

WASTE MANAGEMENT PHOENIX OPEN 2018 SUSTAINABILITY REPORT





Every choice we make during the months of planning for the Waste Management Phoenix Open (WMPO) - the best-attended golf tournament in the world - affects our claim to the title of the “The Greenest Show on Grass.”

The Thunderbirds, Waste Management, the PGA TOUR, TPC Scottsdale and all tournament stakeholders continue to be trailblazers on the journey towards increased sustainability. Along the way, we are thrilled to share best practices with other sporting events and venues to green their games.

ECONOMIC IMPACTS

2018 marked the 83rd annual Waste Management Phoenix Open tournament, making it one of the five longest established events on the PGA TOUR. Based on Arizona State University’s 2017 analysis, Waste Management estimated the total economic impact from the 2018 tournament and its fans at over **\$390 million**, one of the largest financial impacts of any golf event in the nation.

ENVIRONMENTAL IMPACTS

The Waste Management Phoenix Open is **water positive, carbon neutral and zero waste**. The use of water, energy and materials all contribute to the greenhouse gas emissions that are warming our planet so the Waste Management Phoenix Open commits to balancing all environmental impacts from tournament activities

SOCIAL IMPACTS

Making the Waste Management Phoenix Open what it is today takes not only resources, but also commitment from all community stakeholders. Communication and interaction between stakeholders, from managing traffic congestion to ensuring everyone who wants to is able to participate and enjoy the event, is key to positive social impacts and also highlighted in this report.





The table below outlines all WMPO emissions sources and associated GHGs from 2010 through 2018.

FUEL USE		(MtCO ₂ e) ¹								
		2010	2011	2012	2013	2014	2015	2016	2017	2018
Propane	heat, cooking	52	82	81	37	42	60	95	66	44
Diesel	shuttle buses	48	64	53	29	28	27	25	24	18
Biodiesel	shuttle buses	-	-	-	11	6.4	7.0	11	7.6	8.2
Gasoline	sponsor cars	27	21	21	20	17	16	10	21	17
Diesel	sponsor cars	-	-	-	0.2	0.4	-	-	-	-
Diesel	VIP shuttles	-	-	-	-	-	-	-	4.3	1.5
Diesel	waste hauling/portable toilet service	23	12	17	17	27	23	21	21	18
CNG ²	portable toilet service	-	14	3.7	5.6	9.9	32	18	26	1.6
Diesel	generators	33	47	57	39	-	-	-	-	-
Biodiesel	generators	5.0	-	10	28	24	17	31	53	50
Biodiesel	refrigerated trailers	-	-	-	-	-	-	15	11	13
Electricity	conventional energy	76	-	-	-	-	-	-	-	-
Electricity	renewable energy	-	-	-	-	-	-	-	-	-
WASTE END-OF-LIFE MANAGEMENT²										
Compost	food scraps, food/beverage materials, wood	-2.0	28	54	74	67	67	82	93	-17
Recycling	plastics, metals, fibers	-218	-101	-308	-209	-299	-259	-288	-404	-382
Waste-to-energy	non-recyclable fiber and plastics, MRF residue	-	-	-0.2	-3	-0.3	-0.3	-0.3	20	-0.5
Donation	scrim, carpet, turf, programs	-	-	-	-	-	-20	-33	-29	-76
Donation	food	-	-	-	-31	-18	-58	-35	-45	-47
TOTAL GREENHOUSE GAS EMISSIONS³		-32	-167	-11	18	-96	-90	-49	-131	-328

1 MtCO₂e is metric tons of carbon dioxide equivalent.

2 CNG volume is provided in gas gallon equivalent.

3 The [World Resources Institute GHG Protocol](#), [Climate Registry General Reporting Protocol](#), and [EPA WARM model](#) were used to calculate GHG emissions.

The Waste Management Phoenix Open operates under ISO20121 standard for sustainable events management, which defines the requirements to ensure an enduring and balanced approach to economic activity, environmental responsibility and social progress relating to events.



For years, the WMPO has invited third party certifiers to evaluate our environmental claims.

In 2018, we maintained our Evergreen Inspire status with the [Council for Responsible Sport](#) and achieved our second [Golf Environment Organization](#) certification. The Waste Management Phoenix Open was the first PGA TOUR tournament to achieve both certifications and remains largest event ever to achieve this level of recognition.

For the sixth straight year, [UL](#) also provided a third-party verification of the event's waste diversion. UL again verified our efforts, awarding the WMPO "100% landfill diversion rate with 9% incineration with energy recovery." The Waste Management Phoenix Open maintained its status as the largest verified zero waste event in the world.



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ENERGY

Since becoming the title sponsor of the Waste Management Phoenix Open, renewable energy practices have avoided 844 MtCO₂e, which corresponds to taking 181 cars off the road for one year or recycling an additional 294 tons of waste. For the last 8 years, the tournament purchased 100% renewable energy from Arizona Public Service. The sun continued to be a great source of power for compactors and some light fixtures used around the course.

Generators that could not be plugged into the grid ran on biodiesel, and over one-third of ProEm's attendee shuttle buses ran on biodiesel. Most WM trucks used to haul waste have been powered by compressed natural gas (CNG) since 2011, emitting less than half the GHGs of diesel.

The Waste Management Phoenix Open is a carbon neutral event. WM offset all GHG emissions from WMPO operations (204 MtCO₂e), professional and amateur player travel (58 MtCO₂e), vendor travel (107 MtCO₂e), and volunteer travel (212 MtCO₂e). In total, WM offset 720 MtCO₂e through [Envirofit International's](#) clean cookstove program with important economic, social and environmental impacts, supporting ten of the UN Sustainable Development Goals.

100%
RENEWABLE
ENERGY

720
MtCO₂e
OFFSET

CO²
NEUTRAL

UN SUSTAINABLE DEVELOPMENT GOALS ALIGNED WITH ENVIROFIT CLEAN COOKSTOVE PROGRAM





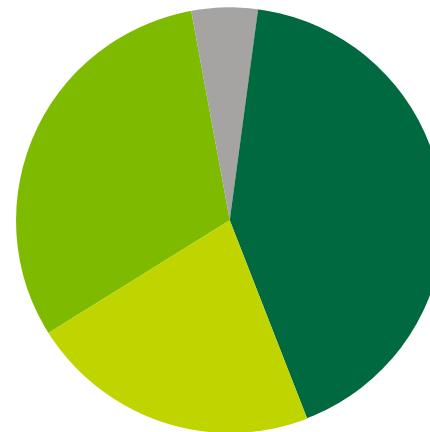
WATER

The Waste Management Phoenix Open is a water positive event. The WMPO implements conservation measures to ensure that water is used responsibly and limits pressures on the municipal water supply. Hand-washing stations used hand sanitizer instead of water, and in **2018 WM captured an estimated 6,353 gallons of grey water**. Since 2011, approximately **37,787 gallons of water** from cooking and cleaning have been reused in the portable toilets.

2018 marked the fourth year of the Waste Management Phoenix Open Water Campaign. Working with [Bonneville Environmental Foundation](#) as a Change the Course sponsor, and teaming up with Kohler, M Culinary and The Thunderbirds, WM restored **75 million gallons** of water to the Verde River in Arizona, bringing the four-year total to over **236 million gallons restored**.



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FRESH WATER, METERED.	42%
BOTTLED WATER	31%
FRESH WATER, USED IN PORTABLE TOILETS. . .	22%
GRAYWATER, RESUSED.	5%



ZERO WASTE CHALLENGE

WM launched the Zero Waste Challenge in 2012 to control event materials and educate attendees on the impact they can have on course and at home. Since then, there have been no trash bins on course, only recycle and compost bins. In 2018, we again **diverted 100% of all tournament materials from the landfill!** What's the value of zero? In all, our waste management practices have avoided the equivalent of removing 513 cars off the road for one year.

In 2018, WM continued utilizing three Zero Waste Stations. The repurposed 40-cubic yard roll-off dumpsters transformed into eye-catching kiosks where fans can play an interactive game. Volunteers posted at our Zero Waste Stations used this game to educate attendees about proper disposal on course and at home, highlighting WM's Recycle Often. Recycled Right.SM campaign that seeks to improve residential and commercial diversion.



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All materials brought on site must be locally reused, recycled, or composted. Vendors agree to this in the contract with the Thunderbirds.

SOME RESULTS

- 66% of 2018 signage was reused from previous tournaments
- 87% of the 2018 signage is being stored for potential reuse
- Daily tickets, pairing sheets, parking passes and parking maps were printed on paper that uses 30% post-consumer recycled content
- Over 90% of paper badges are printed on paper made of 50% total recovered fiber
- All paper materials were Forest Stewardship Council Certified
- Volunteer badges were made from recyclable #5 plastic
- The WM logo water feature used 144,000 golf balls, reused every year since 2012
- Vendors donated 24,620 pounds of unused, perishable food to local organizations
- WMPO remains the largest verified zero waste event in the world



SOCIAL IMPACTS

The WMPO has a positive social impact on the local community with programs throughout the week.

Youth, differently-abled individuals, and hometown heroes

The Standard Bearer Program promotes youth involvement, inviting students under 18 to carry the player score signs and walk around with a grouping – up to seven miles in one round! In 2018, over 318 students participated. The R.S. Hoyt Jr. Family Foundation Dream Day allows youth to experience golf through a junior clinic, motivational speaker and trick shot show. In 2018, a record of more than 550 students participated from five schools from five school districts. Differently-abled and disabled individuals are encouraged to participate in tournament activities through the CBS Outdoor Special Olympics Open. The Waste Management Phoenix Open promotes positive community stakeholder engagement, including free event entry to all law enforcement, firefighters, emergency services, active, reserve and retired military personnel, and family members or one accompanying guest. The Birdies for the Brave Patriots' Outpost has free food and drinks for all military personnel and their guests, along with a great view of the 18th Hole.



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CHARITY

The WMPO generated over **\$12.2 million for charity in 2018**, making donations to more than 200 different organizations throughout the year and used to fund additional improvements to the local community. Saturday at the WMPO is “Green Out Day” - for every person who wears green, the Thunderbirds donate “green.” A total of \$105,000 was raised for three environmental groups. The Thunderbirds also donated more than \$100,000 to charities chosen by participants in the 2018 Phoenix Suns Charities Shot at Glory. The WMPO provides free booth space for one non-profit organization daily in the WMPO Expo Booth through Birdies for Charity.

More information on benefiting charities can be found at the Thunderbirds’ [WMPO website](#).



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\$12.2M
FOR CHARITY

200+
ORGANIZATIONS
BENEFITTED

\$105K
RAISED ON
GREEN-OUT DAY

\$100K
DONATED FROM
SHOT AT GLORY

2018 WASTE MANAGEMENT PHOENIX OPEN “GREENEST SHOW ON GRASS”

TRANSPARENT REPORTING

Council for Responsible Sport - Evergreen Inspire
Golf Environment Organization - GEO Certified
UL - “Zero Waste to Landfill Operations with 9%
incineration with energy recovery” validation

WATER CONSERVATION

RESTORED

75 M

GALLONS
of water

REUSED

6,353

GALLONS
of greywater

RENEWABLE ENERGY & GHG OFFSETS

Offset 720 metric tons of CO2 equivalent with
Envirofit International

100% of electricity provided
by renewable energy

WASTE DIVERSION

100%

materials diverted from landfill



56%

recycled

26%

composted

9%

waste-to-energy

9%

donated

REUSE & DONATIONS

DONATED

24,620

pounds of unused food
to local non-profits

REUSED

51,816

square feet of signage

REUSED

140,000

golf balls in WM's water feature

COMMUNITY IMPACT

THE 2018 WASTE MANAGEMENT
PHOENIX OPEN GENERATED

\$12.2M in charitable donations

Fans shared their passion for golf and
green practices using

#GREENESTSHOW

GREEN OUT DAY RAISED

\$105K for local charities thanks to
fans and players sporting green

WELCOMED **12,000+**

military personnel with their guests to the Patriot's
Outpost on the 18th Hole

FREE
TOURNAMENT
ACCESS

to law enforcement,
emergency services,
and military personnel

STANDARD BEARER PROGRAM | FIRST TEE DREAM DAY | CBS OUTDOOR SPECIAL OLYMPICS OPEN



FORUM

Since 2011, WM has organized a Sustainability Forum, bringing together a mix of experts, customers, government employees, non-government organizations and businesses to contribute to an open-minded dialogue around sustainability principles, best management practices and bottom-line results. With a theme of “Big Ideas. Bold Action. Better World.” the 2018 Forum focused on how to rethink current environmental goals and collectively serve the opportunity to chart a bigger, broader, bolder course forward. [Here are the highlights!](#)



THUNDERBIRDS

Organizing the WMPO in the Valley of the Sun since 1937, the mission of the Thunderbirds is to assist children and families, help people in need and to improve the quality of life in their communities. To date, they have raised more than \$134 million through their WMPO activities. For more information on the governance of The Thunderbirds, please consult the [WMPHOENIXOPEN website](#) the [WMPHOENIXOPEN Sustainability Page](#), and [Thunderbird fact sheet](#).



WASTE MANAGEMENT

Based in Houston, Texas, Waste Management is the leading provider of comprehensive environmental services in North America. In partnership with the PGA TOUR and The Thunderbirds, [Waste Management](#) is dedicated to making the Waste Management Phoenix Open the greenest tournament on the PGA TOUR. For more information on Waste Management’s corporate sustainability efforts and WMPO activities, please visit [ThinkGreen.com](#).



TPC SCOTTSDALE

Sixteen acres on the 400-acre property of [TPC Scottsdale](#) have been devoted to naturalized habitat areas, and 200 acres are desert vegetation and landscaping in the McDowell foothills of the Sonoran. TPC Scottsdale is a 36-hole resort and public golf facility, has been part of Audubon International’s Cooperative Sanctuary Program since 1995. This year, TPC Scottsdale is also completing its first Golf Environmental Organization’s sustainable golf course certification.





CONCLUSION

In 2018, the WMPO again attracted more fans than ever before, repeated and improved upon our successful Zero Waste Challenge, and continued to decrease our carbon footprint. We are proud of our commitment to being the Greenest Show on Grass and what that means to the community in which the Waste Management Phoenix Open is played. By tracking and reporting the tournament's greenhouse gas emissions, making good use of the materials generated, prioritizing renewable energy and alternative energy, as well as conserving water on course and restoring water to the Southwest region, we will play our part to leave the planet in better shape than we received it.