



# MPP's Green Initiative Makes Cents



2017 Partners for  
Pollution Prevention  
Quarterly Meeting

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# Myth or Truth?

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- Environmental improvement and making money are mutually exclusive
- Productivity decreases because of environmental initiatives
- Hourly employees will resist any change even environmentally friendly ones

# History of MPP

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- MPP began as the North American die caster of the Metts Corporation of Japan and began production in 1989
- Metts has satellites in the Philippines, Portugal and Brazil and MPP is the North American die caster for Metts
- Historic Madison was chosen as the home because of its proximity to our customers
- MPP employs over 600 associates
- MPP casts, trims, machines and assembles high quality automotive parts

# History of MPP

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- MPP was registered to ISO 9001 on June 30, 1999
- MPP's environmental management commitment began in 2000 and we achieved ISO 14001 certification on December 15, 2000
- We implemented the system in 7 months by integrating the EMS with the QMS

# History of MPP

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- MPP did NOT have a recycling system during our registration audit
- Recycling came about during a management review in 2001
  - MPP was going to begin importing parts from our Philippine sister company, LMC
- The recycling program began in 2001 with a total recyclables of 24 tons (< \$2,000)
- Compare this to 2016 where we recycled 697 tons

# History of MPP

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- The beginning of recycling was simplistic. We began with cardboard, clear plastic, aluminum cans and paper
- We toured several local facilities and noted that all of them had a full time recycle person
- We decided to absorb all of the recycle work into our processes and this created profit (over \$45,000 in 2016)
- We also wanted buy in from our associates so we decided to return a portion of the money to them and charity

# History of MPP

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- As time went by we captured more and more waste streams
- We began looking into ways to keep from sending garbage to the landfill in 2013 and came across beneficial reuse and waste to energy (incineration)
- Here's how the program has looked from inception:

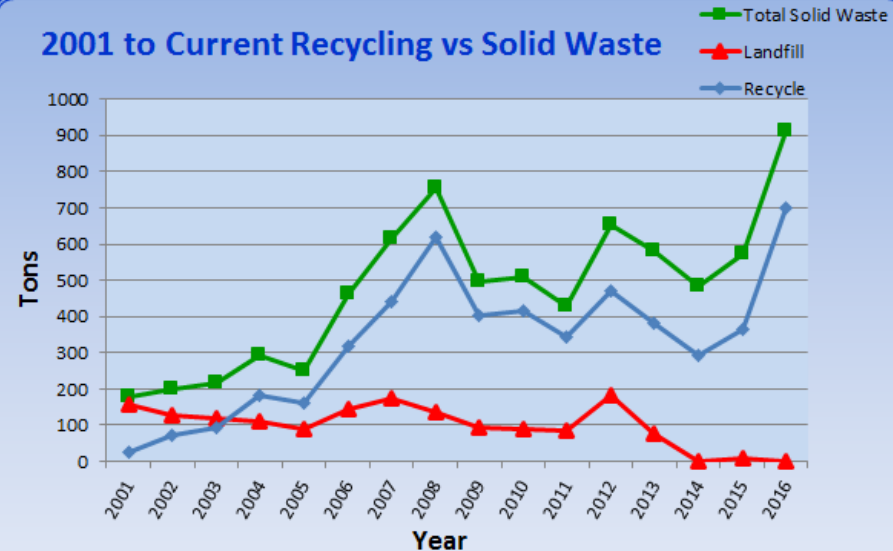
# History of MPP



**Solid Waste 2001 to Present**

Year	Recycled	Landfill	Beneficial Reuse	Incineration	Total Waste	Milestones
2001	23.96	156.00	-	-	179.96	First year recycling began in May
2002	73.79	125.74	-	-	199.53	
2003	95.13	120.22	-	-	215.35	
2004	182.98	111.68	-	-	294.66	Recycled more than we sent to the landfill
2005	162.50	88.50	-	-	251.00	
2006	319.08	143.21	-	-	462.29	
2007	440.47	174.51	-	-	614.98	
2008	618.40	136.19	-	-	754.59	Most total waste ever
2009	403.52	93.45	-	-	496.97	
2010	417.17	91.20	-	-	508.37	
2011	342.34	86.55	-	-	428.89	Tsunami in Japan
2012	469.36	181.99	-	-	651.35	
2013	380.28	77.61	-	121.21	579.10	First year incineration beginning in June
2014	292.69	0.00	15.18	173.64	481.51	First year "0" landfill and first year beneficial reuse
2015	366.74	7.72	50.47	146.54	571.47	7.72 tons went to landfill
2016	697.50	0.00	64.39	175.58	937.47	"0" landfill
<b>Total</b>	<b>5285.91</b>	<b>1594.57</b>	<b>65.65</b>	<b>441.39</b>	<b>6690.02</b>	

**2001 to Current Recycling vs Solid Waste**





# Management commitment



**Our Vision:**

**MPP will be a Company that our Customers Prefer**

**(Our Business Plan Pillars)**

<b>(Our Direction, Our Core Values)</b>	<b>Associate Development</b>	<b>Outstanding Quality</b>	<b>Strong New Model Maturation</b>	<b>Pursue New Technology</b>	<b>Reduce Environmental Impact</b>
	Values people and teamwork. Safety is #1	MPP and it's products are trusted	Smooth New Model Startups.	MPP the Global Std. in METTS .	Exist in harmony with our neighbors
	Associates enjoy their work, best in Madison area.	Win Honda Q awards.	Benchmark in efficiency and cost competitiveness	Self Reliant Engineering and process development	Encourages recycling and shares benefit with associates
	Provides opportunities to learn and advance to next level	All change points are controlled.	Win Honda D awards.	Processes have lasting cost competitiveness and flexibility	Reduce CO2 every year. Insure Clean Water.
	Outstanding communication thru all levels.	Good working environment improving continuously	Indispensable partner to Honda with the competitive advantage in NA	Mfg. leader in the community.	Cleanest plant in all HF and METTS corporation.
	Competitive compensation and incentives for achievement	MPP best scrap rates and quality cost as % of value add	Maintain and expand core business and explore new opportunities	Supports schools and creates opportunities for future employment	0 Landfill Waste.

**A customer required key suppliers to reduce GhG emissions by 10% by 2020. MPP met the challenge 6 years ahead of the mandate because we were already working on reductions.**

# Electricity Reductions



## Energy Efficient Lighting



All mercury vapor lighting was being replaced with T-5 lighting for a savings of over \$4,000-\$12,000 per room per year. The T-5 lighting is also much brighter, but not as bright as LED lights which is what is currently being installed.



Old mercury vapor lighting

Efficient Fluorescent Lighting

# Electricity Reductions



**Variable Frequency Drive**

**Trim press is only used 11 seconds per minute but pulls 9 amps at idle. The VFD pulls the amperage down to “0” while idle.**

**Annually each unit saves:  
\$3,252.51**

**38,720 Kwh**

**26.7 Metric tons of CO<sup>2</sup>.**

**MPP has 15 VFD units of  
29 total trim presses.**

# Natural Gas Reductions



## Energy Efficient Furnaces

The furnace on the left is the open top furnace that is very inefficient. You will notice flames coming the top and side. It's not well insulated.

The closed top furnace on the right is twice as expensive, but has the ability to melt 10,000,000 pounds of aluminum per year using 95,000 therms of natural gas compared to 190,000 therms with the old style.

MPP has 11 of 15 melt furnaces that are high efficiency.

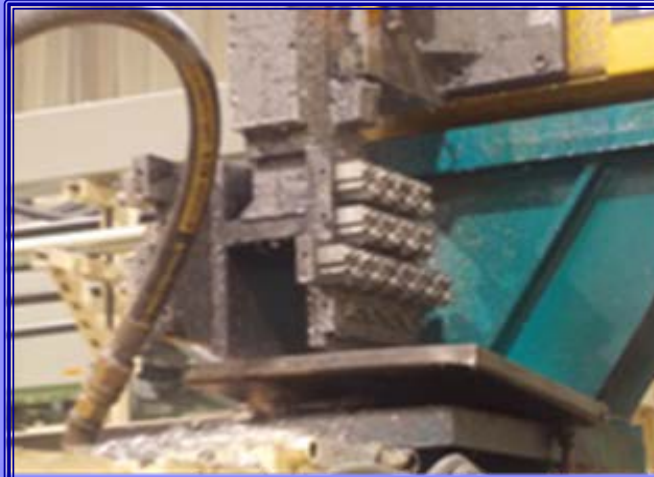




# Wastewater - Sprayer Heads



**Old Full Stream Sprayer**



**Atomized Mist Sprayer**

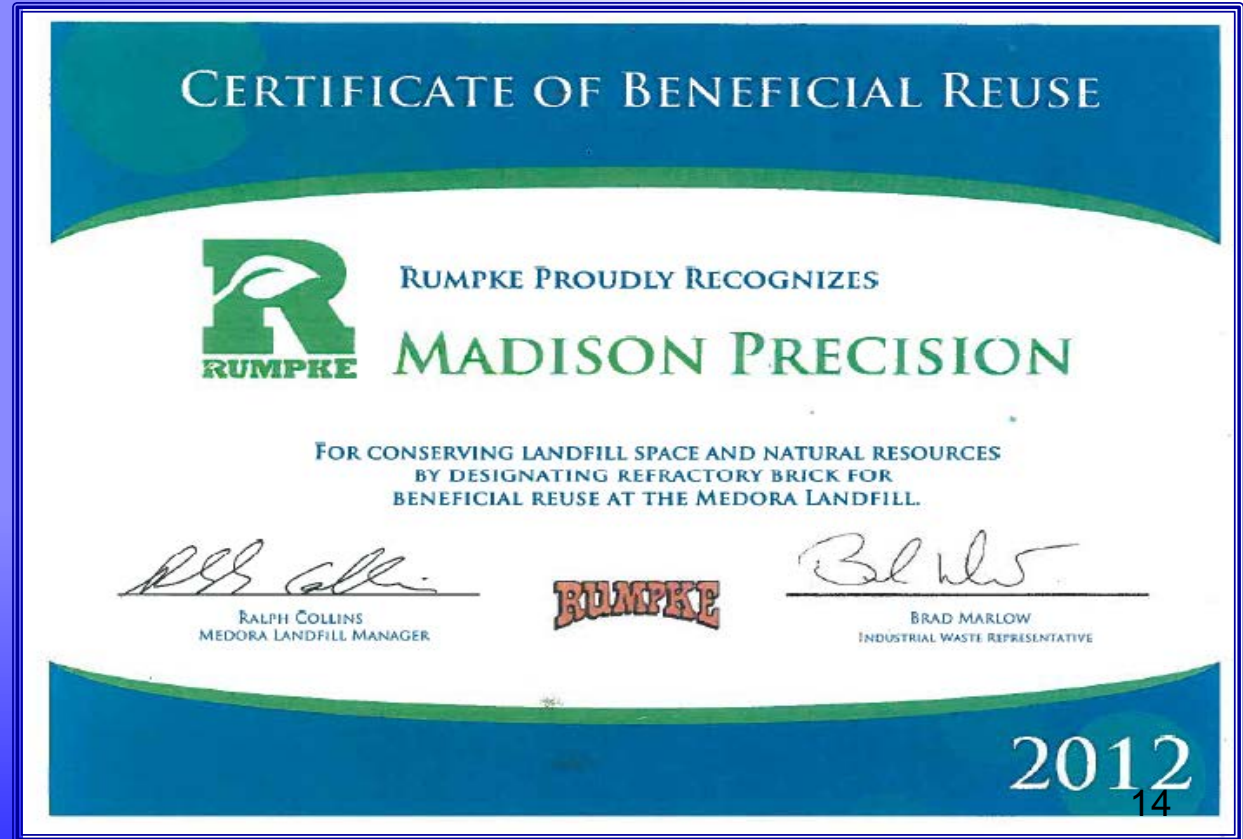
**We call the spray head on the right Medusa! The mist sprayer on the right uses a mist compared to full stream copper tubes.**

**In 2009, our melt ratio of aluminum to water was 11.42. In 2016, it was 12.52. It doesn't sound like much, but if we hadn't installed the sprayers, we would have used an additional 139,472 gallons of water in 2016.**

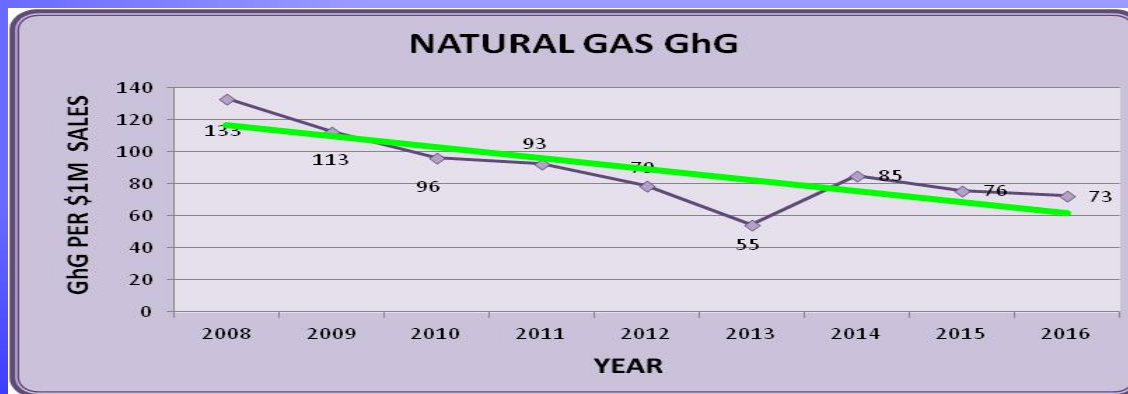
# Solid Waste/Recycling



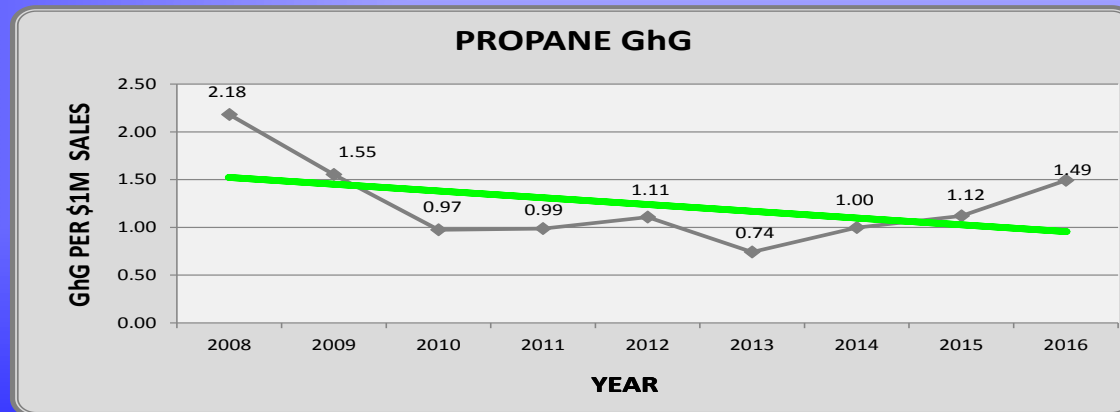
Refractory waste is used for road surfacing and garbage is used as waste to energy (incineration).



# Utilities GhG

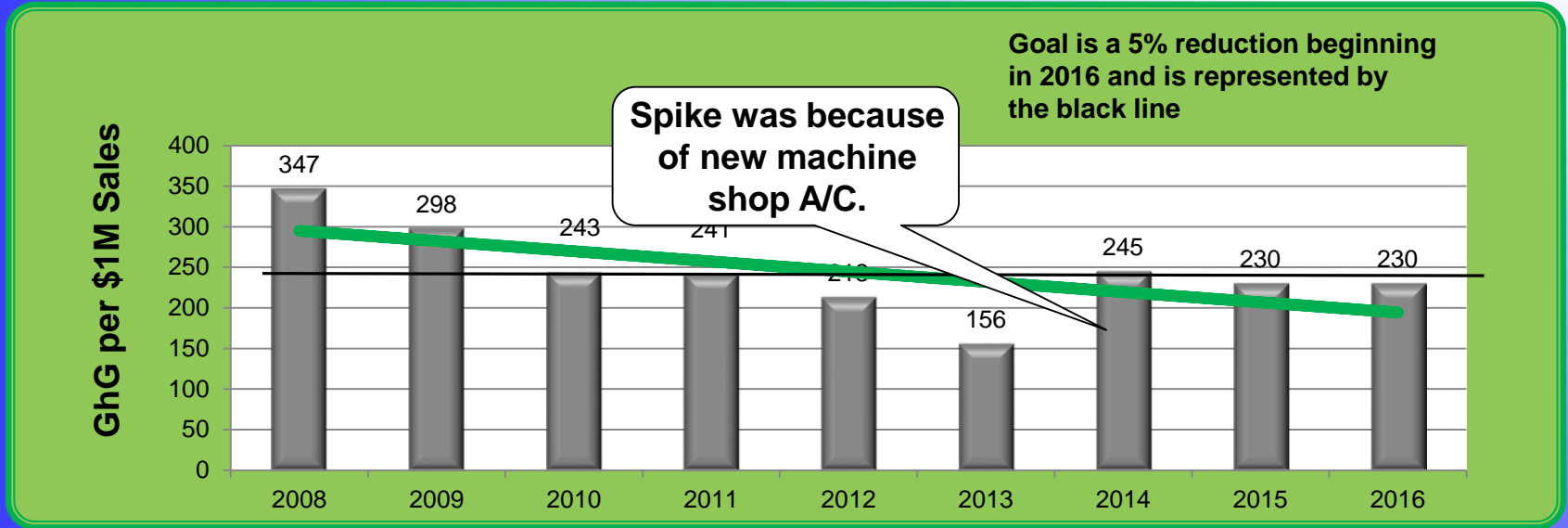


# Recycling and Propane GhG





# Normalized data



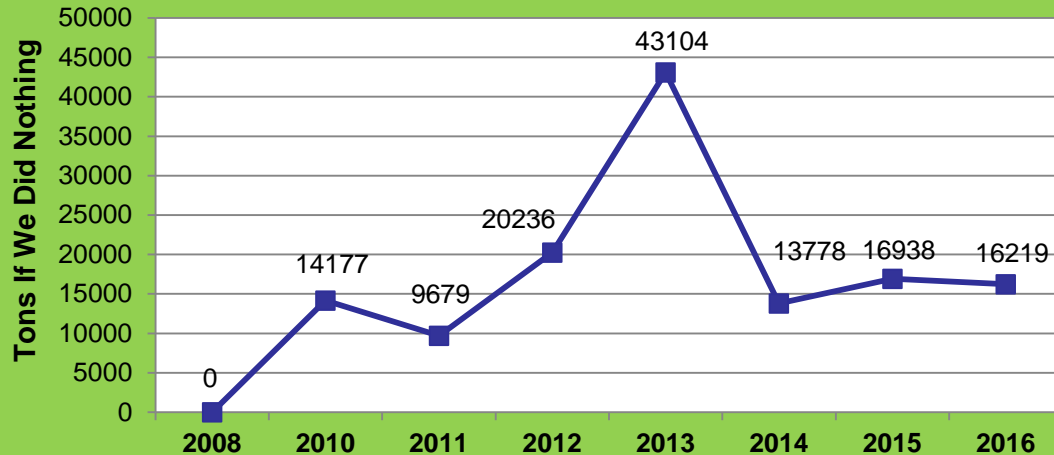
I will begin a process of looking for compressed air leaks and other wastes of electricity. This is a new theme for me in 2017.

# Nariyuki

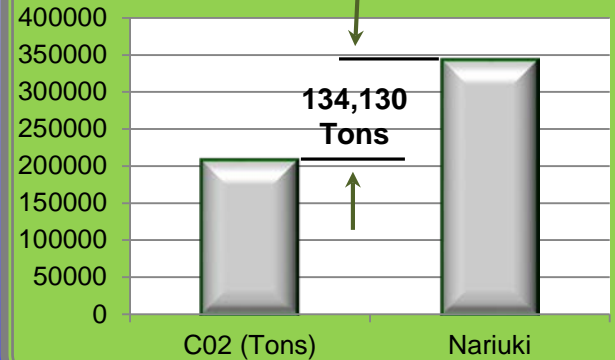


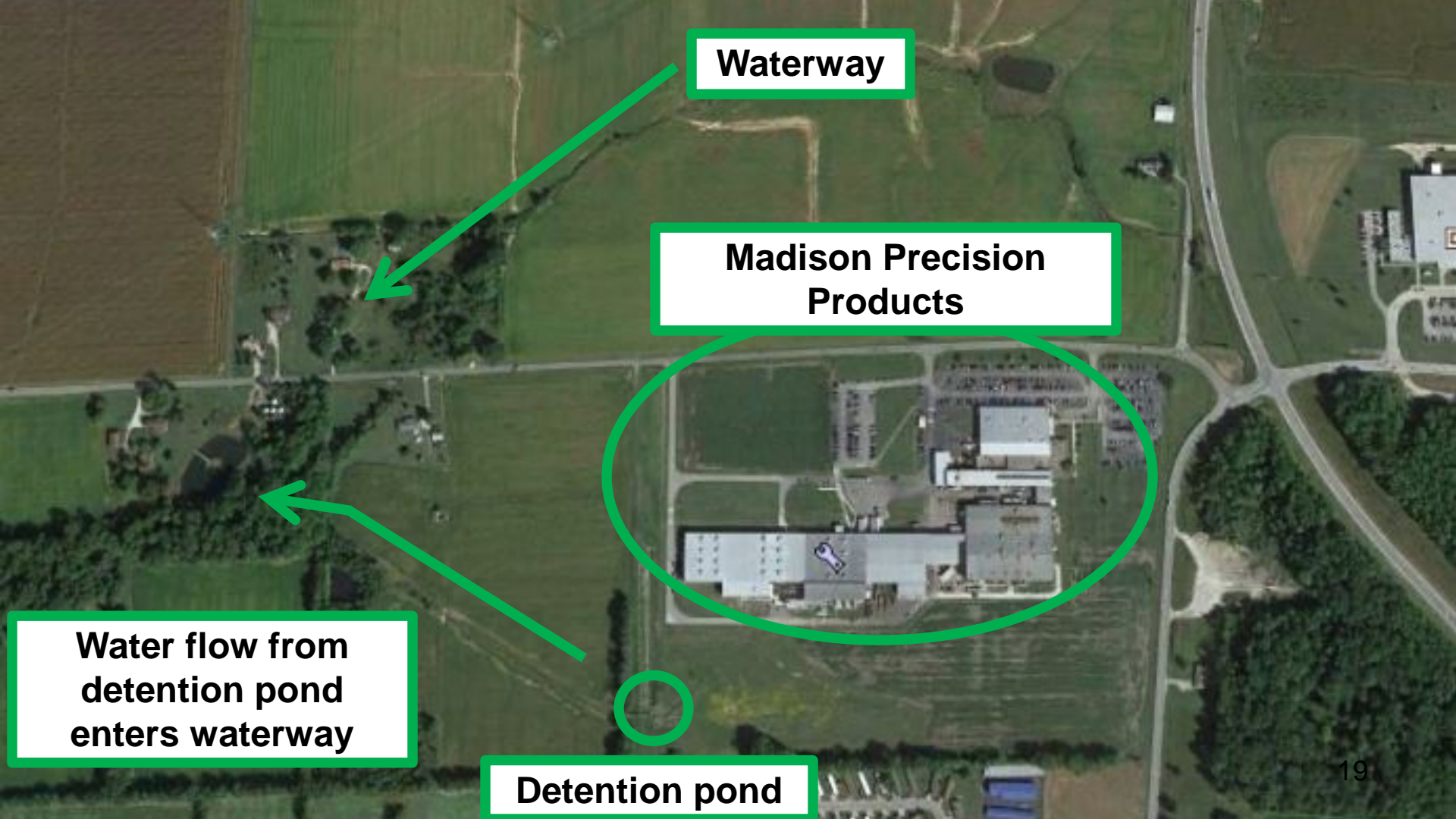
**Nariyuki** – progress. Paraphrased: If we operated today at the baseline level, this is what we would have expended

**Nariyuki (2008 Level)**



**Actual 8 Years CO2 Vs. Nariyuki**





**Waterway**

**Madison Precision  
Products**

**Water flow from  
detention pond  
enters waterway**

**Detention pond**

Madison Precision Products

Clifty Creek

North Madison

IKEC

Madison

White line is path of  
waterway from MPP  
to the Ohio River



**Waterway by  
intersection of  
Dawson-Smith and  
Shun Pike**

**Much  
vegetation  
thrives from  
the stream**

**Cattle drink  
from the  
stream**

**Dawson  
Smith**









**Water from MPP  
passes over Clifty  
Falls**



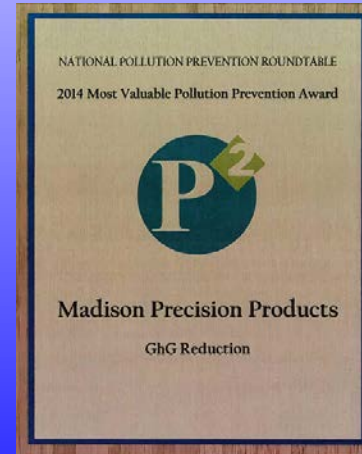


**Clifty Creek empties  
into Ohio River by  
IKEC**

**Ohio  
River**



# Awards and Recognition



# Future plans

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- Continue buying closed top furnaces
- Continue buying energy on demand (VFD) units
- Continue replacing mercury vapor lights with LED lights
- Look for ways to reduce water use
- Propane – July 2014 project (fork truck use). MS is looking towards using electric karts
- Refrigerants – monitor usage (determine if objectives and targets need set)

# The next great idea

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- Think global
- Sister or parent companies
- Customers
- Internet research
- Suppliers and contractors
- Government/environmental websites
- Conferences

# Myth or Truth



- Environmental improvement and making money are mutually exclusive
- Productivity decreases because of environmental initiatives
- Hourly employees will resist any change even environmentally friendly ones

# Useful websites

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- <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>
- <http://www.eia.gov/tools/faqs/faq.cfm?id=45&t=8>
- <http://www.gdrc.org/uem/co2-cal/co2-calculator.html>
- <http://www.stopwaste.us/partnership/calculator/>
- [http://www.greenprogress.com/carbon\\_footprint\\_calculator.php](http://www.greenprogress.com/carbon_footprint_calculator.php)
- <http://www.covanta.com/>

# Questions??