890 (4 acres)	273.9	
Reflective Roof							96,000 sq ft	144.0	
Synthetic Turf				9,000 sf	9,000 sf	9,000 sf	6,000 sq ft	2.1	\$2,433
Native Plants (50)									



Environmental Metrics	Mar 2008 MOU	March 2009 Update	March 2010 Update	March 2011 Update	March 2012 Update	March 2013 Update	March 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Electronics/EPEAT									
<i>Total Savings (MTCO2e)</i>				2.0			1.4	3.4	\$67
Recycling of Electronics				15 TVs, 15 Printers (app. 1000 lb)			1801 lbs	2.2	\$56
Re-Use/Donation of Used Computers				25 (app. 500 lb)				0.6	\$10
Toner/Ink Recycling and Use of Recycled Ink				15 cartridges (app. 60 lb)				0.6	\$1
Battery Recycling				200					
Mass Transit									
Total Savings (MTCO2e)									
Vehicles Miles Traveled									
Transportation									
Total Savings (MTCO2e)				1.9	1.9	1.9	1.9	7.7	\$4,210
Hybrid Vehicles				1	1	1	1	7.7	\$4,210
Electric Vehicles									
Biodiesel Vehicles									
Clean Construction Vehicles									
LNG Vehicles									
Smartway Transporters									
Bike Racks				10	10	10	10		
LEED Projects									
Total Savings (MTCO2e)									
Silver - 30%									
Gold - 40%									
Platinum - 45%									
Misc. - Further Clarification									
Total Savings (MTCO2e)									
NOX (equipment only)									
NOX (includes vehicles)									
MTCO2e Savings									
Total (MTCO2e)	22,500.0	45.9	4,225.9	7,763.0	6,552.3	6,377.2	5,138.2	52,602.5	\$4,417,676
Energy Conservation	0.0	0.0	2,849.3	3,877.1	3,906.8	3,833.3	2,591.2	17,057.7	\$3,753,132
Alternative Energy	0.0	0.0	0.0	1,351.1	1,833.0	1,095.1	407.6	4,686.8	(\$1,320)
Water Conservation	0.0	0.0	9.9	10.5	9.8	9.2	6.8	46.2	\$53,596
Solid Waste Recycling	0.0	0.0	1,320.8	2,405.4	685.8	1,322.7	1,855.4	7,590.1	\$100,424
Green Procurement	22,500.0	0.0	0.0	0.0	0.0	0.0	0.0	22,500.0	\$500,000
Green Landscaping	0.0	45.9	45.9	115.0	115.0	115.0	273.8	710.5	\$7,567
Electronics	0.0	0.0	0.0	2.0	0.0	0.0	1.4	3.4	\$67
Transportation	0.0	0.0	0.0	1.9	1.9	1.9	1.9	7.7	\$4,210



2014

New York Mets - CitiField Additional Green MOU Accomplishments and Cost Savings

Enhancing Sustainability Efforts at Citi Field

The new efforts described below complement the existing programs geared to make Citi Field an environmentally friendly venue. The ballpark was built with recycled concrete and construction vehicles were fueled with ultra-low sulfur diesel.

Food Waste

The Mets, in partnership with Action Carting Environmental Services and ARAMARK, are composting food waste in all kitchens, suites, clubs and restaurants. Grass clippings from the field are also being composted.

In addition, new recycling receptacles are located throughout Citi Field, helping the Mets achieve an equal number of recycling containers to trash bins. Cans, plastic or glass bottles and cardboard will continue to be recycled. Beer cans are no longer being poured into cups to reduce waste.

Green Procurement

The Mets and ARAMARK are purchasing green products including compostable utensils and post-consumer recycled cups, plates, and napkins.

Recycling of Used Oil and Grease

Oil is being recycled in all concession stands, kitchens, clubs and restaurants. The waste oil is converted into biodiesel fuel and then reused in biodiesel-ready field equipment.

Green Cleaning Products

Alliance Building Services now use green cleaning materials in its efforts to keep Citi Field clean.

The Mets save more than four million gallons of water per year by using 414 hands-free faucets, 635 automated toilet flush-valves, and 270 waterless urinals.

An 11,000 square foot green roof atop the administration building in right field, white PVC roofs throughout the ballpark, high mast parking lot light fixtures, permeable pavers, and an underground well used to irrigate the playing field are other ways the Mets are working at Citi Field to protect the environment.