Every choice we make during the 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 many other stakeholders align around the tournament’s sustainability mission. We make every effort to use the WMPO’s platform to drive industry leadership, demonstrate how other organizations can improve their impacts, and educate our incredible fans on how to support thoughtful environmental management.

**ENVIROMENTAL IMPACT**

The WMPO is a carbon neutral, zero waste tournament with a balanced water footprint. The use of energy, materials, and water all contribute to the greenhouse gas emissions that are harming our planet, and the WMPO is committed to minimizing all environmental impacts from tournament activities.

**SOCIAL IMPACT**

Making the WMPO what it is today takes not only resources, but also a commitment to the fans and local community that support our tournament. The Thunderbirds provide access and hospitality to a diverse group of organizations and individuals, and youth participation is prioritized.

**ECONOMIC IMPACT**

2020 marked the 85th annual WMPO tournament, maintaining our status as one of the five longest established events on the PGA TOUR. The Thunderbirds raised a record $14 million for local charities and Waste Management estimated the total economic impact from the 2020 tournament and its fans at over $400 million, one of the largest financial impacts of any golf event in the nation.

The Thunderbirds, Waste Management, the PGA TOUR, TPC Scottsdale and many other stakeholders align around the tournament’s sustainability mission. We make every effort to use the WMPO’s platform to drive industry leadership, demonstrate how other organizations can improve their impacts, and educate our incredible fans on how to support thoughtful environmental management.
The Waste Management Phoenix Open is a carbon neutral tournament.

The visualization below outlines all WMPO emissions sources and associated greenhouse gas emissions (GHGs) from the 2020 tournament. Click here to review all WMPO emissions sources and associated GHGs from 2013 through 2020.

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Using sports as a unifying tool to drive climate awareness, the Waste Management Phoenix Open committed to the [UNFCCC Sports for Climate Action](https://unfccc.int/sports-for-climate-action) in 2019. The Sports for Climate Action initiative positions sports organizations and their communities on the path of the low carbon economy agreed upon in the Paris Agreement.

The Waste Management Phoenix Open is a carbon neutral tournament. Alternative energy is prioritized across all operations. *For the last ten years, the tournament has purchased 100% renewable electricity,* and the sun remains a great source of power for WM’s compactors around the course. Generators that are not plugged into the grid and over one-third of attendee shuttle buses run on biodiesel, which emits fewer emissions than diesel fuel. Most WM trucks used to haul tournament waste have run on compressed natural gas (CNG) since 2011, emitting less than half the GHGs of diesel.

WM also offsets all GHG emissions from WMPO operations as well as travel for WM employees, event management, professional and amateur players, vendors, and volunteers. In total, WM offset 1,128 MtCO₂e through [Bonneville Environmental Foundation’s](https://www.bonnevillecf.org/) Crow Lake Wind project, the largest wind power project owned solely by a cooperative in the United States. Supporting four of the UN Sustainable Development Goals, this project also includes a first-of-its-kind community wind investment partnership.

**GREENHOUSE GAS EMISSIONS**

<table>
<thead>
<tr>
<th>Avoided Emissions* from Waste Diversion (MtCO₂e)</th>
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<tbody>
<tr>
<td>WASTE-TO-ENERGY</td>
</tr>
<tr>
<td>COMPOSTED</td>
</tr>
<tr>
<td>MATERIAL DONATIONS</td>
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<tr>
<td>FOOD DONATIONS</td>
</tr>
<tr>
<td>RECYCLED</td>
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</tbody>
</table>

*Avoided greenhouse gas emissions are calculated using the EPA’s Waste Reduction Model (WARM), by comparing actual waste diversion totals to a baseline scenario of 100% landfill disposal. Greenhouse gas emissions are typically avoided by diverting materials from the landfill, resulting in a negative emissions value compared to the baseline.
For years, the WMPO has invited third party certifiers to evaluate our environmental claims.

In 2020, we achieved our fourth Golf Environment Organization tournament certification. The Waste Management Phoenix Open was the first PGA TOUR tournament to achieve this certification and remains the largest event ever to achieve this level of recognition. The TPC Scottsdale achieved Golf Environment Organization’s facility certification in 2019 as well.

For the eighth straight year, UL provided a third-party validation of the WMPO’s zero waste program. In 2020, the tournament achieved 100% landfill diversion with 13% incineration with energy recovery.
WM launched the Zero Waste Challenge in 2012 to continuously improve the management of materials consumed on site, expand vendor and fan understanding of proper waste disposal, divert waste from landfill, and share a feeling of responsibility for creating the Greenest Show on Grass. Since then, there have been no trash bins on course—only recycle and compost bins.

In 2020, the WMPO again diverted 100% of tournament materials from the landfill. Over the ten years of WM’s title sponsorship, the idea of what makes a sustainable event has evolved. While the concept of zero waste has been an important strategy, we recognize that it does not always consider the upstream and downstream impacts of our management choices. In our ongoing effort to reduce GHG emissions, we continuously explore the life cycle impacts of tournament materials, a concept called sustainable materials management (SMM). SMM helps us understand, for example, that impacts can occur at all stages of a beer cup’s life—from design, manufacturing, transport and packaging of the beer cup, to how the WMPO golf fan will dispose of it, and whether it goes to landfill, gets recycled, composted, reused or incinerated. Choices made at each step of a product’s life can optimize material usage, reduce water and energy consumption, and mitigate greenhouse gas emissions.

Some Results

- 100% of vendors contractually commit to the reuse, donation, recycling, or composting of all materials brought on site
- 85% of 2020 signage was reused from previous tournaments
- 94% of 2020 signage is being stored for reuse
- One ton of wine and liquor bottles were turned into reusable glasses through a local vendor, Refresh Glass
- WM piloted Ball Corporation’s new aluminum cups at the Bay Club and Patriots Outpost
- Daily tickets, pairing sheets, parking passes and parking maps were printed on paper that uses 30% post-consumer recycled content
- All paper materials were Forest Stewardship Council Certified
- The WM logo water feature used 144,000 golf balls, reused every year since 2012
- Vendors donated 12.7 tons of unused, perishable food to local organizations
- 5.67 tons of wood flooring was donated to Stardust Building Supplies
The Thunderbirds, Waste Management, sponsors and vendors come together to balance the tournament’s water impacts. On-course conservation measures help ensure that water is used responsibly. Since 2011, approximately 44,466 gallons of water from cooking and cleaning have been reused in the portable toilets.

2020 marked the fifth year of the tournament’s coordination with Bonneville Environmental Foundation as a Change the Course sponsor. Teaming up with M Culinary, Swire Coca Cola and The Thunderbirds, WM restored 50 million gallons of water to the Verde River Valley in Arizona, bringing the program’s six-year total to over 320 million gallons restored.

The WMPO’s water restoration installation shared tips on water conservation and educated fans about embedded water, the water that goes into the food and products we use. Fans relaxed in the shade of the installation and learned how many gallons of water it takes to produce a hamburger, a gallon of gasoline and a pair of blue jeans.

### BALANCED WATER FOOTPRINT

- **20.4%** Fresh water, portable toilets - 28,132 gallons
- **32.3%** Bottled water, consumed - 40,253 gallons
- **47.3%** Fresh water, course operations - 68,618 gallons
Waste Management utilizes the tournament’s platform to educate attendees and fans about how they can have a positive impact on the environment. In 2020, Waste Management kicked-off the #BinThereDoneThat contest, which encourages everyone to record themselves recycling correctly in a fun way. This messaging was reinforced with videos from trick shot artists as well as professional golfers, and on the Golf Channel’s coverage of WM’s senior leadership during tournament week.

On the course, Waste Management created the Green Scene, a sustainability-focused activation area with games and educational opportunities. Fans practiced proper recycling and composting on dual basketball hoops, guessed the embedded water required to produce a hamburger or pair of blue jeans, learned how they could reduce their GHG footprint, and even entered the #BinThereDoneThat contest on site. They also loved hanging out on the new dumpster couch!

These virtual and on-course efforts combined to fuel correct recycling and contamination reduction across the country. The environmental impact of large-scale behavior change campaigns like these is monumental.
The 10th annual WM Sustainability Forum, themed 2020 Vision, looked at sustainability as a global movement. It brought together influential thought and business leaders who shared the necessity of evolving our thinking and systems to adapt to the changing demands of the environment. This view was echoed across an esteemed group of speakers and resonated strongly with the audience, who left saying that there is a “real and growing corporate interest in sustainability” and that they were “motivated to act!”

Jim Fish, CEO of WM, kicked off the day by talking about accountability, commending the younger generation’s unimpeded view of what we can accomplish and their leadership in holding all generations to a higher social standard. Our stage also played host to John Kerry (68th United States Secretary of State), Christiana Figueres (Former Executive Secretary of the UNFCC, Founding Partner of Global Optimism Ltd and Convener of Mission 2020), Marc Benioff (Chairman & Co-CEO of Salesforce), Jim Fitterling (CEO of DOW) and Peter Zeihan (Geopolitical Strategist, Author).

“"This was my 2nd year at the Forum and I was impressed. It was very invigorating and energizing. Radical change involving businesses and communities is necessary to move the world forward.”
– Avi Zaraya, Kaiser Permanente

“"When a conference is organized by a sustainability leader, it is automatically better. Less cynicism. Less blind quixotic optimism as well. Practical and real and urgent”
– Rahul Advani, SER Capital Partners
SOCIAL IMPACT

The foyer played host to a unique, engaging and interactive showcase. This year, WM worked with 15 customer companies to tell the story of post-consumer recycled content. From PET bottles to glass, we visually articulated how recycled materials can be transformed into our everyday products.

Each booth took the audience on a journey, showing how each company converted these materials into a final product that is just as beautiful and durable as traditionally made products.

CASE STUDIES

"WEARING RECYCLED ON OUR SLEEVES" - A COLLABORATION WITH REPREVE

- We believe that good quality products can be made from recycled materials and Repreve is one of our customers who has proven this repeatedly.
- Using recycled bottles that WM collects, Repreve creates plastic flakes, turns them into chips, which is later melted and made into yarn. This yarn is extremely versatile, creating shirts, shoes and swim wear.
- As more consumers become more conscious of their impact on the planet, many brands have opted to use Repreve fabrics in products. This includes Bermuda Sands, Aeropostale, Fitbit and Ford.

"THE PERFECT PAPER TRAIL" - A COLLABORATION WITH PRATT

- When used paper becomes new paper and later plays a part to create cleaner recycling streams – it creates the perfect paper trail, one that we are proud to be a part of.
- Pratt has always been a strong proponent of recycling. They work with businesses and communities across the U.S. to help divert over 2 million tons of materials from landfill every year. It owns 17 modern Material Recovery Facilities and has an operational footprint from New York to California.
- For the last few years, the WM Phoenix Open has been working with Pratt to produce bins that plays an important role to achieving our zero waste dream.
Youth are encouraged to enjoy golf at the WMPO in a number of ways. Anyone can attend Monday and Tuesday of tournament week for free, and children under 18 enjoy free access with an adult all week. 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 2020, over 290 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 2020, a record of more than 500 students participated from schools in local districts.

Differently-abled and disabled individuals are encouraged to participate in tournament activities through the San Tan Ford Special Olympics.

Our hometown heroes are celebrated at the Birdies for the Brave Patriots’ Outpost with free food and drinks for all military personnel and their guests, along with souvenir WMPO aluminum cups and a great view of the 18th Hole.

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 WMPO generated over $14 million for charity in 2020, making donations to more than 200 different organizations throughout the year and funding 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 $170,000 was raised for four environmental groups.
- The Thunderbirds also donated more than $100,000 to charities chosen by participants in the 2020 Phoenix Suns Charities Shot at Glory.

More information on benefiting charities can be found at the Thunderbirds’ WMPO website.
2020 WASTE MANAGEMENT PHOENIX OPEN “GREENEST SHOW ON GRASS”

WASTE DIVERSION

100% MATERIALS FROM LANDFILL

62.5% RECYCLED
12.8% WASTE-TO-ENERGY
22.5% COMPOSTED
2.2% DONATED

REUSE & DONATION

DONATED 12.7 TONS of unused food to local non-profits

REUSED 120,491 square feet of signage

DONATED 7.35 TONS of building materials to local organizations

COMMUNITY IMPACT

RAISED $170K from Green Out Day for four environmental organizations

WELcomed 11,600+ Military Personnel to the Patriots Outpost

FREE TOURNAMENT ACCESS to law enforcement, emergency services, and military personnel

GHG MANAGEMENT

UNFCCC Sports for Climate Action Signatory

1,128 metric tons of CO₂ offset with Bonneville Environmental Foundation

100% renewable electricity

WATER CONSERVATION

RESTORED 50M GALLONS of water with water sponsors

REUSED 44,466 GALLONS of gray water since 2011

Digital Sustainability Report

#BINTHEREDONETHAT... WM’S RECYCLING TRICK SHOT CONTEST

148 video submissions
8.5M social impressions

CLICK TO WATCH!
APPENDIX
WMPO EMISSIONS

The table below outlines all WMPO emissions sources and associated GHGs from 2013 through 2020.

### Fuel Use

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### Waste End-of-Life Management

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### Water

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1 MtCO₂e is metric tons of carbon dioxide equivalent.

2 The World Resources Institute GBI 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.
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. The Thunderbirds and the Waste Management Phoenix Open have raised more than $85 million for local charities since 2010 when Waste Management became title sponsor. In its history, dating back to 1932, the Phoenix Open has raised more than $161 million for charities in Arizona. For more information on the governance of The Thunderbirds, please consult the WM Phoenix Open website, the WM Phoenix Open Sustainability Page, and The Thunderbirds fact sheet.

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. Learn more about Waste Management Sustainability Services Sports and Entertainment and our corporate sustainability efforts and WMPO activities at wm.com.

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. In 2019, TPC Scottsdale achieved the Golf Environment Organization’s sustainable golf course certification.