



New York Mets - CitiField
Environmental Assessment:
MOU Annual Report
August 28, 2015

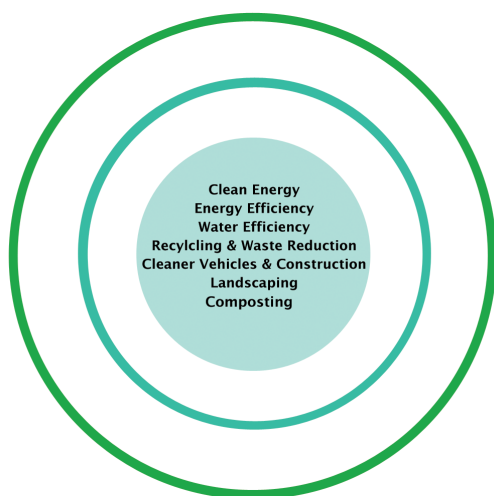


Environmental Protection Agency
Region 2

Michael Poetzsch, PE
212-637-4147

Accomplishments

Reductions of 69,841 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.

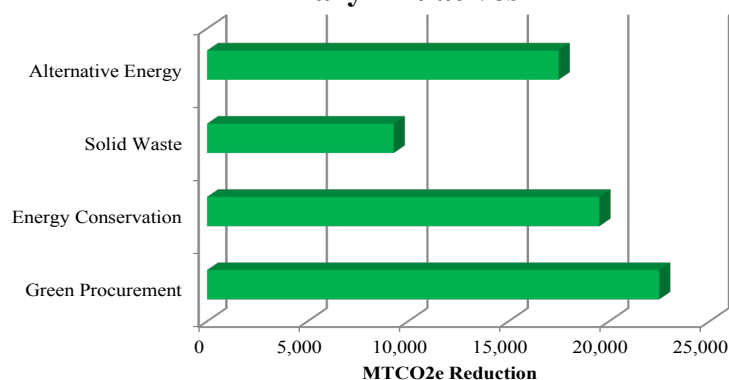
Reduction in Environmental Footprint

In the last seven years, the New York Mets and CitiField Stadium have provided seven 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 69,841 MTCO₂e* and saved an estimated \$5 million in operating expenses.

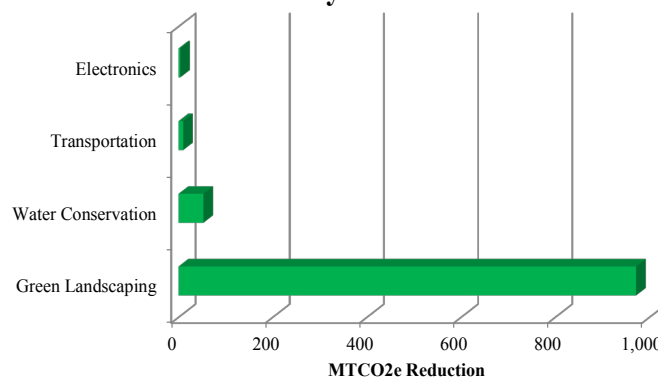
*Metric Ton Carbon Dioxide Equivalent

Environmental Metrics	Total Sector (MTCO ₂ e)	Cost Savings (est.)
Energy Conservation	19,522.5	\$4,295,453
Alternative Energy	17,493.3	(\$1,320)
Water Conservation	52.6	\$60,956
Solid Waste	9,287.9	\$124,305
Green Procurement	22,500.0	\$500,000
Green Landscaping	971.5	\$10,623
Electronics Re-use / Recycling	3.4	\$67
Transportation	9.7	\$5,263
Total (MTCO ₂ e)	69,840.9	\$4,991,744

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. This report utilized conversion factors developed from prior report(s).

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 69,841 MTCO₂e

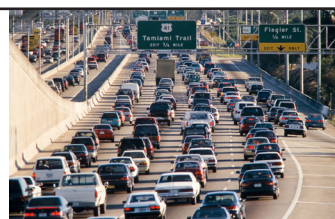


Greenhouse Gas Equivalencies

What does the reduction of 69,841 MTCO₂e represent ?

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

- Annual greenhouse gas emissions from 14,703 vehicles



- Carbon dioxide emissions from 7,858,782 gallons of gasoline



- Carbon dioxide emissions from 162,421 barrels of oil consumed



- Carbon dioxide emissions from the energy use of 6,372 homes for one year



- Carbon dioxide emissions from 2,910,042 propane tanks used for home barbeques



- Carbon dioxide emissions from gasoline carried by 925 tanker trucks



- Carbon dioxide emissions from burning 374 railcars' worth of coal (over 5 1/2 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	Dec 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Energy Conservation/Energy Star										
Total Savings (MTCO2e)			2,849	3,877	3,907	3,833	2,591	2,465	19,523	\$4,295,453
Miscellaneous Energy Conservation			4,338,501 kwh	5,903,579 kwh	5,948,752 kwh	5,836,800 kwh	3,945,600 kwh	3,734,400 kwh	19,510	\$4,292,753
Bulb Replacement - CFLs										
Bulb Replacement - LEDs								18,686 kwh	12	\$2,700
Gas Savings										
Fuel Oil Savings										
Alternative Energy										
Total Savings (MTCO2e)				1,351	1,833	1,095	408	12,806	17,493	(\$4,923)
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	19,500,000 kwh	17,493	(\$4,923)
Water Conservation/WaterSense										
Total Savings (MTCO2e)			10	11	10	9	7	6	53	\$60,956
Miscellaneous Water Conservation										
Low Flow/Hands Free Faucets			463,000 gal	489,185 gal	454,559 gal	428,616 gal	316,010 gal	295,238 gal	5	\$6,150
Low Flow Toilets			314,000 gal	331,059 gal	307,626 gal	290,069 gal	213,862 gal	199,805 gal	4	\$4,164
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	2,433,188 gal	44	\$50,643
Solid Waste Recycling										
Total Savings (MTCO2e)			1,328	2,508	691	1,341	1,878	1,542	9,288	\$124,305
Mixed Recyclables (includes Wastewise)			236 tons	209 tons	171 tons	137.28 tons	353.28 tons	346.79 tons	4,080	\$58,134
Mixed Metal (construction/ non-construction)				236 tons					937	\$9,440
Mixed Paper						164.1 tons	148.59 tons	119.76 tons	1,523	\$17,298
Blue Wrap										
Mixed Organics										
Food Donation (Waste diversion)							14,975 lbs	9,480 lbs	2	\$489
Biosolids and Food Waste Recycling / Composting						28.62 tons	28.33 tons	64.52 tons	24	\$4,859

Environmental Metrics	Mar 2008 MOU	March 2009 Update	March 2010 Update	March 2011 Update	March 2012 Update	March 2013 Update	March 2014 Update	Dec 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Fluorescent Bulbs				1100 bulbs (700 lb)		967 lbs	230 lbs		0	\$38
Ceiling Tiles Recycled										
Carpet Recycled										
Waste Oil Recycled			55,000 gal	73,600 gal	17,250 gal	16,091 gal	15,765 gal	10,684 gal	2,261	\$32,026
Magazines / Third Class Mail										
Newspapers/Office paper										
Aluminum Cans						18.2 tons	16.52 tons	15.80 tons	460	\$2,021
Glass										
Green Procurement										
Total Savings (MTCO2e)	22,500								22,500	\$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	\$500,000
Green Landscaping										
Total Savings (MTCO2e)		46	46	115	115	115	274	261	971	\$10,623
Green Roofs		11,000 sf	11,000 sf	11,000 sf	11,000 sf	11,000 sf	11,000 sf	11,000 sf	168	
Porous Pavement		65,000 sf	65,000 sf	65,000 sf	65,000 sf	65,000 sf	65,000 sf	65,000 sf	14	
Grass		25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf	140	
Low / No Mow Area										
Green Space										
Re-use of Collected Storm-water										
On-Site Use of Compost / Mulch							63 tons		13	\$2,520
Moisture Sensing Sprinklers (65)							1,040,000 gal	1,040,000 gal	5	\$5,228
Number / Acres of Trees				890 (4 acres)	890 (4 acres)	890 (4 acres)	890 (4 acres)	890 (4 acres)	342	
Reflective Roof							96,000 sq ft	96,000 sq ft	288	
Synthetic Turf				9,000 sf	9,000 sf	9,000 sf	6,000 sq ft	6,000 sq ft	2	\$2,875
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	Dec 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Electronics/EPEAT										
Total Savings (MTCO2e)				2			1		3	\$67
Recycling of Electronics				15 TVs, 15 Printers (app. 1000 lb)			1801 lbs		2	\$56
Re-Use/Donation of Used Computers				25 (app. 500 lb)					1	\$10
Toner/Ink Recycling and Use of Recycled Ink				15 cartridges (app. 60 lb)					1	\$1
Battery Recycling				200						
Transportation										
Total Savings (MTCO2e)				2	2	2	2	2	10	\$5,263
Hybrid Vehicles				1	1	1	1	1	10	\$5,263
Electric Vehicles										
Biodiesel Vehicles										
Clean Construction Vehicles										
LNG Vehicles										
Smartway Transporters										
Bike Racks				10	10	10	10	10		
MTCO2e Savings										
Total (MTCO2e)	22,500	46	4,233	7,866	6,557	6,395	5,161	17,082	69,841	\$4,991,744
Energy Conservation	0	0	2,849	3,877	3,907	3,833	2,591	2,465	19,523	\$4,295,453
Alternative Energy	0	0	0	1,351	1,833	1,095	408W	12,806	17,493	(\$4,923)
Water Conservation	0	0	10	11	10	9	7	6	53	\$60,956
Solid Waste Recycling	0	0	1,328	2,508	691	1,341	1,878	1,542	9,288	\$124,305
Green Procurement	22,500	0	0	0	0	0	0	0	22,500	\$500,000
Green Landscaping	0	46	46	115	115	115	274	261	971	\$10,623
Electronics	0	0	0	2	0	0	1	0	3	\$67
Transportation	0	0	0	2	2	2	2	2	10	\$5,263



2015

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.