

2021 WM PHOENIX OPEN

SUSTAINABILITY REPORT

ENVIRONMENTAL IMPACT

The WM Phoenix Open is a zero waste tournament with a balanced carbon and water operational footprint. The use of energy, materials, and water all contribute to the greenhouse gas emissions that are harming our planet. The WM Phoenix Open is committed to minimizing all environmental impacts from tournament activities and always working for a sustainable tomorrow.

SOCIAL IMPACT

Making the WM Phoenix Open 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 event access and hospitality to a diverse group of organizations and individuals and youth participation is prioritized.

ECONOMIC IMPACT

2021 marked the 86th annual WM Phoenix Open tournament, maintaining our status as one of the five longest established events on the PGA TOUR. The Thunderbirds raised \$3.8 million for local charities, including \$115,250 through its Faces on 16 campaign.



Every choice we make during the planning for the WM Phoenix Open - the best-attended golf tournament in the world - affects our claim to the title of the

**"THE GREENEST SHOW
ON GRASS."**

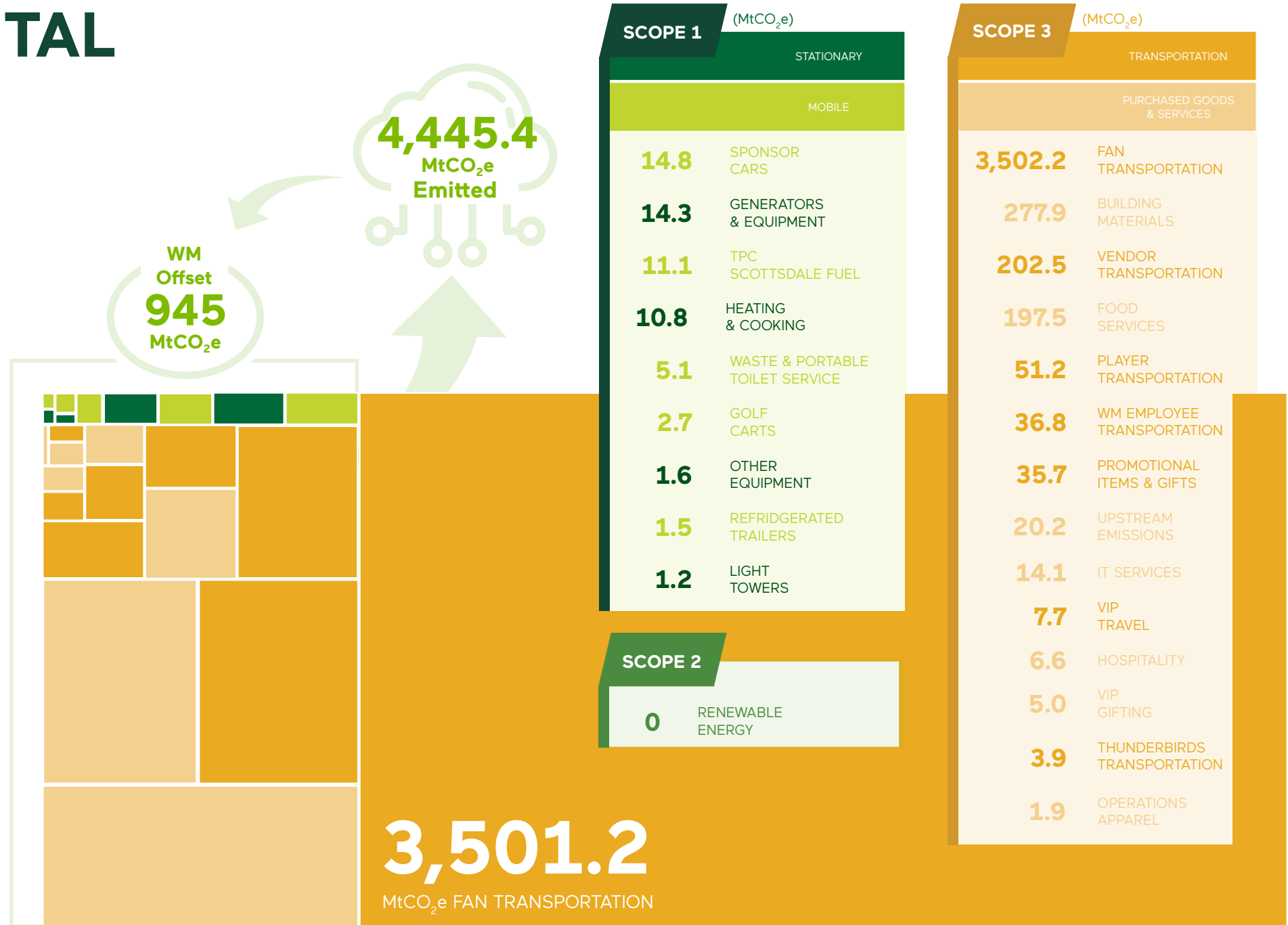
ENVIRONMENTAL IMPACT

GREENHOUSE GAS EMISSIONS

WM balances the carbon footprint for all tournament operations.

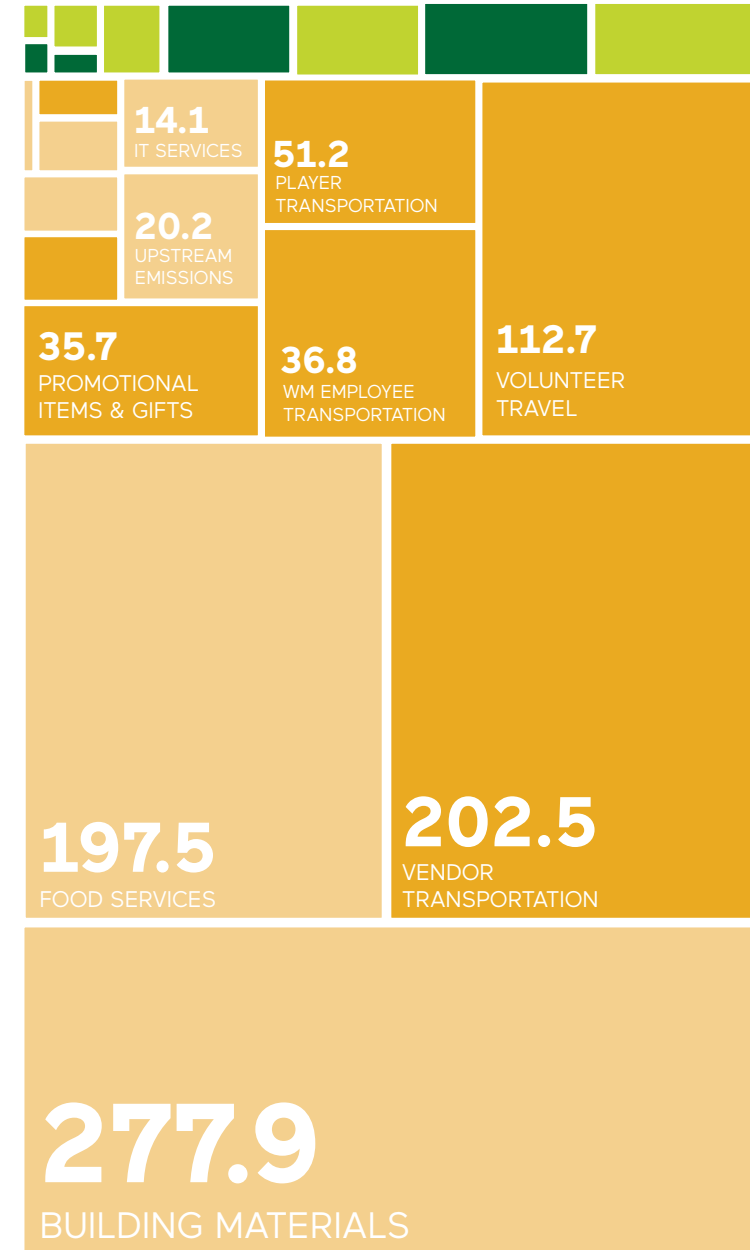
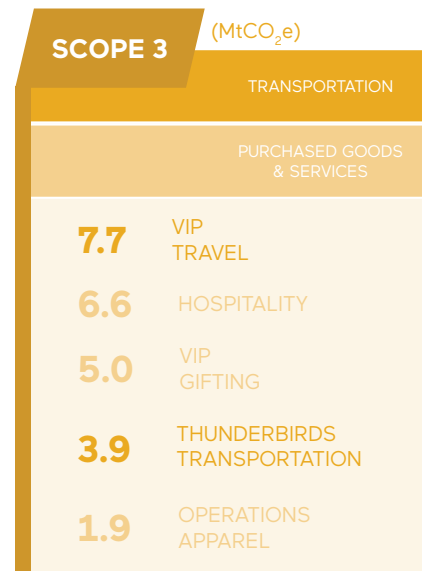
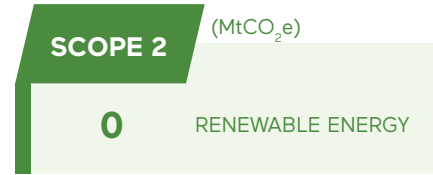
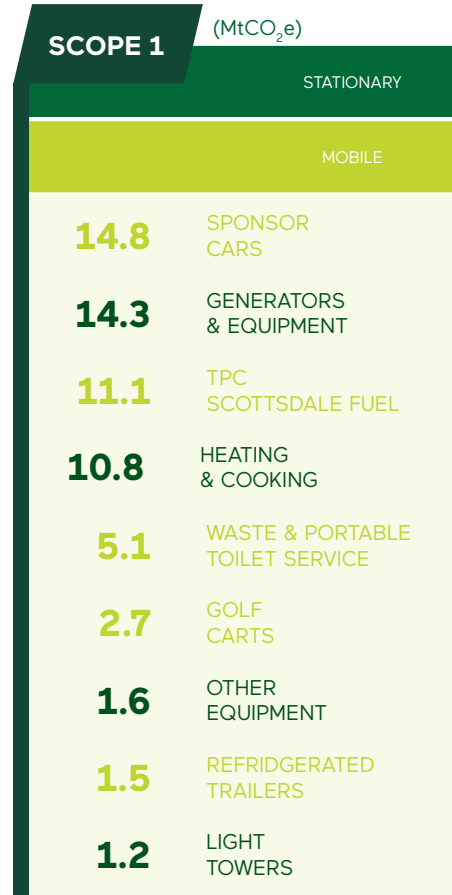
The visualization on the right outlines all WM Phoenix Open emissions sources and associated greenhouse gas (GHG) emissions from the 2021 tournament. WM purchases carbon offsets for all Scope 1 and Scope 3 emissions, except for fan transportation. [Click here](#) to review all WM Phoenix Open emissions sources and associated GHG emissions from the 2021

SEE NEXT PAGE FOR BREAKDOWN



ENVIRONMENTAL IMPACT

GREENHOUSE GAS EMISSIONS



ENVIRONMENTAL IMPACT

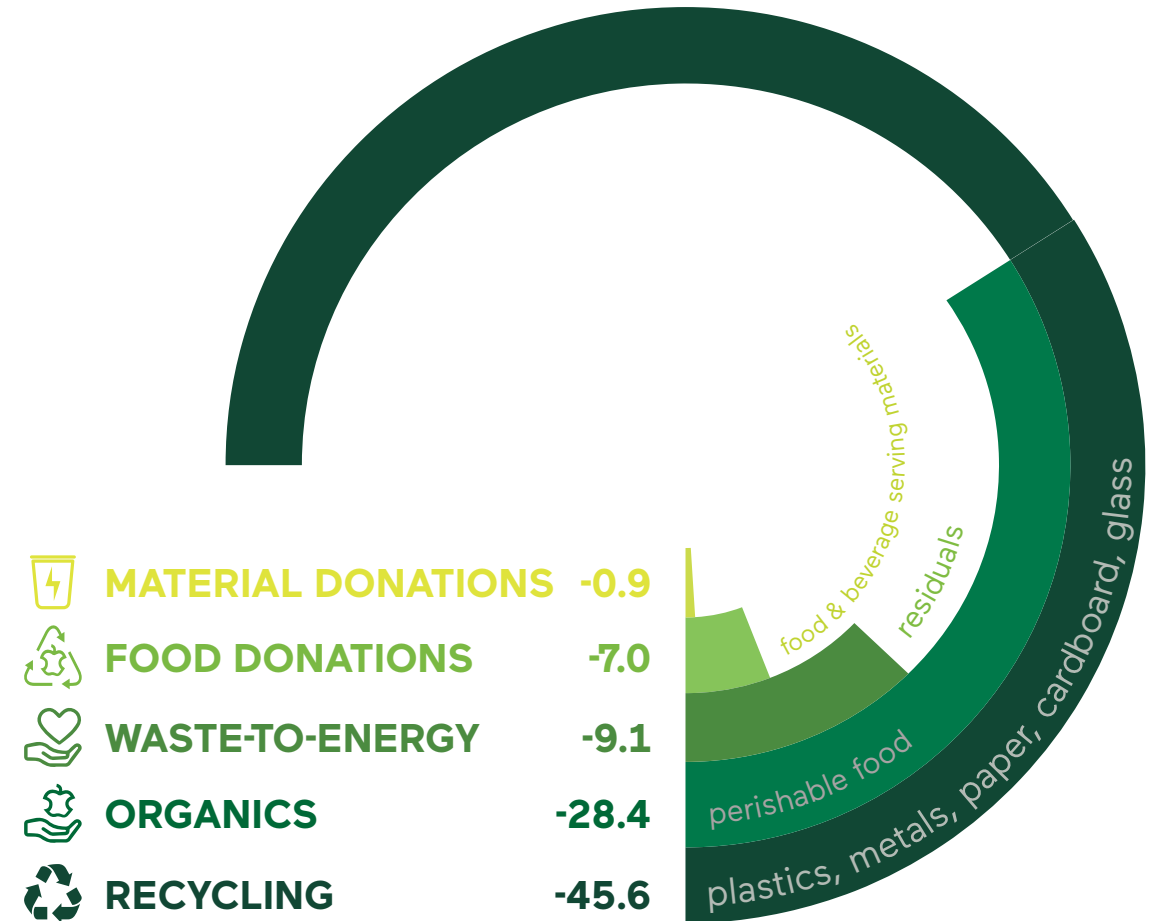
GREENHOUSE GAS EMISSIONS

Using sports as a unifying tool to drive climate awareness, the WM Phoenix Open committed to the [UNFCCC Sports for Climate Action](#) framework 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. In 2022, the WM Phoenix Open will conduct an updated benchmarking analysis and set a formal GHG reduction target.

The WM Phoenix Open has a balanced operational carbon footprint. Alternative energy is prioritized across all operations. For the last eleven years, the tournament has purchased 100% renewable electricity and generators that are not plugged into the grid 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 GHG emissions of diesel.

WM also offsets Scope 1 GHG emissions as well as all Scope 3 emissions except for fan travel, including building materials, purchased goods, hospitality, and transportation for WM employees, event management, professional and amateur players, vendors, and volunteers. In total, WM offsets 941 metric tons of carbon dioxide equivalent (MtCO₂e) through [Bonneville Environmental Foundation's](#) 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.

Avoided Emissions* from Waste Diversion (MtCO₂e)



* Avoided greenhouse gas emissions are calculated using the EPA's Waste Reduction Model (WARM), 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.

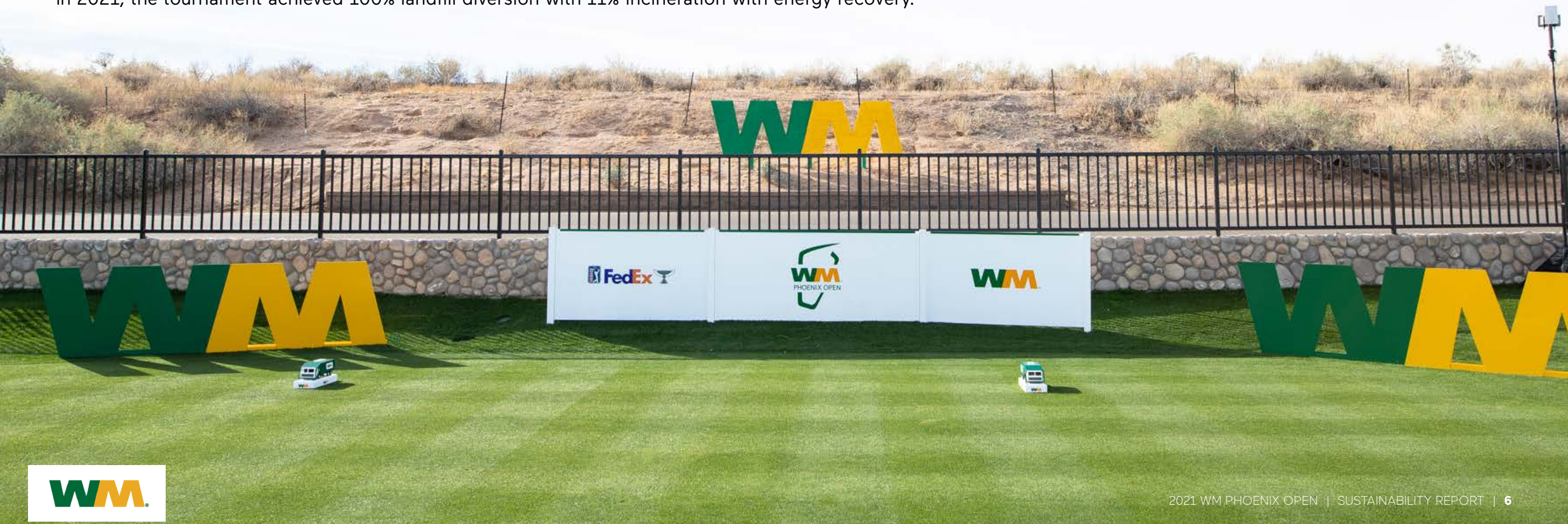
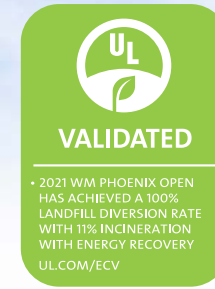
ENVIRONMENTAL IMPACT

TRANSPARENCY

For years, the WM Phoenix Open has invited third party certifiers to evaluate our environmental claims.

In 2021, we achieved our fifth **Golf Environment Organization** tournament certification. The WM 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 has maintained its Golf Environment Organization's facility certification since 2019 as well.

For the ninth straight year, **UL** provided a third-party validation of the WM Phoenix Open's zero waste program. In 2021, the tournament achieved 100% landfill diversion with 11% incineration with energy recovery.

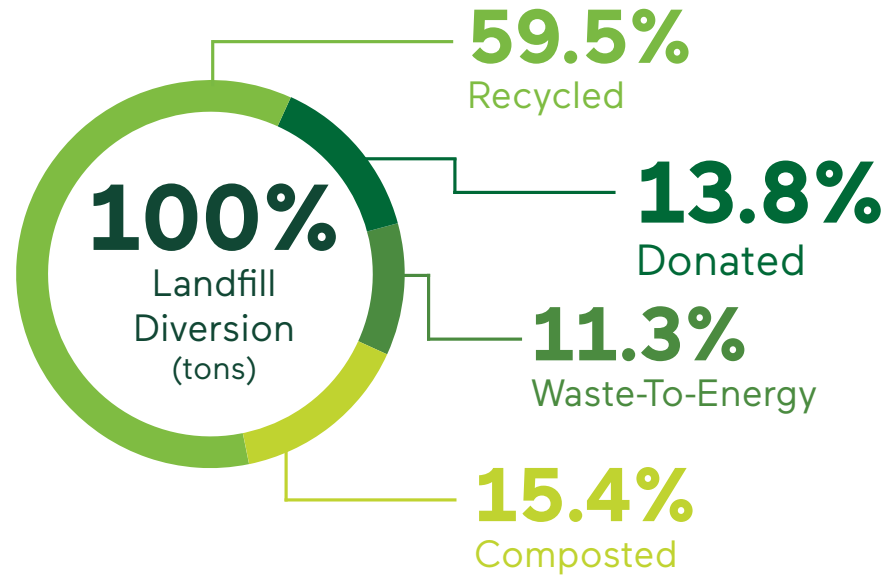


ENVIRONMENTAL IMPACT

MATERIALS

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 landfill bins on course—only recycle and compost bins.

In 2021, the WM Phoenix Open again diverted 100% of tournament materials from the landfill. Over the eleven 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 the design, manufacturing, transport, and packaging of the beer cup, to how the WM Phoenix Open golf fan will dispose of it, to 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
- 73.7% of 2021 signage was reused from previous tournaments
- 84.1% of 2021 signage is being stored for reuse
- 170.5 pounds of wine and liquor bottles were turned into reusable glasses through a local vendor, Refresh Glass
- The Thunderbirds expanded upon last year's Ball Corporation pilot to serve aluminum cups across the entire course
- 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 1.9 tons of unused, perishable food to local organizations
- 30,460 pounds of building materials were donated to Stardust Building Supplies
- 11,800 pounds of building materials were donated to the Elks Club

ENVIRONMENTAL IMPACT

WATER

The Thunderbirds, WM, 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.

2021 marked the sixth year of the tournament's coordination with [Bonneville Environmental Foundation](#) as a [Change the Course](#) sponsor. WM restored 5 million gallons of water to the Verde River Valley in Arizona, bringing the program's seven-year total to over 325 million gallons restored.

The WM Phoenix Open'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.

TOURNAMENT WATER FOOTPRINT

BALANCED THROUGH WATER RESTORATION CERTIFICATES



ENVIRONMENTAL IMPACT

UN SUSTAINABLE DEVELOPMENT GOALS

The UN's **Sustainable Development Goals** (SDGs) provide a set of universal goals to help combat the urgent environmental, political, and economic challenges facing our world. The UN SDGs call on all organizations to apply their creativity and innovation to solve sustainable development challenges. The WM Phoenix Open strives to support the UN SDGs and assess how we can establish targets to expand our positive impact on the local communities and the environment.

1 NO POVERTY



Goal 1: End poverty in all its forms everywhere

Through annual donations from the Thunderbirds, the WM Phoenix Open assists in raising awareness and facilitating the mobilization of resources to alleviate poverty. Tournament contributions support Arizona charities and organizations that help lift up those most in need.

8 DECENT WORK AND ECONOMIC GROWTH



Goal 8: Decent work and economic growth

The WM Phoenix Open generates a substantial impact on the local community, resulting in over \$400 million of economic activity in a typical year. The scale of the tournament offers opportunities for economic growth, employment, and community involvement.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Goal 9: Industry, innovation, and infrastructure

The WM Phoenix Open strives to model innovation and best practices for all industries. Sponsorship means more than branding at our tournament, so the Thunderbirds and WM actively engage organizations interested in contributing to our sustainability initiatives related to responsible procurement, water restoration, emissions reductions and waste diversion. WM's annual Sustainability Forum also convenes influential thought and business leaders who share the necessity of evolving our thinking and systems to adapt to the changing demands of the environment. WM holds an Innovation Lab each year as well with the goal of exploring what innovations are most important to our customers and acting on the results to ensure progress.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Goal 12: Responsible consumption and production

Sustainable consumption and material management are top priority at the WM Phoenix Open. We divert 100% of tournament materials from the landfill and every vendor contractually commits to the reuse, donation, recycling, or composting of all materials brought on course. In addition, WM works with brands like Pratt Industries, Unifi, and Refresh Glass to utilize and promote products made from recycled materials.

13 CLIMATE ACTION



Goal 13: Climate Action

The WM Phoenix Open aims to model greenhouse gas emissions measurement and management to reduce our impacts while also inspiring others to take action. The Thunderbirds and WM engage vendors to reduce the tournament's greenhouse gas footprint on course and down the supply chain, balancing our remaining footprint with carbon offsets. WM will establish a new greenhouse gas baseline for the tournament in 2022 and work to set science-based targets in line with our UNFCCC Sports for Climate Action framework commitment and the Paris Agreement.

ENVIRONMENTAL IMPACT

SUSTAINABILITY EDUCATION

WM utilizes the tournament's platform to educate attendees and fans about how they can make a positive impact on the environment. In 2021, WM kept the energy and excitement of the WM Phoenix Open alive by engaging fans at home as part of the #GreenBucketList Sweepstakes. By following WM on social media, tagging three friends and sharing tips fans were using to prepare for their potential 2022 WM Phoenix Open experience, fans were entered for the chance to win a one-of-a-kind experience for them and three friends to the 2022 WM Phoenix Open. As part of the Sweepstakes, WM also continued to educate fans about recycling right, specifically keeping all food, liquid, and plastic bags out of the recycling bin, by incentivizing fans to share their "recycling tips" in the comments. Those who shared proper tips and showed a clear understanding of recycling right were prioritized during the random drawing of the winner following the event. One of the unique prizes offered as part of the Sweepstakes included access to the WM Green Suite, a special set of embedded seats on the world-famous 16th hole, during the third round of next year's event. These will be the "best seats in the house on golf's most exciting hole."

Fans at home watched WM's new [brand videos](#), highlighting how the WM Phoenix Open implements zero waste as well as tournament achievements. WM also created a new [behind-the-scenes sustainability tour](#) for fans to learn about the tournament's comprehensive sustainability program.



PGA TOUR players also encountered new educational efforts throughout their WM Phoenix Open experience, learning about how to support the zero waste program. Players received a gift from Refresh Glass to highlight how the circular economy can come to life in a cool way. Each pair of glasses came from last year's tournament or a local community business. With their circular gift, players found a quick guide to recycling and composting on course as well as sustainability metrics about the tournament's initiatives related to water restoration, greenhouse gas emissions management, and zero waste. WM's COO added a message to the players about modeling best practices and WM's commitment to the environment. The TPC Scottsdale also worked with WM to add new signage on diversion and sustainability metrics in key areas in the clubhouse.

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.



SOCIAL IMPACT

WM SUSTAINABILITY FORUM

The 11th annual WM Sustainability Forum, themed Breakthrough, looked back on a year of crisis and acknowledged the importance of establishing integrated political, economic, social and environmental systems in order to create a more sustainable world. 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.

To lead up to the Sustainability Forum, WM hosted two virtual sessions on in Driving Sustainability series. The first session, titled ["From Crisis to Opportunity,"](#) included Christiana Figueres, Former Executive Secretary of the UNFCCC and Founding Partner of Global Optimism Ltd and Convener of Mission 2020, and Jasmine Crowe, Founder and CEO of Goodr. The second session, titled ["The Next Four Years,"](#) included Alex Wagner, co-host of Showtime's "The Circus" and an anchor and correspondent at CBS News, co-anchoring CBS THIS MORNING: SATURDAY, as well as Nat Bullard, Chief Content Officer at BloombergNEF.

The 2021 Sustainability Forum was a virtual event this year which allowed for an expanded audience. The first day of the Forum started off with a keynote from Jonathan Foley, Executive Director of Project Drawdown, on what his organization has learned about the science of climate change over the last three years and where we are in our journey to drawdown. This was followed by a panel on how cities, NGOs, and corporations are reducing their greenhouse gas emissions. Joel Makower, Chairman and Executive Editor of the GreenBiz Group, moderated the panel that featured Cooper Martin, Director of Sustainability and Solutions for the Center for Solutions at the National League of Cities, David Tulauskas, Vice President and Chief Sustainability Officer of Nestle Waters, Rachel Goldstein, U.S. Public Policy Director at Mars, Tim Juliani, Director of U.S. Corporate Climate Engagement at the World Wildlife Fund, and Susan Robinson, WM's Senior Director of Sustainability and Policy.

The day concluded with an energizing announcement about WM's new virtual [Together Today, For Tomorrow \(TT4T\) Series](#) that will feature up-and-coming leaders in the sustainability space, starting with Gitanjali Rao, inventor and TIME's 2020 Kid of the Year. [Watch the first TT4T video.](#)



FEBRUARY 3-4 | 10:30 AM ET

BREAKTHROUGH
VIRTUAL EVENT

FEATURED SPEAKERS



JONATHAN FOLEY
EXECUTIVE DIRECTOR
PROJECT DRAWDOWN



INDRA NOOYI
FORMER CHAIRMAN AND CEO
PEPSICO



DOUG MCMILLON
PRESIDENT AND CEO
WALMART



SATYA NADELLA
CEO
MICROSOFT

SOCIAL IMPACT

WM SUSTAINABILITY FORUM

Jim Fish, CEO and President of WM, kicked off the second day of the Forum by sharing the path WM is charting to create a more sustainable tomorrow. This was followed by a conversation on inspiring leadership between Tara Hemmer, WM's Chief Sustainability Officer, and Indra Nooyi, PepsiCo's recently retired CEO and one of the world's 100 most powerful women. Next up was a Leading with Purpose panel with Jim Fish, Doug McMillon, President and CEO of Walmart and Satya Nadella, CEO of Microsoft. In the final session of day two, viewers heard from Charles Harbison, Founder and Creative Director at Harbison Studio, about how he became the designer of a sustainable line for Banana Republic in partnership with Harlem's Fashion Row. To close out the day, WM made an exciting announcement about our new **Design Challenge**, where WM is joining forces with Slow Factory Foundation to support the next generation of fashion designers in applying circular and regenerative principles to their work. Applicants have the exciting chance to engage in a seven-month program that will end in a showcase at the 2022 WM Sustainability Forum in February.



FEBRUARY 3-4 | 10:30 AM ET

LEADING WITH PURPOSE CEO PANEL



JIM FISH
PRESIDENT AND CEO
WASTE MANAGEMENT



DOUG MCMILLON
PRESIDENT AND CEO
WALMART



SATYA NADELLA
CEO
MICROSOFT



ECONOMIC IMPACT

CHARITABLE DONATIONS

The WM Phoenix Open generated over **\$3.8 million for charity in 2021**, making donations to more than 200 different organizations throughout the year and funding additional improvements to the local community.

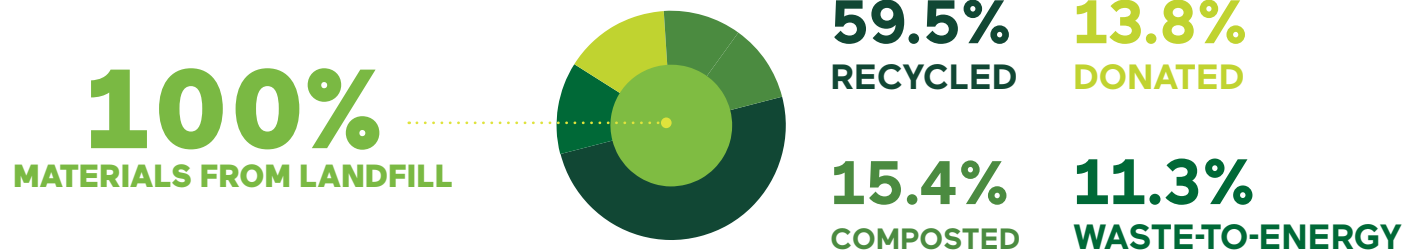
- The Thunderbirds raised \$115,250 through its Faces on 16 campaign, a program that had fans donate money to have their face at the iconic 16th hole. The Thunderbirds plan to distribute the funds to four charities – Arizona Helping Hands, Boys and Girls Clubs of the Valley, Phoenix Children’s Hospital, and Teen Lifeline.
- The Thunderbirds also donated more than \$20,000 to charities chosen by participants in the 2021 Phoenix Suns Charities Shot at Glory. The Golf Channel’s Alexandra O’Laughlin took home first prize this year, finishing within 15 ft of the pin while securing \$15,000 for Ralston House Children’s Advocacy Center. Barstool Sports’ Riggs finished second and raised \$10,000 for The Barstool Fund, while third place finisher, two-time World Series Champ Shane Victorino pulled in \$5,000 for the Shane Victorino Foundation.

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



2021 WM PHOENIX OPEN "THE GREENEST SHOW ON GRASS"

WASTE DIVERSION



REUSE & DONATION



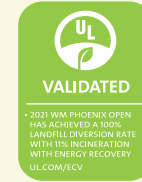
COMMUNITY IMPACT



TRANSPARENT REPORTING



Golf
Environment
Organization
Certification ✓



UL Validation ✓

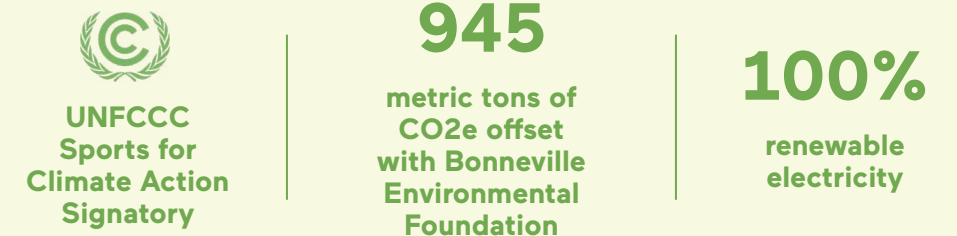
[Virtual Sustainability Tour](#)

[CLICK TO VIEW »](#)

WATER CONSERVATION



GHG MANAGEMENT



APPENDIX



WM PHOENIX OPEN

EMISSIONS BREAKDOWN

The table below outlines all WM Phoenix Open's source and associated GHGs from the 2021 tournament.

Scope 1	Fuel	MtCO ₂ e
Stationary		
Generators and Equipment	Biodiesel	14.3
Other Equipment	Biodiesel	1.6
Light Towers	Biodiesel	1.2
Heating and Cooking	Propane	10.8
Mobile		
Sponsor Cars	Gasoline	14.8
Golf Carts	Gasoline	2.7
TPC Scottsdale Fuel	Gasoline	7.1
TPC Scottsdale Fuel	Diesel	3.9
Waste and Portable Toilet Service	Diesel	5.1
Waste and Portable Toilet Service	CNG	0.03
Refrigerated Trailers	Biodiesel	1.5
Scope 1 Total:		63.0

Scope 2		MtCO ₂ e
Renewable energy	Electricity	0.0
Scope 2 Total:		0

Scope 3	MtCO ₂ e	
Purchased Goods and Services		
Building Materials	277.9	
Food Service	197.5	
Promotional Items & Gifts	35.7	
IT Services	14.1	
Hospitality	6.6	
VIP Gifting	5.0	
Operations Apparel	1.9	
Fuel and Energy Related Activities		
Upstream Emissions	20.2	
Waste Generated in Operations		
Donation - Materials	-0.9	
Donation - Food	-7.0	
Waste-to-Energy	-9.1	
Organics	-28.4	
Recycling	-45.6	
Scope 3 Transportation		
Fan Transportation	3,501.2	
Vendor Transportation	202.5	
Volunteer Travel	112.7	
Player Transportation	51.2	
WM Employee Transportation	36.8	
VIP Travel	7.7	
Thunderbirds Transportation	3.9	
Scope 3 Total:		4,383.8

Total GHG Emissions	4,445.4
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MtCO₂e is metric tons of carbon dioxide equivalent.

The World Resources Institute GHG Protocol, Carnegie Mellon University EIO-LCA Tool, EPA GHG Emissions Factors Hub, and EPA WARM were used to calculate GHG emissions.

The WM 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.

THE THUNDERBIRDS

Organizing the WM Phoenix Open 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 WM Phoenix Open have raised more than \$99.5 million for local charities since 2010 when WM became title sponsor. In its history, dating back to 1932, the tournament has raised more than \$165.6 million for charities in Arizona. For more information on the governance of the Thunderbirds, please consult the [WM Phoenix Open website](#).

WM

Based in Houston, Texas, WM is the leading provider of comprehensive environmental services in North America. In partnership with the PGA TOUR and The Thunderbirds, WM is dedicated to making the WM Phoenix Open the greenest tournament on the PGA TOUR. Learn more about the [WM Sustainability Services Sports and Entertainment team](#) and our corporate sustainability efforts and WM Phoenix Open activities at [wm.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, and has been part of Audubon International's Cooperative Sanctuary Program since 1995. Since 2019, the TPC Scottsdale has maintained its Golf Environment Organization's sustainable golf course certification.

