



2023 WM PHOENIX OPEN

SUSTAINABILITY REPORT



ENVIRONMENTAL IMPACT

The WM Phoenix Open is the largest certified zero waste event in the world with complimentary greenhouse gas emissions and water management initiatives. The use of energy, materials, and water contribute to the creation of greenhouse gas emissions that are harming our planet. We remain committed to minimizing environmental impacts from tournament activities and working for a more sustainable tomorrow.

SOCIAL IMPACT

The social and environmental impacts of climate change are intertwined. Activating an effective social strategy requires a coordinated commitment from The Thunderbirds, WM, the local communities, and tournament vendors and sponsors. With a focus on supporting Arizonans, the tournament prioritizes engaging underserved groups and driving impactful charitable donations across the state. Our 2022 analysis utilizing environmental justice mapping tools from the US EPA shifted how the WM Phoenix Open approaches supporting local communities.

ECONOMIC IMPACT

2023 marked the 88th annual WM Phoenix Open, maintaining our status as one of the five longest established events on the PGA TOUR. The Thunderbirds, the tournament host, raised a record \$14.5 million for local charities while the tournament generated over an estimated \$450 million in total economic impact. In 2024, we are excited to launch the WM Phoenix Open For Tomorrow FundSM to direct additional funding to positive impactful energy, water, and food waste minimization initiatives for underserved communities in Arizona.

The data, analysis and claims in this report are exclusive to the WM Phoenix Open and are not part of WM's corporate sustainability program and reporting.

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

"THE GREENEST SHOW ON GRASS."

WM'S SUSTAINABILITY AMBITIONS

Energy is **RENEWABLE**

We're innovating for climate progress.



Communities are **THRIVING**

We're empowering people to live sustainably.



Material is **REPURPOSED**

We're reimagining a circular economy.



The Thunderbirds, WM, and the tournament's stakeholders coordinate to align with WM's sustainability ambitions related to renewable energy, thriving communities, and repurposing materials. We make every effort to use the WM Phoenix Open's platform to drive industry leadership, demonstrate how other organizations can improve their impacts, and support our incredible community with thoughtful environmental priorities.



2023 WM PHOENIX OPEN

"THE GREENEST SHOW ON GRASS"

MATERIAL RECOVERY



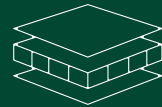
REUSE & DONATION



DONATED
18.9 TONS
of unused food to local non-profits



REUSED
53k+
square feet of signage



DONATED
32.6 TONS
of building materials to local organizations

COMMUNITY IMPACT

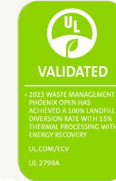


\$14.5M IN CHARITABLE DONATIONS FROM THE THUNDERBIRDS

TRANSPARENT REPORTING



Golf Environment Organization Certification ✓



UL Validation ✓

Digital Sustainability Report

WATER MANAGEMENT

REUSED
15,750 GALLONS
of gray water on course

RESTORED
400M GALLONS
of water since 2015

15 Water Restoration Supporters



GHG EMISSIONS MANAGEMENT



UNFCCC Sports for Climate Action Signatory

\$43,000

contributed to Tribal Renewable Energy Projects

100%

renewable electricity through RECS



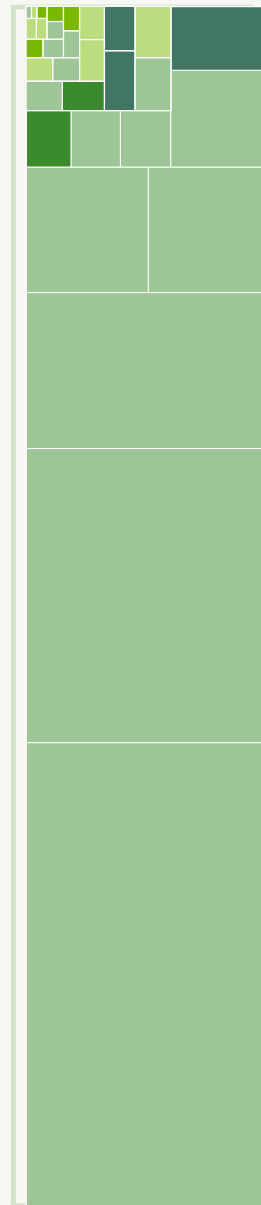
ENVIRONMENTAL IMPACT

GREENHOUSE GAS EMISSIONS

Businesses and sports organizations alike play an important role in driving down greenhouse gas (GHG) emissions and providing a mainstream platform for climate education that aims to inspire widespread behavior change. The [Intergovernmental Panel on Climate Change](#) (IPCC) continues to warn that global warming must not exceed 1.5°C above pre-industrial temperatures by 2050 to avoid the most catastrophic impacts of climate change. The IPCC's most recent reports continue to confirm that climate crisis is already affecting every region of the planet, and that curbing temperature rise at this level requires swift action across all industries and aspects of society.

In line with the IPCC and United Nation's 2030 reduction targets, the tournament aims to reduce GHG emissions by 50% from its 2022 baseline, a reduction of 4,028.1 metric tons of carbon dioxide equivalent (MtCO₂e). This includes emissions reductions from scope 1, 2 and 3 emissions generated by tournament operations except fan travel. The Thunderbirds and WM continue to work on fan transportation emissions reduction initiatives – the tournament's largest source of emissions. While fan travel is not included in our baseline reduction goal, we maintain that reducing this element of the tournament's footprint stands out as a top priority.

SEE
NEXT
PAGE



SCOPE 1 (MtCO ₂ e)	
MOBILE	
STATIONARY	
71.5	VENDOR FUEL
39.3	GENERATORS AND EQUIPMENT
31.7	HEATING & COOKING
24.0	LIGHT TOWERS
15.2	SPONSOR CARS
9.5	GOLF CARTS
8.7	REFRIGERATED TRAILERS
8.1	OTHER EQUIPMENT
2.5	SPONSOR FUEL

SCOPE 2	
0	LOCATION-BASED RENEWABLE ELECTRICITY AND RECS

SCOPE 3 (MtCO ₂ e)	
DOWNSTREAM TRANSPORTATION AND DISTRIBUTION	
EVENT-RELATED TRAVEL	
BUSINESS TRAVEL	
PURCHASED GOODS AND SERVICES	
78,621.2	FAN TRAVEL
4,428.6	BUILDING MATERIAL
2,802.8	FOOD SERVICE
1,484.6	THUNDERBIRDS TRANSPORTATION
594.9	SUPPORT SERVICES
378.9	VENDOR TRAVEL
247.4	VOLUNTEER TRAVEL
111.6	BROADCAST TRAVEL
109.9	SPONSOR TRANSPORTATION
98.8	EMPLOYEE COMMUTING
73.8	OTHER PURCHASED GOODS & SERVICES

SCOPE 3 (MtCO ₂ e)	
70.7	VIP TRAVEL
52.0	PLAYER TRAVEL
48.1	WM TRAVEL
40.9	VIP GIFTING
23.9	WASTE GENERATED FROM OPERATIONS
17.0	IT SERVICES
14.7	SIGNAGE
11.1	OPS APPAREL
4.6	FUEL AND ENERGY RELATED ACTIVITIES
2.4	OPS GIFTING

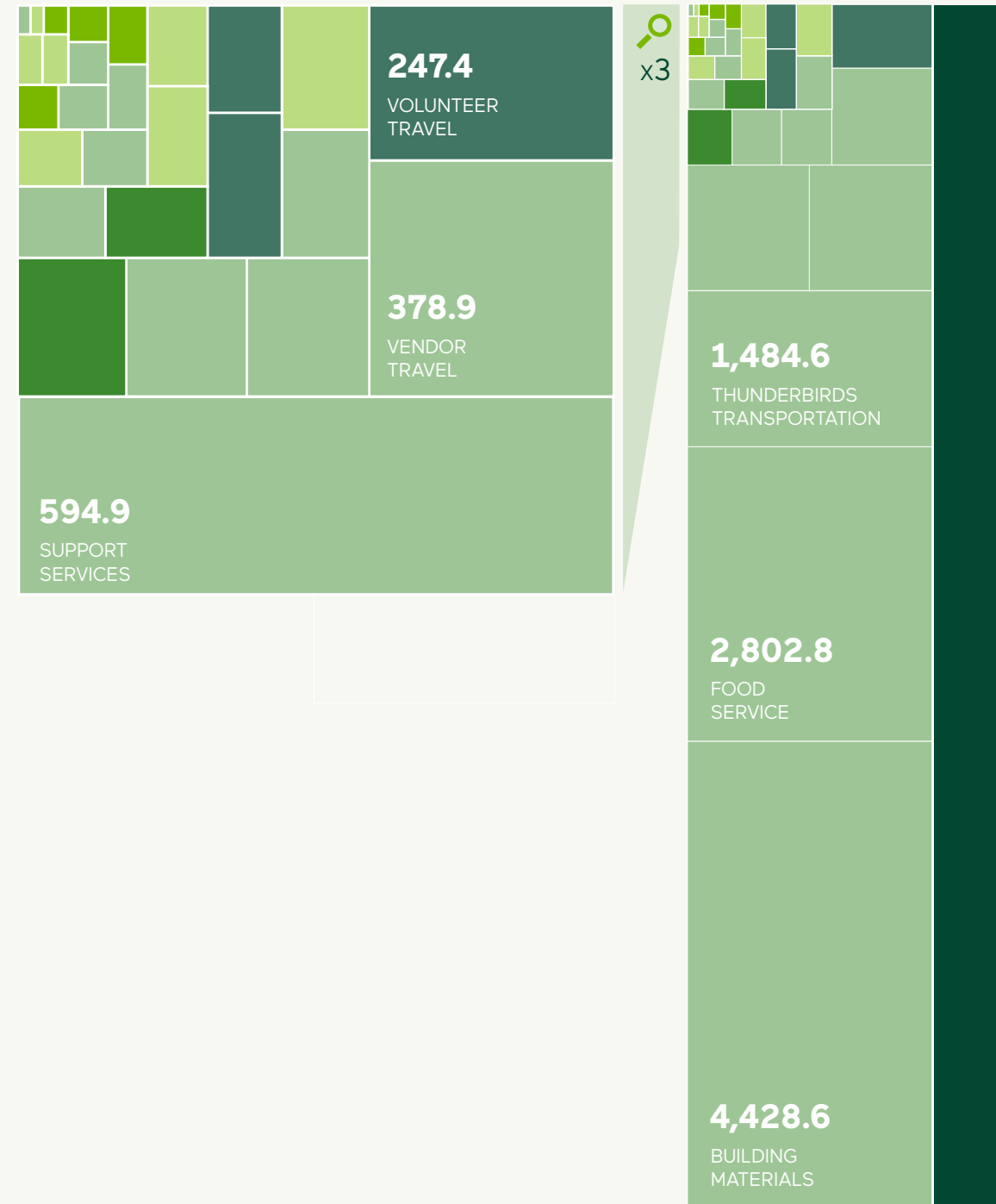
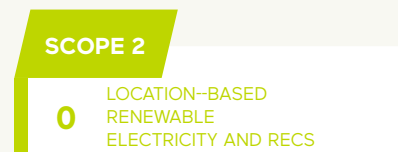
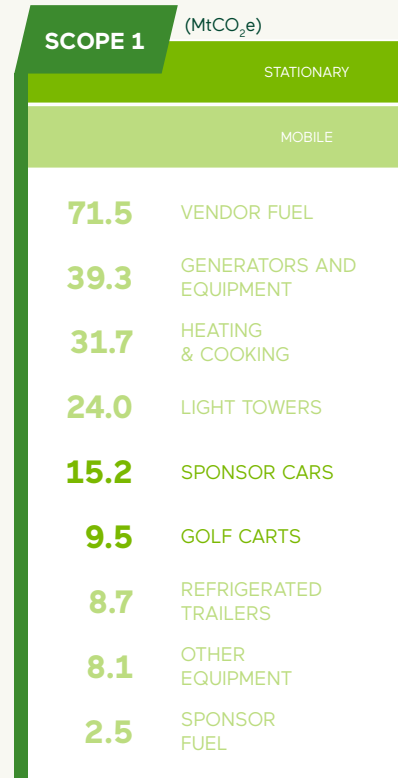
78,621.2 MtCO₂e
FAN TRANSPORTATION

ENVIRONMENTAL IMPACT

GREENHOUSE GAS EMISSIONS

The visualization on the right outlines all WM Phoenix Open emissions sources and associated GHG emissions from the 2023 tournament.

[Click here](#) to review all WM Phoenix Open emissions sources and associated GHG emissions from the 2023 tournament.



ENVIRONMENTAL IMPACT

GREENHOUSE GAS EMISSIONS






The WM Phoenix Open remains committed to the [UNFCCC Sports for Climate Action framework](#), a unifying tool that aims to drive climate awareness through sports. The Sports for Climate Action initiative seeks to position sports organizations on the path of the lower carbon economy and the IPCC's 1.5°C threshold that is set by the Paris Agreement.

In line with our UNFCCC commitment, we employ a range of strategies that seek to reduce GHG emissions generation on and off the course. We prioritize alternative energy use across all event operations. The Thunderbirds purchase 100% renewable electricity through RECs from the local utility, APS, to mitigate the tournament's scope 2 footprint, and generators that are not plugged into the grid run on biodiesel. Most WM trucks used to haul tournament waste run on compressed natural gas and emit less than half the GHG emissions of traditional diesel. The tournament's longstanding success with sending zero waste to landfill prevents GHG emissions associated with material end-of-life.

In 2023, WM purchased voluntary carbon offsets for all scope 1 and a portion of non-fan travel scope 3 emissions. Guided by an analysis that utilized environmental justice tools from the US EPA, WM also put \$43,000 towards the Gila River Indian Community (GRIC) Irrigation Canal PV Project through the [Bonneville Environmental Foundation](#). This represents a path to supporting a meaningful emissions reduction project while also reducing canal water evaporation. [Click here](#) for more information in the Environmental Justice Mapping section.

In 2024, we are launching the WM Phoenix Open For Tomorrow FundSM, a platform created to amplify the tournament's ability to contribute to adverse environmental impact reduction in Arizona. While continuing to combine contributions from WM and the Thunderbirds, this initiative also provides an opportunity for tournament stakeholders to get involved. Fund planning is underway with the intent of financing GHG emissions, water, and materials management projects that aims to support marginalized and vulnerable populations in local communities, particularly groups who may be disproportionately affected by climate change.

Potential Avoided Emissions from Material Recovery (MtCO₂e)*

	ORGANICS	-10.1
	MATERIAL DONATION	-56.9
	FOOD DONATION	-78.5
	ENERGY GENERATION	-86.9
	RECYCLING	-764.9

*Potential avoided emissions are calculated using the EPA's Waste Reduction Model (WARM) to better illustrate the full impact of end-of-life waste treatment methods. These numbers were not included in the GHG Inventory in accordance with GHG Protocol standards.

Waste Methodology

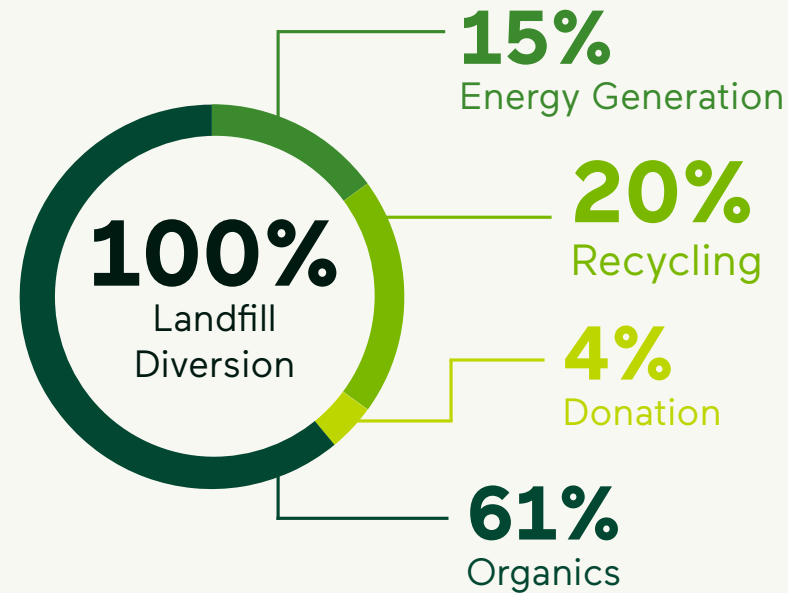
*In alignment with WRI's GHG Protocol, no emissions are allocated for recycling and composting activities as those materials are not reaching end-of-life but rather becoming the raw material inputs for a new product. Positive emissions from these processes are instead allocated to the upstream emissions of the recycled products.

ENVIRONMENTAL IMPACT

MATERIALS

WM launched the Zero Waste Challenge in 2012 with the aim of continuously improving the management of materials consumed on site, expand vendor and fan understanding of proper waste disposal, divert waste from landfills, 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 2023, the WM Phoenix Open again diverted 100% of tournament materials from the landfill. Over the thirteen 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 impacts of materials 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 involves accounting for the impacts that can occur at all stages of a product's life cycle—from the design, manufacturing, transport, and packaging of the item, to how the WM Phoenix Open golf fan will dispose of it, to whether it gets recycled, composted, reused, incinerated, or landfilled. Choices made at each step of a product's life can optimize material usage, reduce water and energy consumption by keeping resources in the value chain, and mitigate GHG emissions. A focus on comprehensive SMM has led the tournament to require vendor use of material types with lower embedded GHG emissions and focus on the expansion of reusable material programs.



SOME RESULTS

- 100% of vendors contractually committed to the reuse, donation, recycling, or composting of all materials brought on site.
- Expanded TURN reusable cups initiative during tournament week to a full hospitality tent with an 85% return rate.
- Almost 15 tons of mesh fencing sent for recycling into new WM carts made by Rehrig.
- 62% of 2023 signage reused from previous tournaments.
- 67% of 2023 signage stored for reuse.
- 970 pounds of wine and liquor bottles turned into reusable glassware through a local vendor, Refresh Glass.
- Daily tickets, pairing sheets, parking passes, and parking maps printed on paper that uses 30% post-consumer recycled content.
- 100% of tournament paper materials were Forest Stewardship Council Certified.
- 18.9 tons of unused, perishable food was donated to local organizations by M Culinary Concepts and Levy Restaurants.
- 19.6 tons of wood donated to Stardust Building Supplies.

ENVIRONMENTAL IMPACT

WATER

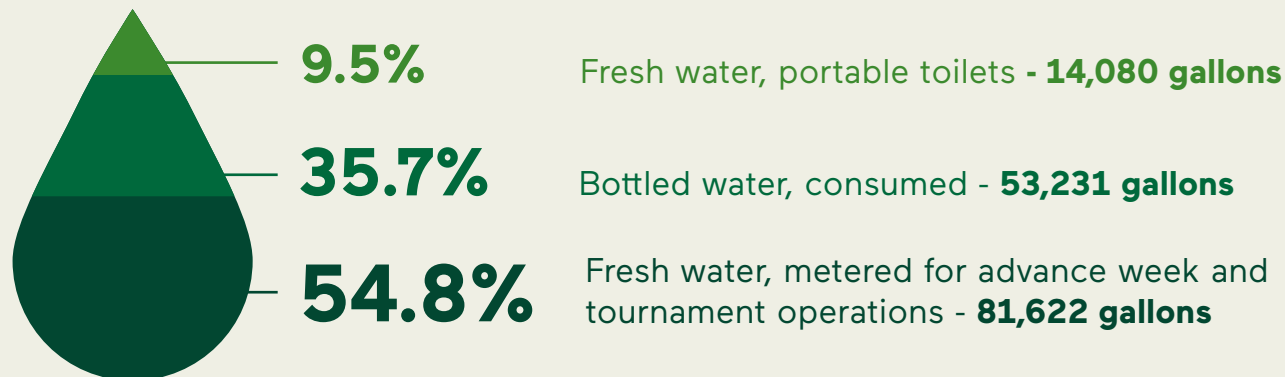
The TPC Scottsdale's high efficiency water management system helps to optimize gray water reuse, separate from tournament operations. On-course tournament conservation measures also help ensure that water is used responsibly. Since 2011, approximately 72,000 gallons of water from cooking and cleaning have been reused in the portable toilets.

2023 marked the eighth year of the tournament's coordination with [Bonneville Environmental Foundation](#) as a [Change the Course](#) participant. Tournament sponsors, vendors, and operational collaborators join The Thunderbirds and WM to balance the WM Phoenix Open's water impacts. Fifteen organizations, more than double

the number of participants in previous years, combined efforts to restore 35 million gallons of water to Arizona's Verde River Valley, bringing the program's eight-year total to 400 million gallons restored. To further the reach of this restoration story, the PGA TOUR published an [article](#) about the tournament's water restoration efforts.

The WM Green Scene also featured water education. Signage highlighted the restoration initiative as well as program sponsors, and a new cornhole game educated fans about how reusing and recycling textiles conserves embedded water, the water required to make products and food.

TOURNAMENT WEEK DIRECT WATER FOOTPRINT



ENVIRONMENTAL IMPACT

VENDOR HIGHLIGHT – M CULINARY CONCEPTS

[M Culinary Concepts](#) embodies the WM Phoenix Open’s sustainability ambitions. As a keystone tournament vendor since 2010, M Culinary helps bring our zero waste vision to life across the course. Their team’s passion for elevating the tournament’s commitments stands out throughout the year while planning for procurement standards and tournament operations.

As the largest food provider on site, M Culinary works with WM each year and is contractually required to use certified compostable food service products and recyclable or reusable beverage containers. Responsibly diverting waste from landfill cannot be done without strict control over incoming materials and M Culinary’s dedication to compliance with the tournament’s sustainable materials requirements, as well as innovation in material use, is a pinnacle aspect of the WM Phoenix Open’s zero waste success.

M Culinary maintains a strong relationship with a local non-profit food recovery program, [Waste Not](#), to recover perishable food for redistribution in the community. Waste Not transports unused food from the WM Phoenix Open to over 60 diverse Phoenix agencies including schools, daycare centers, rehabilitation centers and senior facilities throughout the Greater Phoenix area.

M Culinary also sources their ingredients and materials from local suppliers whenever possible, utilizes 100% compostable service ware across other operations, and strives to manage their fleet vehicles to reduce fuel consumption and associated GHG emissions.

“ We’ve learned a lot through the WM Phoenix Open and then we internalized those environmental priorities and live them every day. We are proud to help WM continue to push the limit of what a large-scale sustainability effort looks like every year.”

— **Doug Janison**
Chief Operations Officer | M Culinary Concepts

Thanks to coordination with M Culinary, WM added an additional community food waste outlet for the 2023 tournament, hauling food scraps to its next best use at the [Arizona Worm Farm](#). The worm farm accepted more than 12 tons of pre-consumer food remains. This organic material feeds black soldier fly larvae that then feed worms. The worms’ castings become a nutrient rich soil enrichment product that TPC Scottsdale was able to purchase back and use on the golf course – a system exemplifying localized circularity of a waste stream.



ENVIRONMENTAL IMPACT

SUSTAINABILITY EDUCATION

WM uses the tournament's platform to help educate fans about how to make a positive impact on the environment. To help combat recycling contamination issues nationwide, WM focuses on teaching fans how to recycle correctly, specifically keeping food, liquid, and plastic bags out of recycling bins.

PGA TOUR player Matthew Fitzpatrick and former NFL star Ryan Fitzpatrick brought the unique energy of the WM Phoenix Open to viewers at home by participating in "Undercover Ops," where the all-star athletes duped WM staff and PGA TOUR players during a faux recycling training exercise and a comedic montage of the "operation" aired on [PGA TOUR channels](#).

Players also encountered educational efforts throughout their WM Phoenix Open experience. A quick guide to recycling and composting on course as well as calls-to-action related to the tournament's initiatives for water restoration, GHG emissions management, and zero waste were posted in locker rooms and player dining areas. Unique in 2023, players were able to make a real-time positive impact by using a posted QR codes that allowed them to purchase verified carbon offsets for their air travel. The WM Green Scene once again featured climate education and fan games. Alongside embedded water cornhole, a version of the game illustrated how minimizing and composting food waste helps to reduce GHG emissions.

WM continued to lead behind-the-scenes sustainability tours for sports organizations, PGA TOUR sponsors and partners, and other sustainability professionals. Participants learned about the intent behind the WM Green Scene games, bin design, the vendor engagement process, and other planning strategies for the tournament's comprehensive sustainability program.

Events can have an incredible ripple effect. Sustainability is in the DNA of the WM Phoenix Open. As a result, our vendors, sponsors, and fans have an opportunity to consider their footprint. If they leave with a different understanding of climate impacts, there is potential for that knowledge and experience to outweigh on-course achievements.



SOCIAL IMPACT

WM SUSTAINABILITY CUSTOMER SESSION

The 2023 WM Sustainability Customer Session brought together corporate executives and sustainability leaders from WM and professional sports organizations. Under this year's theme, Sustainability in Sports, the event focused on the importance of integrating sustainability into live events. Highlights of the event include opening remarks from WM's SVP and Chief Sustainability Officer, Tara Hemmer; a customer panel featuring the Indianapolis Motor Speedway, Climate Pledge Arena, and Topgolf where sustainability practitioners talked about actions they are taking to meet sustainability goals; and a live discussion between WM CEO Jim Fish and the PGA TOUR Commissioner, Jay Monahan.



SOCIAL IMPACT

COMMUNITY ENGAGEMENT

By supporting philanthropic activities and programs throughout the week, the WM Phoenix Open seeks to benefit communities across Arizona and leaves a lasting, positive social impact long after the tournament ends.

OUTREACH AND ACCESS

The Thunderbirds once again celebrated active first responders as well as active and retired US military personnel with their guests at the Birdies for the Brave Patriots' Outpost. This is the 20th year that the tournament has extended this free invitation and an exceptional view of the 18th Hole as a small gesture of thanks to our hometown heroes.

Dream Day, which occurs the Tuesday of the WM Phoenix Open week, is the pinnacle event for the First Tee – Phoenix School & Community Program. Volunteers, dozens of The Thunderbirds, and nearly every professional sports team's mascot in Arizona is on hand to greet the kids. For this group of almost 500 grade school students, this field trip is the first time they have been to a golf course. We hope that this helps tear down the barrier of belonging and makes everyone feel welcome as the kids try golf for themselves on putting, chipping and full-swing stations. When inviting schools to Dream Day, we intentionally involve Title 1 and schools are likely to have the highest percentage of kids that have never been to a golf course.

The tournament festivities continued later in the morning when community leaders and celebrities joined PGA TOUR players and Valley team mascots in the annual San Tan Ford Special Olympics Putting Challenge. Twenty-three-time gold medalist Michael Phelps, former Diamondbacks pitcher Brandon Webb and San Tan Ford owner Tim Hovik are just a few of the participants that paired up with Special Olympics athletes to putt nine holes.



SOCIAL IMPACT

ENVIRONMENTAL JUSTICE MAPPING

LOCAL ANALYSIS

WM conducted a community impact analysis for the 2022 WM Phoenix Open using US EPA environmental justice tools EJScreen and EnviroAtlas. This analysis included a review of demographic and socioeconomic indicators, environmental indicators, health disparities, critical service gaps, and impacts of climate change, which were considered within an 18-mile radius of the WM Phoenix Open site. The radius was set based on local community considerations and proximity to local Tribal Nations. The tournament will continue to consider surrounding communities in designing and implementing the sustainability and social impact efforts.

GENERAL FINDINGS

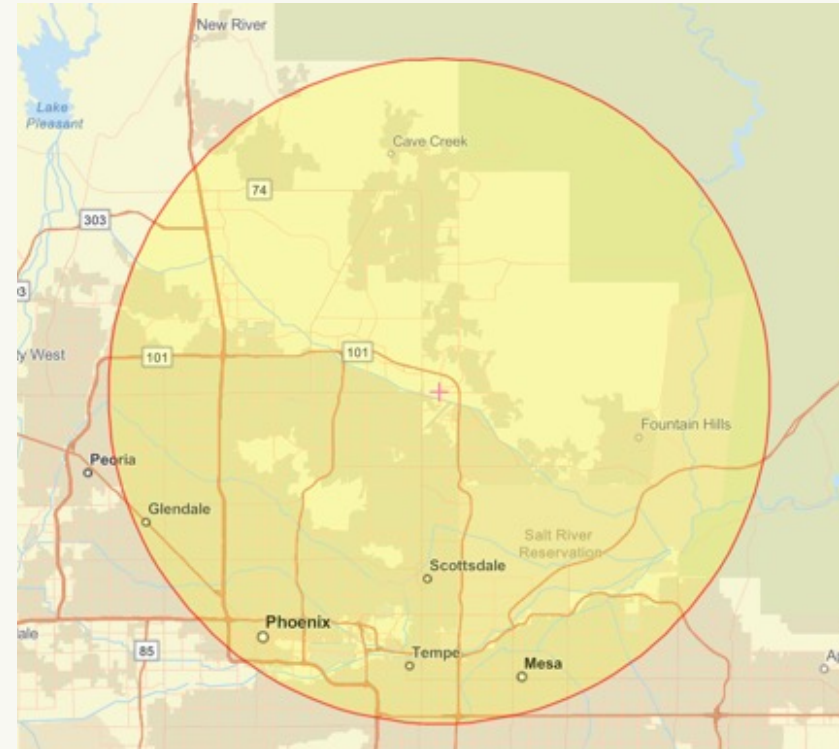
The WM Phoenix Open is located near several large communities with a diversity of ethnicities, races, migration backgrounds, and languages spoken. Within the 18-mile radius study area, US EPA's environmental justice data indicates a pattern of vulnerable communities dealing with environmental factors that affect human health such as extreme heat, heat islands, and air pollutants.

Working to understand the makeup and unique vulnerabilities of the surrounding area is essential to moving forward with holistic, community grounded environmental actions. US EPA data was leveraged to better understand effects of extreme heat and air pollutants to nearby at-risk communities and to focus engagements and impact reduction resources in those communities.

TRIBAL NATIONS PROJECTS

In 2023, the WM Phoenix Open and project supporters again donated to the Navajo Water project and WM contributed to the GRIC Irrigation Canal PV project.

- The [Navajo Water Project](#) is an Indigenous-led, community-managed utility alternative that brings hot and cold running water to homes without access to water or sewer lines. The work creates meaningful, high-paying jobs, many with benefits like 100% employer-paid health coverage.
- The [GRIC Irrigation Canal PV Project](#) implemented the first phase solar PV constructed over the Tribe's irrigation canals. The project supports economic development for GRIC and tribal utility, reducing the cost of power for the GRIC's irrigation system, the need to import coal power, water evaporation from irrigation canals, and water use associated with coal power imported to the reservation.



ECONOMIC IMPACT

ANALYSIS

Based on a 2022 economic impact analysis conducted by The Thunderbirds and Arizona State University on local activities around tournament week, the WM Phoenix Open generated an estimated economic impact of over \$450 million, demonstrating the widespread benefits to the local community.

CHARITABLE DONATIONS

The Thunderbirds generated a record \$14.5 million for charity in 2023, making donations to more than 200 different organizations throughout the year and funding additional improvements to the local community.

Players, caddies, volunteers, and fans covered TPC Scottsdale in green for the 12th annual GREEN OUT day to show support for environmental sustainability. The Thunderbirds donated \$170,000 to three environmentally focused projects and organizations – Navajo Water Project, Waste Not, and the GRIC Irrigation Canal PV Project.

The stands at the iconic 16th Hole were full of enthusiastic golf fans for the WHOOP Shot at Glory held on Wednesday afternoon of tournament week. This is a closest-to-the-pin contest for a chance at winning \$1 million for charity. Olympic all-star Michael Phelps came in first place securing \$40,000 for his charity of choice. Second place went to golf YouTube sensation Peter Finch, who took home \$25,000 for his charity. Third place went to Minnesota Vikings receiver Adam Thielen who secured \$15,000 for charity.

Learn more about the benefiting charities at [WM Phoenix Open website](#).



CERTIFICATIONS

For a decade, the WM Phoenix Open has validated its environmental program through third-party certifiers.

GOLF ENVIRONMENT ORGANIZATION

In 2023, we achieved our seventh [Golf Environment Organization](#) (GEO) tournament certification. The WM Phoenix Open was the first PGA TOUR tournament to achieve this certification and remains the most-attended event ever to achieve this recognition. This holistic certification covers sections on Planning, Site Protection, Natural Resource Management, Access and Equity, and Community Legacy.



UL

For the eleventh straight year, [UL](#) provided a third-party validation of the WM Phoenix Open's zero waste program. UL requires a strict review of planning, on-course operations and detailed diversion processing reporting. In 2023, the tournament achieved 100% landfill diversion with 15% thermal processing with energy recovery. The tournament accounts for this thermal processing with energy recovery in its GHG emissions profile and the tournament continues to work toward minimizing usage of this outlet in lieu of alternatives with a lower GHG emissions footprint.



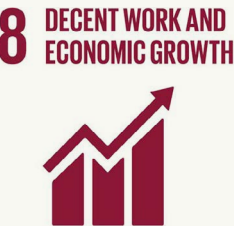
UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The United Nations [Sustainable Development Goals](#) (UN SDGs) provide a set of universal goals to align behaviors 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.



Goal 1: End poverty in all its forms everywhere

The United Nations Sustainable Development Goals (UN 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.



Goal 8: Decent work and economic growth

The WM Phoenix Open generates a substantial positive economic benefit on the local community, resulting in more than an estimated \$450 million of economic activity. 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 across industries. Sponsorship means more than branding at the tournament, so The Thunderbirds and WM actively engage organizations interested in contributing to our sustainability initiatives related to responsible procurement, water restoration, GHG emissions reductions, and waste diversion. WM's customer session series convened influential thought and business leaders who share the passion to evolve our thinking and systems to adapt to the changing demands of the environment.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Goal 12 Responsible consumption and production

Sustainable consumption and material management are top priorities 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 like-minded brands involved in the tournament's supply chain to utilize and promote products made from recycled materials.

13 CLIMATE ACTION



Goal 13: Climate Action

The WM Phoenix Open aims to model GHG emissions measurement and management to reduce our adverse impacts while also inspiring others to take action. The Thunderbirds and WM engage vendors to help reduce the tournament's GHG footprint on course and down the supply chain. The WM Phoenix Open established a new GHG emissions baseline for the tournament in 2022 and aspires to set science-based targets in line with our UNFCCC Sports for Climate Action framework 2030 commitment and the Paris Agreement.

APPENDIX



WM PHOENIX OPEN

The table below outlines the WM Phoenix Open's sources and associated GHG emissions from the 2023 tournament.

EMISSIONS

Scope 1	Fuel	MtCO ₂ e
Stationary		
Generators - On-course	Biodiesel	35.90
Generators - Parking Lots	Biodiesel	3.41
Heating and Cooking	Propane	31.65
Light Towers - On-course	Biodiesel	2.02
Light Towers - Parking Lots	Biodiesel	21.83
Misc. Equipment	Misc.	8.05
Refrigerated Trailers	Biodiesel	8.67
Vendor Fuel Usage	Diesel / Gasoline	71.50
Sponsor Fuel Usage	Diesel / Gasoline	2.52
Mobile		
Sponsor Cars	Gasoline	15.23
Golf Carts	Gasoline	9.47
Scope 1 Total:		210.24

Scope 2		MtCO ₂ e
Renewable Energy	Location-based Renewable Electricity and RECs	0
Scope 2 Total:		-

Scope 3	MtCO ₂ e
Business Travel	
Business Travel	48.06
WM Travel	98.81
Downstream Transportation and Distribution	
Fan Travel	78,621.15
PGA TOUR Player Travel	51.98
PGA TOUR Player Hotels	11.86
VIP Travel	70.72
Volunteer Travel	247.35
Fuel and Energy Related Activities	
Fuel and Energy Related Activities	4.61
Purchased Goods and Services	
Building Materials	4,428.60
Food Service	2,802.82
IT Services	17.04
Operations Team Apparel	11.10
Operations Team Gifting	2.37
Other Purchased Goods and Services	73.80
Signage	14.65
Support Services	594.96
Thunderbirds Transportation	1,484.58
VIP Gifting	40.93
Upstream Transportation and Distribution	
Broadcast Travel	111.60
Sponsor Transportation	109.91
Vendor Travel	17.04
Waste Generated from Operations	
Waste Generated from Operations	23.96
Scope 3 Total: 89,249.81	

Total GHG Emissions	89,460.05
----------------------------	------------------

NOTES

MtCO₂e is metric tons of carbon dioxide equivalent.

The World Resources Institute GHG Protocol, Climate Registry General Reporting Protocol, 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 GHG emissions and analysis reflected in this report are exclusive to the WM Phoenix Open and are not part of WM's corporate GHG inventory and reporting.

To learn more about WM's sustainability efforts and ambitions, please visit sustainability.wm.com.

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 improve the quality of life in their communities. In its history, dating back to 1932, the tournament has raised more than \$190.6 million for charities in Arizona. The Thunderbirds and the WM Phoenix Open have raised over \$124.5 million for local charities since 2010 when WM became title sponsor. Learn more information about the governance of The Thunderbirds and the organization's charitable impacts at the [WM Phoenix Open website](#).

WM

Based in Houston, Texas, WM is North America's largest comprehensive waste management environmental solutions provider. In collaboration with the PGA TOUR and The Thunderbirds, WM is dedicated to making the WM Phoenix Open the most sustainability-minded tournament on the PGA TOUR. Learn more about [WM Advisory Services](#), our [company sustainability efforts and ambitions](#), and [WM Phoenix Open](#) activities.

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.

