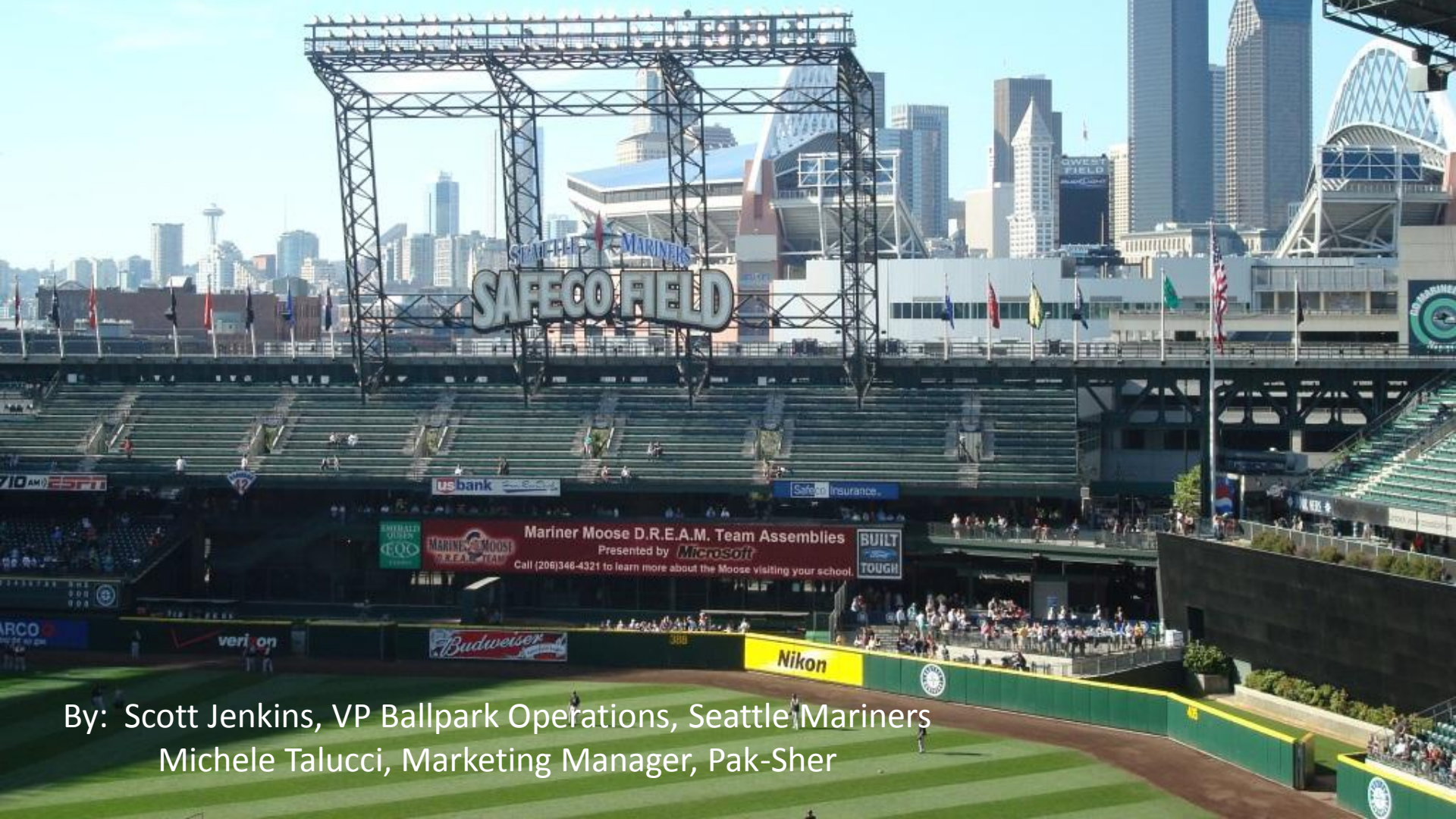


Seattle Mariners and Strategic Partnerships: A Success Story in Waste Diversion and Conservation



By: Scott Jenkins, VP Ballpark Operations, Seattle Mariners
Michele Talucci, Marketing Manager, Pak-Sher



The Seattle Mariners are taking steps to reduce our environmental impact

- ♻️ Recycling 80% of our waste
- ♻️ Reducing natural gas use by 60%
- ♻️ Reducing electric use by 30%
- ♻️ Reducing water use 15%
- ♻️ Restroom paper products are made of 100% recycled fiber
- ♻️ Office paper is made of 100% post consumer recycled fiber

Please join us in our efforts to Reduce, Reuse and Recycle.

Green Is Good Business

- **Cost Savings**
- **Brand Value**
- **Corporate Social Responsibility**
- **Trajectory of Green**
- **Can we afford not to go green**



2010 wettest, among hottest ever, report says

BY JUSTIN GILLIS
The New York Times

New government figures for the global climate show that 2010 was the wettest year on record, and it tied 2005 as the hottest year since record-keeping began in 1880.

The new figures confirm that 2010 will go down as one of the more remarkable years in the annals of climatology. It featured prodigious snowstorms that broke seasonal records in the United States and Europe; a record-shattering summer heat wave that scorched Russia; strong floods that drove people from their homes in places such as Pakistan, Australia, California and Tennessee; and a die-off of coral reefs; and a continuation in the global trend of a warming climate.

Two agencies, NASA and the National Oceanic and Atmospheric Administration (NOAA), reported Wednesday that the global average surface temperature for 2010 had tied the record set in 2005. The analyses differ slightly: In the NOAA version, the 2010 temperature was 1.12 degrees Fahrenheit above the average for the 20th century, which is 57 degrees.

It was the 34th year running that global temperatures have been above the 20th-century average; the last below-average year was 1976. The new figures show that nine of the 10 warmest years on record have occurred since 2001.

Earth has been warming in fits and starts for decades, and most climatologists say that is because humans are releasing heat-trapping gases such as carbon dioxide into the atmosphere. The carbon-dioxide level has increased about 40 percent since the Industrial Revolution.

"The climate is continuing to show the influence of greenhouse gases," said David Easterling, a scientist at NOAA's National Climatic Data Center in Asheville, N.C.

Aside from NASA and NOAA, another agency, a research center in Britain, compiles a global temperature record. That unit has yet to report its figures for 2010. (The data sets are compiled by slightly different methods, and in the British figures, the previous warmest year on record was 1998.)

The United States was wetter and hotter last year than the average values for the 20th century, but overall the year was not as exceptional in this country as for the world as a whole. In the contiguous U.S., for instance, the NOAA figures showed that it was the fourth-hottest summer on record and the 23rd hottest year.

Still, some remarkable events occurred at a regional scale, including snowstorms in February 2010 that shattered seasonal records in cities like Washington, Baltimore and Philadelphia. In the summer, a heat wave broke records in the South and along much of the East Coast.

Public Awareness Is Rising

- Hottest year on record
- Wettest year on record
- Record snow falls in US and Europe
- Record heat scorched Russia
- Severe die-off of coral reefs
- Continuing trend of warming climate



NATIONAL GEOGRAPHIC
NGM.COM

JANUARY 2011

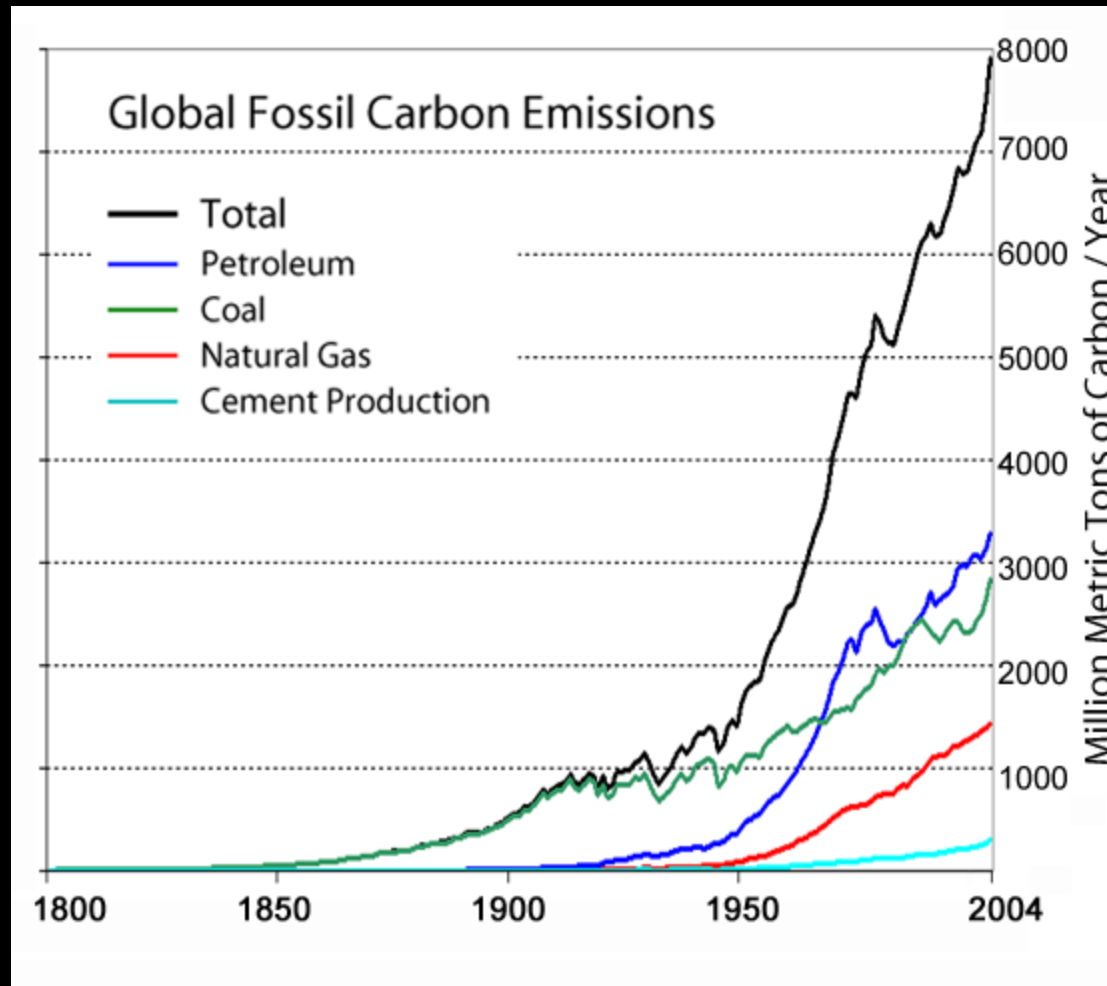
NATIONAL GEOGRAPHIC

POPULATION **7** BILLION

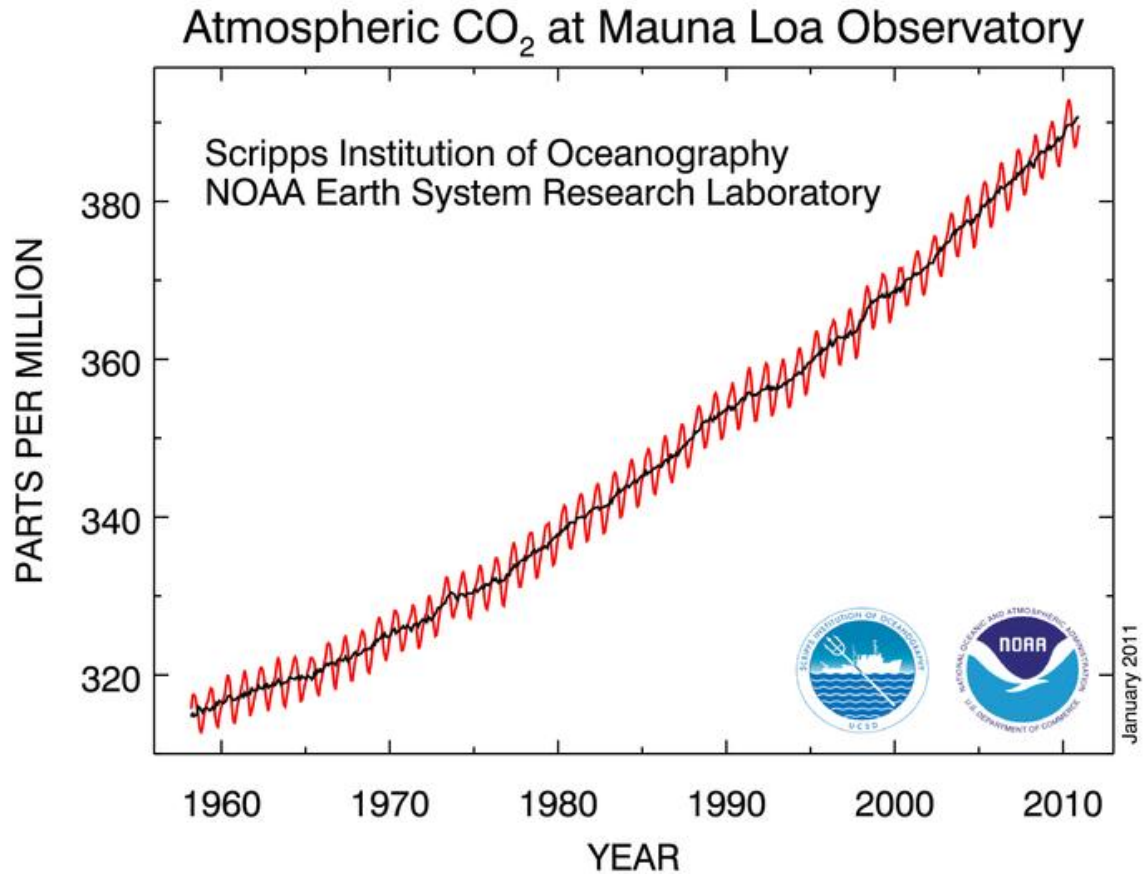
How your world will change

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America's Lost City 126

Huge Growth in Fossil Fuel Use



Alarming Rise in CO₂ Levels



<http://www.extremeicesurvey.org>



"Ice asks no questions, presents no arguments, reads no newspapers, listens to no debates. It is not burdened by ideology and carries no political baggage as it changes from solid to liquid. It just melts."

University of Michigan Geophysicist Henry Pollack

Bottom Line Opportunities

- Brand Value
- Utility Savings
- Waste Removal Costs



Brand Value



Four Seasons Hotel, Maui

JOIN THE GREEN TEAM!

Energy Savings

	2006	2007	2008	2009	2010
Electric (KWh)	13,194,750	11,694,997	11,448,675	10,977,335	10,747,263
Natural Gas (Thems)	305,552	194,574	206,928	170,650	182,355
Water (CCF)	26,898	27,653	24,154	24,793	20,500
Sewer (CCF)	21,747	22,431	19,027	19,412	14,300

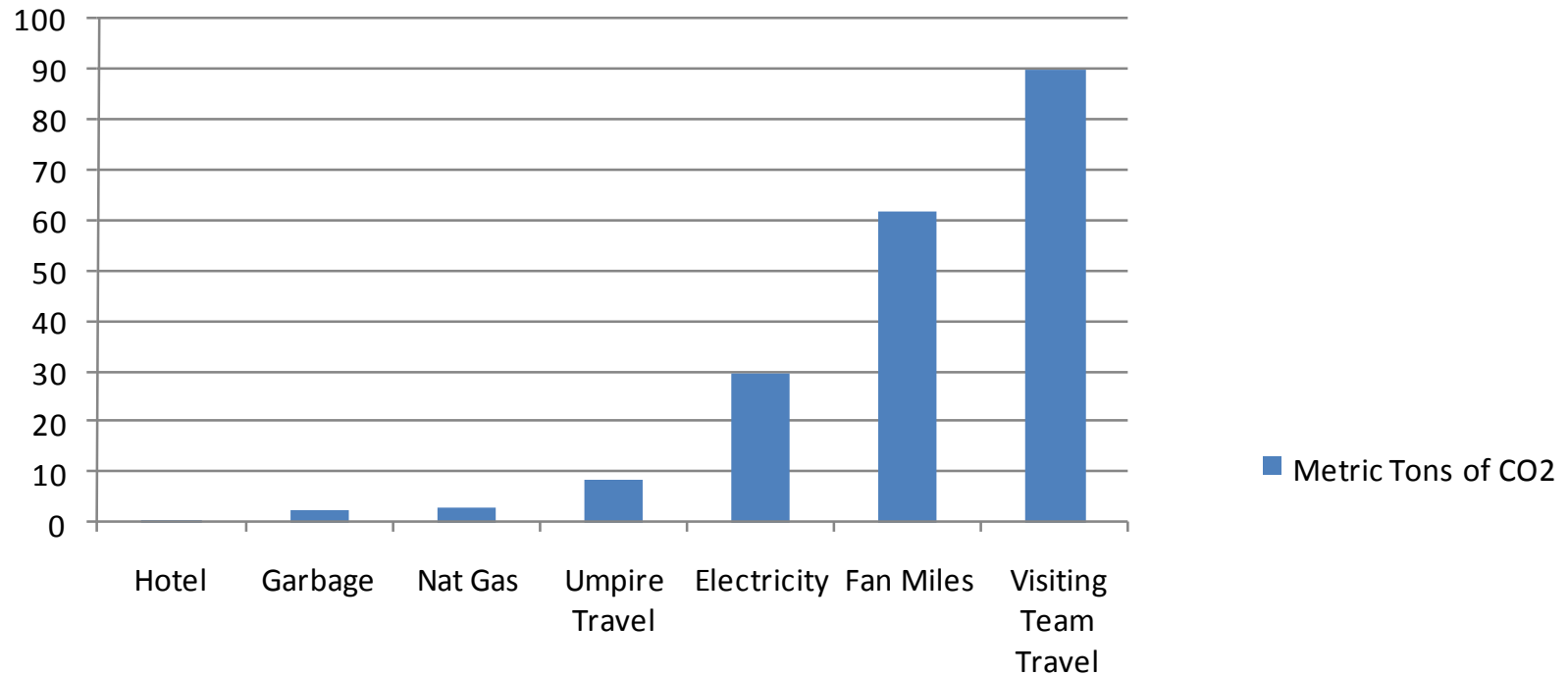
	Cost				
	2006	2007	2008	2009	2010
Electric (KWh)	\$ 755,389	\$ 562,694	\$ 598,198	\$ 513,440	\$ 655,583
Natural Gas (Thems)	\$ 349,135	\$ 248,474	\$ 231,080	\$ 211,580	\$ 153,316
Water (CCF)	\$ 94,572	\$ 90,735	\$ 80,767	\$ 104,395	\$ 95,794
Sewer (CCF)	\$ 143,492	\$ 166,265	\$ 148,220	\$ 169,724	\$ 128,414
TOTAL	\$ 1,342,588	\$ 1,068,168	\$ 1,058,265	\$ 999,139	\$ 1,033,107
\$ SAVED	\$ -	\$ 274,420	\$ 284,323	\$ 343,449	\$ 309,481

4 yr Savings \$ 1,211,672



Carbon Impact of a Game

2010 Earth Day Game Carbon Off-sets

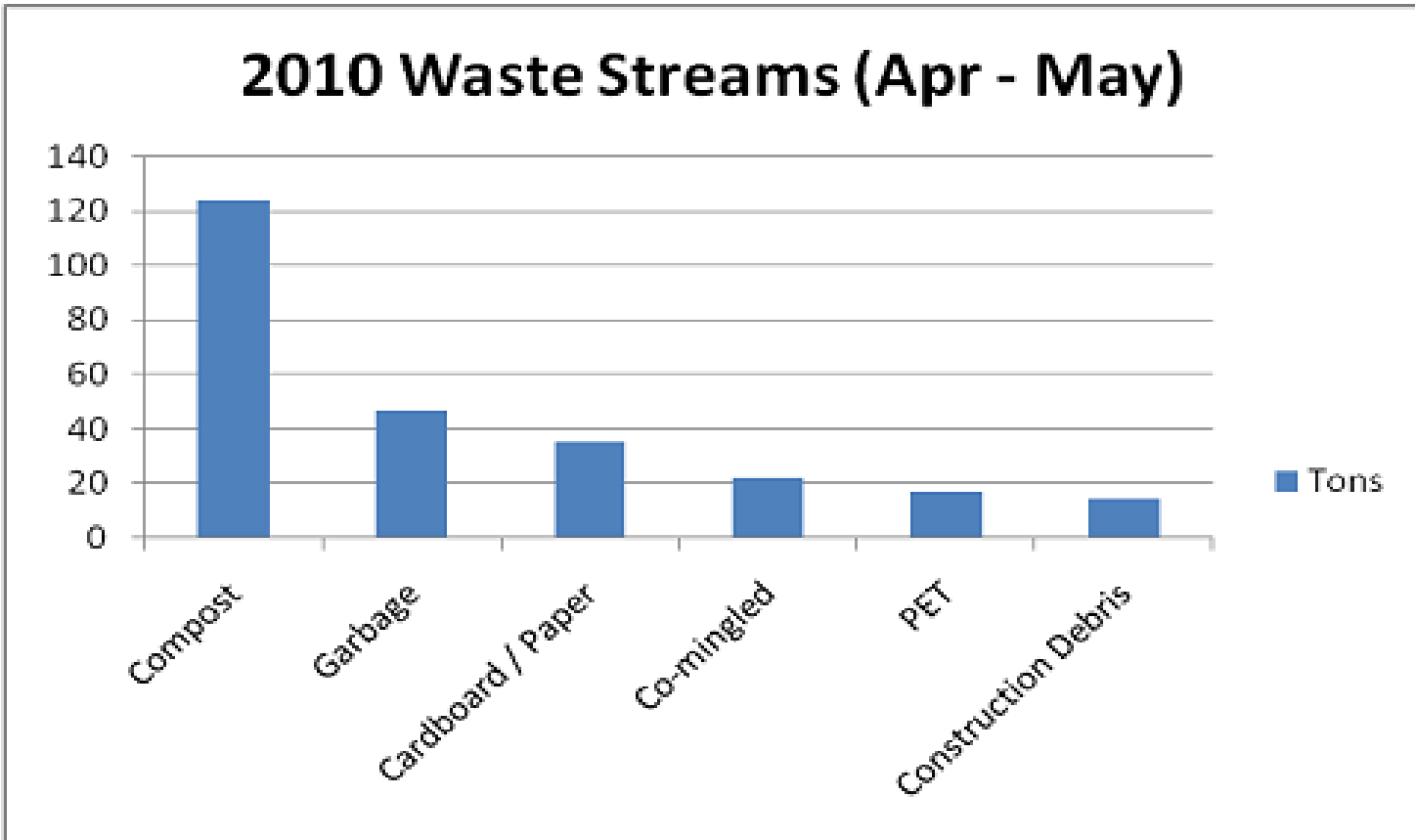


We've Switched To Compostable Service Ware



It's Not Garbage Anymore!

Recycling Rate = 81.9%



Garbage	46.92
Cardboard / Paper	35.33
Co-mingled (glass, plastic, metal containers)	22.09
PET (water, soda, beer bottles)	16.95
Construction Debris	14.43

Total Waste = 259.47 Tons

Recyclables = 212.55 Tons

Successful Collaboration





PLEASE STAY ALERT TO BATS AND BALLS LEAVING THE FIELD

This bag is 100% compostable. Please assist us in our efforts to maintain an environmentally friendly ballpark by placing serving ware and food items only in this bag.



Warning: To avoid suffocation, do not place over your head and keep out of reach of children.

Ideal Imprint Alert/Reminder:

- Min. line weight: 1/2 point.
- Min. dropout line weight: 1 point.

ABCDEFabcdef • Min. type size: 7 point.
ABCD abcd • Min. reverse type size: 9 point.

Reversed text should be Bold & Sans Serif only
 Sans Serif = ABCDEFG abcdefg
 Serif = ABCDEFG abcdefg

CEDAR GROVE® COMPOSTABLE

CEDAR GROVE® COMPOSTABLE

IT'S NOT GARBAGE ANYMORE • IT'S NOT GARBAGE ANYMORE • IT'S NOT GARBAGE ANYMORE • IT'S NOT GARBAGE ANYMORE



MICROBREW • SPECIALTY • IMPORT • MICROBREW • SPECIALTY • IMPORT • MICROBREW • SPECIALTY • IMPORT

GC20 Imprint Area = 3 1/2" X 8 7/8"

Imprint area begins approximately 1" from the bottom of the cup.



This Color Indicates Placement of White Ink!



Default to Recycling



Striving For Zero Waste




Food



Food Soiled Paper



Approved Compostable Packaging



SAFE Field, SAFE Seats, SAFE Shop





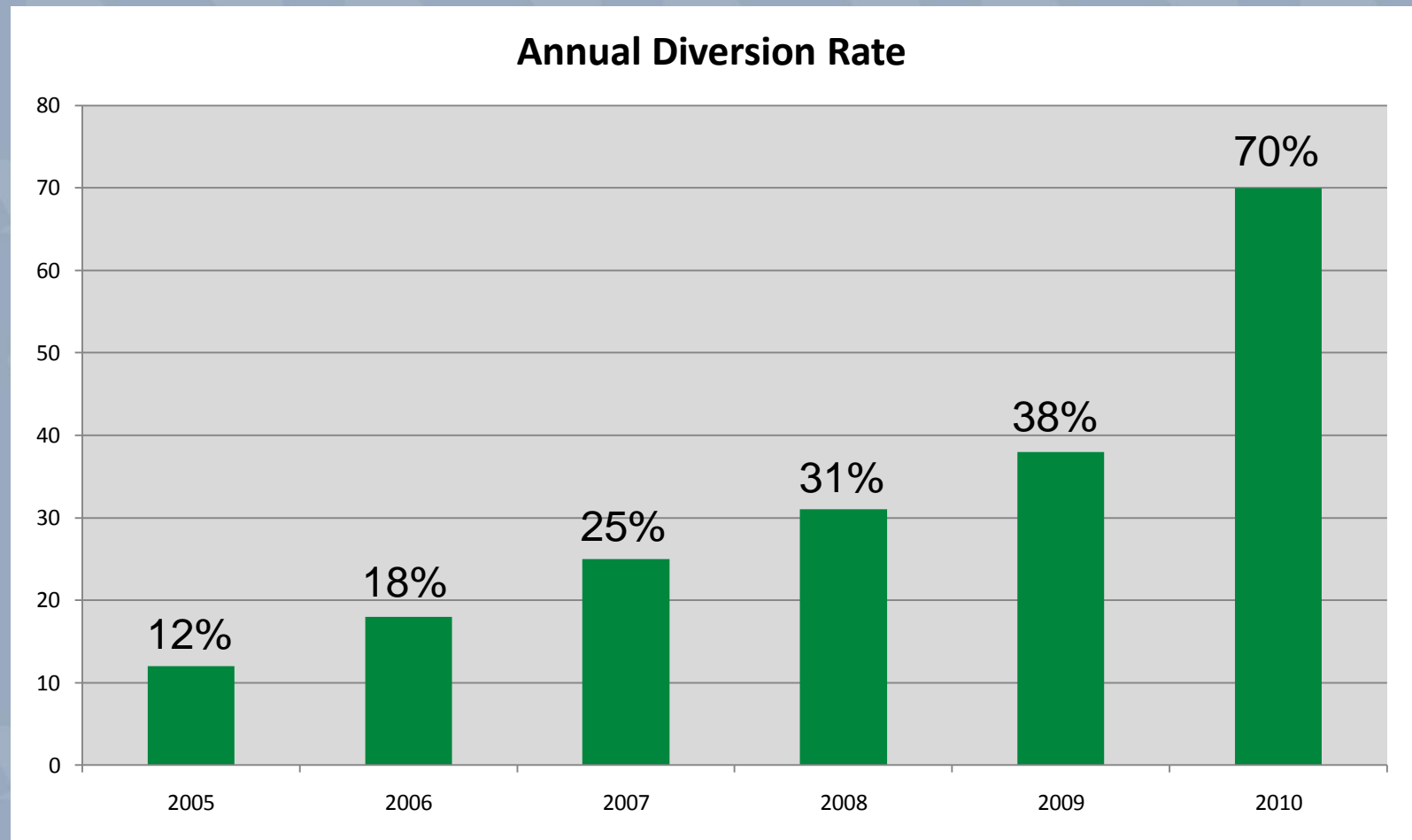


Plastic Bottles



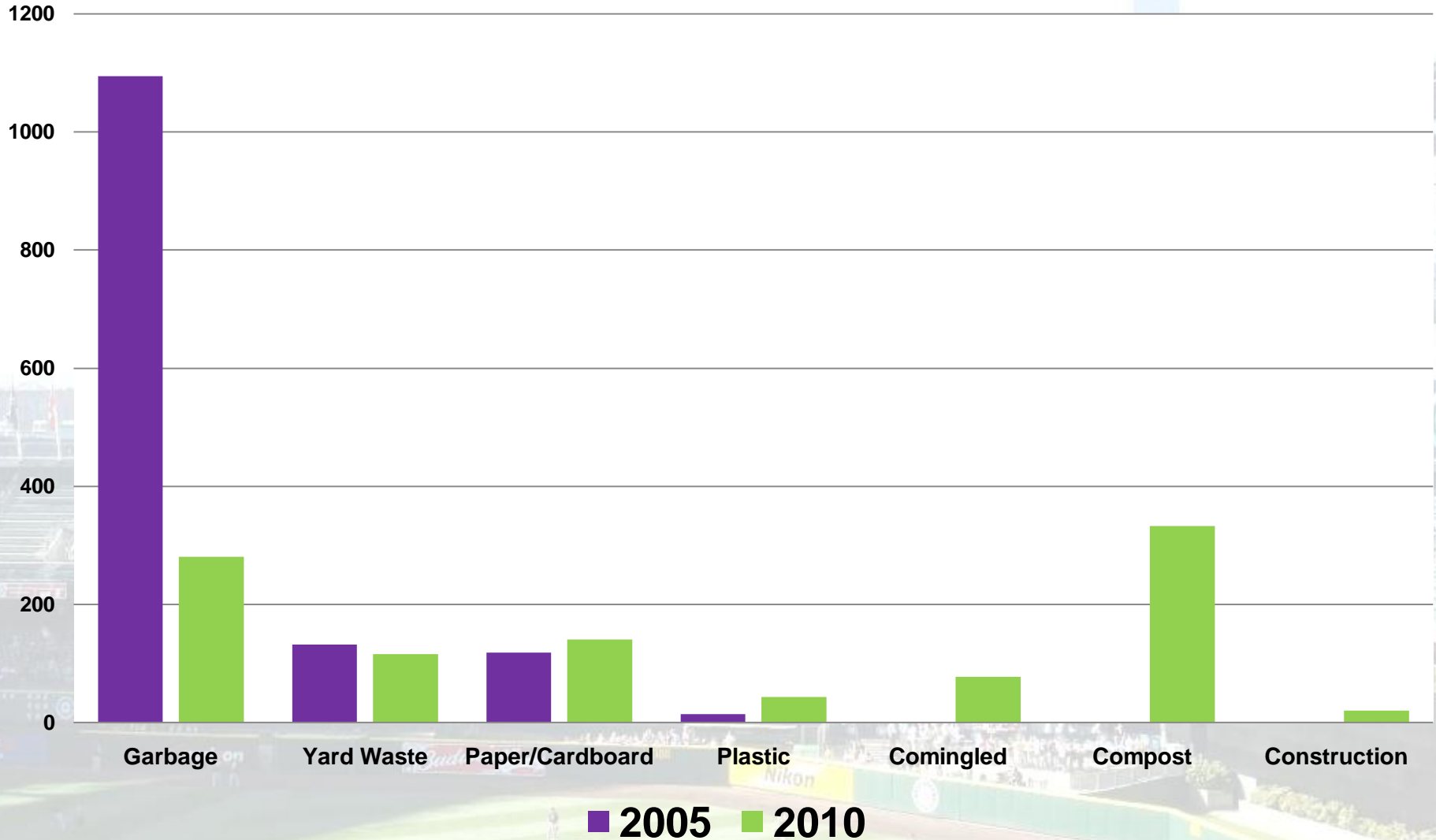


JOIN THE GREEN TEAM!



2010 Diversion Cost Savings = \$72,000

Recycling Streams (Tons)



Coaching and Quality Control

Green Team Checklist (Team #10)

Location	Container			Appropriate Bag?	Informed by Centerplate supervisor?	Everyone Briefed?	Clean Stream (0-10)	
	Compost	Recycle	Garbage				Pre Gates	Post Gates
330 GH	X	X	X	YES	YES	YES	0	0
332 SS	X	X	X	YES	YES	YES	0	0
337 I/G	X	X	X	YES	YES	YES	0	0
341 GGG/C	X	X	X	YES	YES	YES	0	0
346 RR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
349 PBBQ	X	X	X	YES	YES	YES	0	0
(P) 331 DD	X	X	X	YES	YES	YES	0	0
(P) 333 BS	X	X	X	YES	YES	YES	3	5
(P) 339 SSL	X	X	X	YES	YES	YES	0	0
(P) 341 DD	X	X	X	YES	YES	YES	0	0
(P) 341 BS	X	NO	NO	YES	YES	YES	0	0

Comments:

346 RR - Not open Pre-Game

333 BS - Mixed Compostable in garbage

341 BS - Needs blue and grey cans

Nightly Housekeeping Report

Stand #	Stand Name	COMINGLE OK	COMINGLE BAD	FOOD OK	FOOD BAD	GARBAGE OK	GARBAGE BAD
117	Ivars Seafood / Dixie bbq	3	2	4	1	2	1
126	Rolling Roof	2	1	4	0	2	0
132	The Natural	0	0	0	0	0	0
132	Auntie Anne	0	1	1	0	0	1
132	Tortilla Junction	2	0	2	1	2	0
132	Shiskaberrys	1	0	1	0	0	0
133	Thai Ginger	1	1	1	0	2	0
133	The Grounds Crew	0	1	1	0	0	0
135	CheeseSteak	3	2	2	2	1	1
141	High Cheese Pizza	1	2	3	0	1	1
148	Kid Valley	2	1	2	0	1	1
190	Rolling Roof	1	1	2	0	0	0
105	Rolling Roof	1	1	4	1	0	2
106	Kid Valley	0	2	0	3	1	1
110	Garlic Jims	2	0	1	0	0	0
212	Bases Loaded	1	1	1	0	1	0
214	The grounds crew	1	0	1	0	1	0
216	Bistro	1	0	1	0	1	0
219	Broiler	1	1	1	0	1	0
223	Rolling Roof	1	0	1	0	1	0
	bars and wine bar	3	0	2	0	5	1
233	Espresso	1	0	1	0	1	0
240	Carvery	1	1	2	0	2	0
244	Rolling Roof	1	0	1	0	1	0
247	beer express	1	0	0	0	1	0
249	Sound Seafood	1	1	1	1	1	1
	Summary Total	32	19	40	9	28	10
		Success Rate	62.7%	Success Rate	81.6%	Success Rate	73.7%



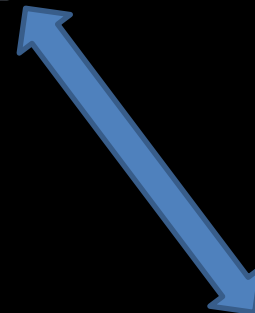
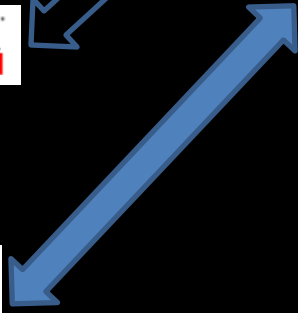
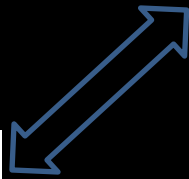
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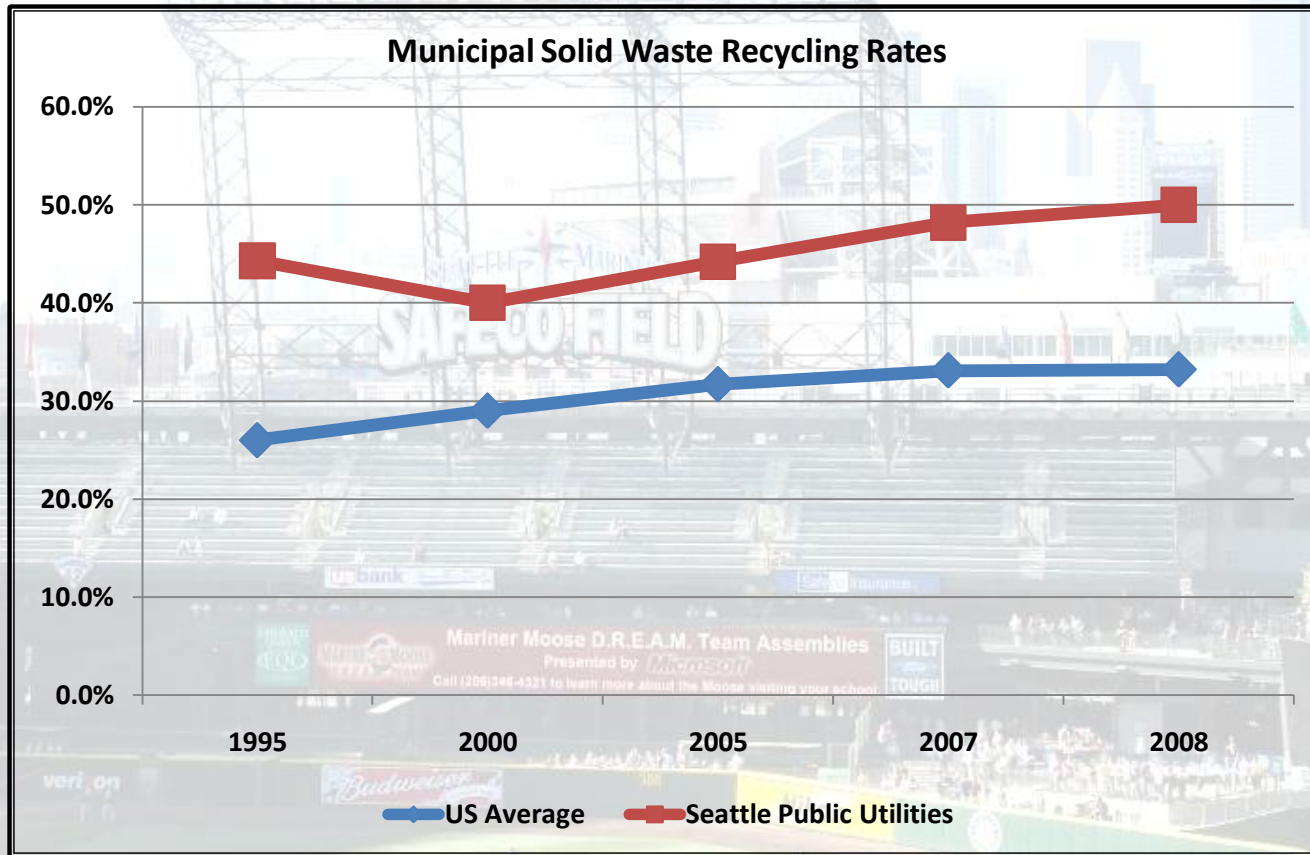
Please join us in our efforts to Reduce, Reuse and Recycle.



The Push to Composting: A True Partnership Effort



SEATTLE PUBLIC UTILITIES A culture of conservation





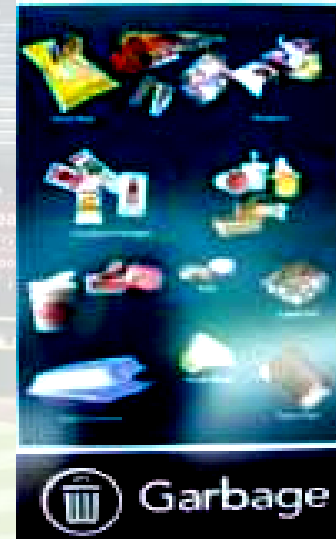
Seattle Public Utilities

- 2007: Zero Waste Study: Polystyrene #1 Target
- Effective 1/1/2009: Polystyrene food container ban
- Next step: Further attack trash in 18 mos
Effective 7/1/2010: All Single-Use food service ware and packaging must be compostable/recyclable
- Mandatory Residential Recycling/Composting
- Market interventions setting compostable collection cost 30% below garbage.



Seattle Public Utilities

- Focus on education, collaboration, support not punitive
- Stakeholder process: Challenged the supply chain to develop bioplastic alternatives and propelled Cedar Grove into testing and identification.
- Developed free educational materials for businesses





Cedar Grove



- 1989: Yard Waste Composting
- 2000: Approached by SPU to accept food scraps
 - Odor and health department concerns: several years of research and worldwide technology search before permit endorsement.
 - Expansion to 2nd plant
 - Added hauling services
- Food scraps in 2006...business community dives in and begins looking at their waste stream to determine what else can be composted
- Cedar Grove develops product testing and approval
 - 2003: 3 Products
 - 2009: 400 Products
 - 2010: > 700 Approved Products**



Cedar Grove

Developed labeling standards to prevent contamination



CEDAR GROVE™ COMPOSTABLE

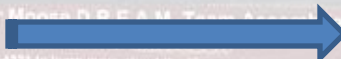
Quickly became the Gold Standard in the Northwest

Pak-Sher

- Developed unique line of Bioplastic bags and food handling sheets, unavailable elsewhere in marketplace



- Developed relationship with Cedar Grove, embraced labeling concept





Diamond Club: The last Piece in The Mariners Puzzle

- Highly Visible Elite Section: 370 Prime seats behind home plate
- In-Seat Food Service with Compostable trays, utensils, cups.
- Trash bag at each seat, NOT COMPOSTABLE
- Pak-Sher offered unique combination of bioplastic competency and custom capabilities



Challenges to Bioplastics in the Marketplace

- **Price**
- **Geography**
 - **Land Cost/Availability**
 - **Composter location**
- **Legislation**
 - **Federal: No Labeling Standards, no claims legislation - greenwashing**
 - **Local: P/U Services/Bag Bans**
- **Composter Acceptance**
 - **Contamination Concerns – No labeling standards for identification**
- **Consumer Acceptance**
- **Convenience**

Seattle: The Perfect Storm

- Land is scarce and expensive
- 2 Local Landfills closed in the '80's – Significant portion of the garbage hauled many miles away.
 - 82% cost increase to community
- Culture of Conservation
- Cedar Grove Composting – Leading the industry
- Strong relationships between business community and local government
- Seattle Mariners leading MLB in conservation efforts



PAK-SHER



The Future

Mariners: Continued pressure on supply chain:
Heat sensitivity and prepackaged products

Cedar Grove: Continued product testing to improve
incoming feedstock, BD project: fuel generation from
anaerobic digestion

SPU: Continuing stakeholder process, expanding to multi-
family and office building/shopping center food courts

Pak-Sher: Continued resin evaluation, focus on cost and
performance

All: Outreach and Education

Conclusion: Bioplastics won't sell themselves

Coordinated effort:

- Business Community
- Supply Chain
- Local Legislature
- Local Composter

Without Business community dedication, supply chain sluggish

Without legislature, demand sluggish

Without Composter invested in bioplastics, biodegradability is irrelevant

Most Critical Acceptance Factors:

Process Convenience, Identification and Price