# 2023 SUSTAINABILITY REPORT



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Letter from Sister Judith Ann

### LETTER FROM THE CEO

I extend my warmest greetings to each of you as we embark on yet another chapter in our journey towards sustainability and excellence in health care. It is with great pleasure and pride that I introduce to you OSF HealthCare's Sustainability Report, a comprehensive document that highlights our dedication to environmental stewardship and social responsibility.

In an era defined by unprecedented challenges and evolving societal needs, the importance of sustainability in health care cannot be overstated. As a leading health care organization, OSF recognizes our unique position to effect positive change not only within the confines of our facilities but also throughout the broader communities we serve.

This year's report serves as a testament to our unwavering commitment to sustainability across all facets of our operations. From our efforts to reduce energy consumption and mitigate our carbon footprint to our initiatives aimed at reducing waste, we have made significant strides in aligning our actions with our Values.

At the heart of our sustainability agenda lies a deep sense of responsibility – to our patients, our communities and the planet. We recognize that healthy communities thrive in a clean, green environment. That's why we approach every decision with a future-focused lens, understanding that our actions today will have a lasting impact on generations to come.

Our sustainability journey is marked by collaboration, innovation and a relentless pursuit of excellence. Through the implementation of cutting-edge technology and the cultivation of a culture that values sustainability, we have achieved notable progress in our quest to mitigate our environmental impacts. Yet, we recognize that our work is far from complete. As we reflect on our accomplishments and milestones, we also acknowledge the challenges that lie ahead. Climate change, pervasive and long-lasting chemicals in the air and water, resource scarcity, and health disparities continue to pose significant threats to the well-being of our planet and its inhabitants. Therefore, we must commit to redoubling our efforts and remain steadfast in our commitment to driving positive change.

I invite each of you to explore this year's sustainability report and join us in our efforts to build a healthier, more sustainable world for generations to come. Together, we have the power to effect meaningful change and leave a lasting legacy of compassion, innovation and stewardship. Thank you for your continued support and partnership as we strive to redefine the future of health care – one sustainable step at a time.

Robert Sehring Chief Executive Officer

# ABOUT OSF HEALTHCARE

NUMBER OF MISSION PARTNERS **24,000** 

NUMBER OF ADVANCED PRACTICE PROVIDERS **747** 

NUMBER OF PHYSICIANS **1,159** 

YEAR FOUNDED

1877

NUMBER OF

LOCATIONS

159

2023 OSF HealthCare Sustainability Report | Introduction

### **ABOUT US**

OSF HealthCare is an integrated health system founded by The Sisters of the Third Order of St. Francis and headquartered in Peoria, Illinois. OSF follows the moral vision and teaching of the Catholic Church through a service of love and compassion, fulfilling a Mission of caring and peace consistent with the needs of the Church and the people served.

## **OUR MISSION**

In the spirit of Christ and the example of Francis of Assisi, the Mission of OSF HealthCare is to serve persons with the greatest care and love in a community that celebrates the Gift of Life.

## **OUR VISION**

Embracing God's great gift of life, we are one OSF Ministry transforming health care to improve the lives of those we serve.

## **OUR VALUES**

JUSTICE: Personal worth and dignity of every person we serve regardless of race, color, religion and ability to pay

COMPASSION: Caring response to the physical, emotional and spiritual needs of the people we serve

INTEGRITY: Decision-making based on Catholic ethical principles and Catholic social teachings in every activity of the system

TEAMWORK: Collaboration with each other, with physicians and with other providers to deliver comprehensive, integrated and quality health care

EMPLOYEE WELL-BEING: Concern for the physical, spiritual, emotional and economical well-being of employees

SUPPORTIVE WORK ENVIRONMENT: Quality work environments which focus on comprehensive, integrated quality service and opportunities for employee growth

TRUST: Open and honest communication to foster trust relationships among ourselves and with those we serve

STEWARDSHIP: Responsible stewardship of the financial, human and technological resources of the system

LEADERSHIP: Leadership in the health field and in the communities we serve

### **OUR APPROACH TO ENVIRONMENTAL STEWARDSHIP**

A healthy, pollution-free environment is essential for fostering healthy communities and healthy individuals. That's why environmental stewardship is an integral aspect of the OSF HealthCare Mission.

### **OSF ENERGY & SUSTAINABILITY PROGRAM**

OSF HealthCare fulfills the Mission and Vision to transform health care and improve lives through the Energy and Sustainability program, which focuses on three main areas: Energy and Certain Gases, Waste and Recyclables, and Purchased Goods and Services. The efforts to reduce the environmental footprint of OSF are shared in this report.

#### **OSF SUSTAINABILITY ADVISORY COUNCIL**

OSF HealthCare has a Sustainability Advisory Council, comprised of senior leaders from various divisions, whose purpose is to provide guidance and direction to sustainability efforts of OSF. The advisory council's charter recognizes the connection between environmental stewardship and the OSF Mission, which is expressed by this guiding principle:

OSF believes the health of our planet is inextricably linked (5)) to the health of all people. Pollution and climate change are affecting global health and OSF can help reverse their devastating effects by mitigating its impacts.

£

Environmental stewardship is in the fabric of the Franciscan V heritage of OSF. With compassion for the poor and vulnerable most impacted by environmental harm, OSF recognizes the dependent relationship between care for creation and care for community.

OSF is committed to doing its part, not only because it's our role as a leader in health care but also because doing so makes us a more innovative, resilient organization and inspires confidence in our Mission Partners, patients, suppliers and the communities that we serve.







### **BY THE NUMBERS**

#### OSF and the Environment

To maximize impact, the OSF environmental team prioritized its energy and sustainability efforts on a specific group of facilities larger than 20,000 ft2 in 2023. This targeted approach, referenced in this report, includes 52 sites that collectively account for 83.7% of the total energy usage of OSF.

#### **Resource Consumption**

Energy: 2,044,830,000 kilo-British thermal units (kBtu) Water: 332,625,600 gallons Fuels: 591,767 gallons (includes gasoline, fuel-oil, diesel, jet fuel and combined) Food: 349,886 pounds of animal protein (includes beef, chicken, pork and fish) Styrofoam: 3,179,010 cups purchased Paper: 752,257 pounds of white office printer paper

#### **Environmental Outputs**

Greenhouse Gases: 215,156 metric tons of carbon dioxide equivalent (MT CO.e) (Scope 1 & 2) Air Pollution<sup>1</sup>: 47.3 tons of nitrogen oxides and 3.5 tons of particulate matter (hospitals only) Solid Waste: 12,328,999 pounds (hospitals only) Medical Waste: 1,281,301 pounds (hospitals only)

## 52 SITES 13M+

**SQUARE FEET** 83.7% **OF ENERGY USAGE** 

## **ENERGY & CERTAIN GASES**

There are several types of planet-warming gases generated directly or indirectly by the healthcare industry, including carbon dioxide, methane, nitrous oxide and other chemicals used in anesthesia and refrigeration/air conditioning. The impact of these gases can be normalized to carbon dioxide (CO<sub>2</sub>) and thus are collectively referred to as carbon emissions. These emissions impact climate and air pollution.

#### CARBON EMISSIONS

While the environmental footprint of OSF encompasses many areas, conventional and climate-changing air pollution pose the most significant health and environmental threats. However, this also presents the greatest opportunity for reduction.

their overall impact. These Scopes track emissions from different stages of operation.

- Scope 1: Direct Emissions These come from sources that are controlled on-site, like fuel combustion in our facilities from boilers, furnaces or vehicles.
- from the organization's energy usage.<sup>2</sup>
- waste disposal and other indirect sources.<sup>3</sup>

Energy consumption and certain gas emissions fall under Scopes 1 and 2.

2023 Scope 1 and 2 Carbon **Emissions (in metric tons)** 

> Electricity 141,058 65.6%

<sup>2</sup> U.S. Environmental Protection Agency, "Scope 1 and Scope 2 Inventory Guidance," https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance <sup>3</sup> U.S. Environmental Protection Agency, "Scope 3 Inventory Guidance," https://www.epa.gov/climateleadership/scope-3-inventory-guidance <sup>4</sup> Other Fuels includes diesel, gasoline, fuel oil and jet fuel

Greenhouse gas emissions are categorized into three Scopes, each measured in equivalent tons of carbon dioxide (CO<sub>2</sub>e) to show

• Scope 2: Indirect Emissions - These are associated with the purchase of electricity. While these may physically occur at the facility where they are generated, they are still accounted for in an organization's greenhouse gas emission inventory because they result

• Scope 3: Other Indirect Emissions - This broader category encompasses emissions from our supply chain purchasing activities,



#### **ENERGY**

OSF HealthCare is committed to reducing its carbon footprint through targeted energy efficiency projects, focusing on its select group of large facilities (over 20,000 ft<sup>2</sup>). These projects are crucial as buildings and equipment require a significant amount of energy. Each year, the energy use of OSF is comparable to that of around 15,850 homes in Illinois.<sup>5</sup> Notably, 95.6% of the OSF Scope 1 and 2 greenhouse gas emissions stem from building energy consumption.

#### 2023 OSF Building Energy Use

Type of Energy	Quantity	Cost	Equivalent CO <sub>2</sub> (MT CO <sub>2</sub> e)
Electricity (kWh)	241,135,478	\$20,531,900	141,058
Natural Gas (therms)	12,223,335	\$5,777,654	64,674
Generators & Boilers (gallons)	24,737	\$74,245	252
Total (MMBtu)	2,048,240	\$26,383,799	205,984

#### Energy Achievements Across OSF

OSF uses ENERGY STAR<sup>®</sup> scores, a program launched by the US Environmental Protection Agency, to rank a hospital's energy performance. This program helps organizations better understand how a building's energy consumption measures up against similar buildings nationwide. The ENERGY STAR score is based on 12 months of energy consumption and is scored on a scale of 1-100, with 75 or higher indicating the building as a top performer.

When OSF started using the ENERGY STAR program to assess their buildings in 2019, no hospital scored higher than 75, with only 15% achieving a score higher than 50. However, with energy efforts continuing over the last several years, three OSF hospitals scored higher than 75 in 2023 and 56% of hospitals scored higher than 50.

Another remarkable achievement came in the form of the Energy to Care Award, earned by OSF HealthCare Saint James – John W. Albrecht Medical Center in Pontiac, Illinois, and OSF HealthCare St. Joseph Medical Center in Bloomington, Illinois. This award given by the American Society for Health Care Engineering (ASHE) recognizes those that reduce their energy consumption by at least 10% year over year.



On the right, Joshua Meade, director of Facility Operations and Planning - OSF Eastern Region, accepts the 2023 Energy to Care award from ASHE for energy performance at OSF Saint James in Pontiac.

#### **Energy Projects**

- Total Projects Completed: 34
- Total Project Costs: \$2,010,055
- Utility Incentives (to Vendor): \$760,570
- Cost to OSF: \$1,249,485
- Utility Incentives (to OSF): \$79,200
- Annual Savings: \$423,600/year
- Combined Internal Rate of Return: 33.6%
- Energy Saved: 38,555,690 kBtu
- CO, Emissions Avoided: 3,960 MT/year

#### Energy Efficiency Efforts at OSF Saint James (Pontiac)

In 2023, OSF Saint James completed a facility-wide upgrade of the building automation system. The project received \$100,000 in incentives from local utilities to replace the existing outdated controls system with new control panels, sensors, transmitters and end devices. This is the first OSF hospital to have all HVAC equipment fully controlled and monitored through Automated Logic's WebCTRL system, which is OSF's standard building automation system. This project is projected to decrease energy costs by about \$50,000/year with an internal rate of return (IRR) of 17%. The hospital's energy consumption will be reduced by 4,580,000 kBtu, which is equivalent to 645 tons of greenhouse gases. That's equal to the energy use of 74 homes for one year.



\*Calculated over 12-month periods, this chart uses weather normalized site EUI.

5 Homes in Illinois use 44% more energy than the average U.S. household, according to the U.S. Energy Information Administration, https://www.eia.gov/consumption/residential/reports/2009/state\_briefs/pdf/IL.pdf

Their journey toward energy efficiency excellence began in the fall of 2021 when OSF replaced a failing chiller with a highefficiency centrifugal chiller. Capacity was also added that year to limit the use of a steam absorption chiller. Continuing these efforts over the last two years, the campus has been able to reduce their energy intensity by 32% and prevent the release of over 1,000 metric tons of CO<sub>2</sub> emissions. That is equivalent to one full year of energy usages of over 150 homes. These statistics helped them achieve an ENERGY STAR score of 84 for national hospital energy efficiency.

OSF Saint James was able to achieve this because of their continued energy improvement efforts, which have included monitor-based commissioning, upgrades to the building automation system and the formation of a "Green Team" that meets monthly to discuss sustainability and energy usage.

#### Community Solar

OSF purchases solar energy from several community solar projects in Illinois, which are mid-sized projects (10 to 40 acres) operated in a manner that benefits regional and local subscribers. In 2023, OSF saved \$88,854 by buying 6,065,449 kilowatt-hour (kWh) of solar electricity, which made up about 2.5% of its total energy use.





#### Electric Vehicle Charging Station

In 2023, OSF upgraded a broken and outdated electric vehicle charging device at OSF HealthCare Saint Clare Medical Center in Princeton, Illinois. The new ChargePoint station is a level-2 dual-port charger that allows for two vehicles to charge simultaneously. This charging station provided fuel for about 2,030 miles of driving with zero tailpipe emissions.

#### Anesthestic Gas eCO



### Decrease in desflurane usage from 2022 to 2023

#### Steam Piping Insulation at OSF Saint Francis Medical Center (Peoria)

Uninsulated steam distribution and condensate return lines are a constant source of wasted energy. Insulation can typically reduce energy losses by 90% and can help ensure the proper steam pressure of plant equipment.<sup>6</sup> In March of 2023, an energy audit was performed at OSF HealthCare Saint Francis Medical Center in Peoria, Illinois, to identify areas of uninsulated steam piping. This project installed 267 removable jackets, 153 fittings and over 1,000 linear feet of steam and condensate piping insulation, which will save OSF over 100,000 therms/year of natural gas totaling over \$70,000 each year. Ameren awarded OSF \$104,700 in incentives for this installation project, bringing the out-of-pocket cost down to \$156,500. The IRR for this project is 44.6%, with an annual carbon emissions reduction of 555 metric tons (equivalent to 620,550 pounds of coal burned annually<sup>7</sup>).



#### **OTHER FUELS**

87%

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Met

OSF uses several types of fossil fuel energy sources including gasoline, diesel, fuel oil and aviation fuel. For example, the OSF fleet of over 800 vehicles consumes just over 270,000 gallons of gasoline and 49,000 gallons of diesel fuel at a cost of \$1.17 million. Compared to buildings, the planet-warming air emissions associated with vehicles are relatively small (1.4% or 2,904 metric tons of  $CO_2$ ), however mobile fuel use is directly under the control of OSF and as such represents an opportunity for future reduction. These mobile sources produce approximately 5.8 metric tons of ozone-creating nitrous oxide from tailpipe emissions.

<sup>6</sup> U.S. Department of Energy, "Insulate Steam Distribution and Condensate Return Lines," https://www.energy.gov/sites/prod/files/2014/05/f16/steam2\_insulate.pdf <sup>7</sup> U.S. Environmental Protection Agency, "Greenhouse Gas Equivalencies Calculator," https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results

#### **ANESTHETIC GASES**

In 2023, OSF purchased 8,095 kg of anesthetic gases, including desflurane, sevoflurane and nitrous oxide. These gases cost over \$460,000 and were responsible for 2.9% of the Scope 1 greenhouse gas emissions for the year. Each anesthetic gas has a unique impact on atmospheric warming, which is expressed as its global warming potential (GWP), and shows the impact relative to carbon dioxide.

#### Desflurane Reduction

Desflurane has a GWP 2,540 times that of  $CO_2$  and is therefore a target for reduction. Desflurane usage (by weight) decreased by 87% from 2022 to 2023, with only 48 kg purchased in 2023. This transition away from desflurane reduced greenhouse gas emissions by approximately 770 metric tons of  $CO_2$ e and provided a cost savings of over \$73,700.



### WASTE & RECYCLABLES

Healthcare and building operations generate significant quantities of waste. That's why OSF is committed to reducing waste and embracing responsible recycling practices by using innovative strategies and collaborative efforts.

#### WASTE

The OSF Energy and Sustainability program prioritizes reducing waste generated by hospitals (versus medical and office buildings), a significant contributor to the overall healthcare environmental footprint. Since 2019, OSF has achieved impressive results, reducing hospital medical waste by over 110,000 pounds/adjusted patient day (lbs/APD). Additionally, OSF increased its waste recycling rate by 12%. These combined efforts demonstrate the commitment of OSF to minimizing it's environmental impact while delivering exceptional patient care.





2023 Hospital Waste Disposal Method

### RECYCLING

OSF recyclables include paper from confidential document shredding, mixed recyclables, electronic waste, collected medical devices, used cooking oil, batteries, bulbs and lead vests. OSF collected 3.3 million pounds of recyclables in 2023 which included about 808,000pounds of cardboard, a 60% increase from the previous year. This accounted for about 24% of the total recyclables collected by OSF and was sold for recycling for \$36,000.

2

14



#### Medical Device Collection Program

In 2023, OSF collected 128,000 single-use medical devices across the Ministry, 19.2% of the total quantity used throughout the year. These collection efforts, which included items such as pulse oximeters, lateral transfer mats, EP catheters, tourniquets and manifolds, diverted over 50,000 pounds of medical devices from being dumped into landfills. These collected medical devices were sent to be reprocessed into new devices under an FDA-approved program, which inspects and certifies reprocessed devices for clinical use.

This program was created because it's been found that reprocessed medical devices typically have lower carbon footprints than a first-time manufactured device. For example, a reprocessed pulse oximeter has a 49% lower carbon footprint than a new manufactured one. In 2023, OSF purchased 414,000 pulse oximeters (of which 20% were reprocessed) and collected 96,500 for reprocessing. This example of material circularity reduced carbon emissions by 6.2 metric tons of CO<sub>2</sub>e and diverted 4,825 pounds of waste from the landfill.<sup>8,9</sup>

#### 2023 Collection Program Highlights

414,000	PULSE OXIMETERS PURCHASED
96,500	DEVICES COLLECTED
6.2 MT CO <sub>2</sub> e	REDUCTION IN CARBON EMISSIONS
4,825 POUNDS	WASTE SAVED FROM LANDFILLS

## **PURCHASED GOODS & SERVICES**

The impact that a healthcare supply chain can have on the environment is large and complex. OSF recognizes that the environmental and social impacts associated with the goods and services we purchase are a significant part of our overall sustainability footprint. OSF is committed to addressing this key area and taking proactive steps to reduce the sustainability impacts within our supply chain.

#### **SCOPE 3 CARBON EMISSIONS**

As previously mentioned, greenhouse gas emissions are categorized as Scope 1, Scope 2 and Scope 3. Scope 3 emissions, such as those from purchased goods and services, often represent the largest share of a company's indirect emissions. In 2023, OSF completed its Scope 3 inventory for the second year in a row, quantifying carbon emissions across several categories utilizing a spend-based accounting tool created by Practice Greenhealth.





#### **Mission Outreach**

Founded in 2002 by the hospital The Sisters of the Third Order of St. Francis, Mission Outreach is a program that works to improve the health and wellness of people across the globe through the responsible donation of medical supplies, equipment and support services. Mission Outreach distributes medical donations to countries in need throughout Africa, South American and Ukraine. In 2023, OSF donated 69 pieces of medical equipment, 7,313 supply items, and various pieces of office equipment to Mission Outreach. The combined weight of these donations, which would otherwise be disposed of to a landfill, was 17,310 pounds. This year's donation brought the total contribution from OSF to 177,932 pounds of supplies since 2018.

Category Name	GHG Emissions (MT CO <sub>2</sub> e)	Percent of Total Scope 3 Emissions
Purchased goods & services*	207,311	74.3%
Upstream energy-related emissions	37,114	13.3%
Employee commuting	22,420	8.0%
Downstream transportation & distribution	5,931	2.1%
Waste generated in operations	3,323	1.2%
Business travel	2,435	0.9%
Sold products (inhalers)	377	0.2%
Investments	Not quantified	-

\*The top three sub-categories of purchased goods and services are chemical products (such as pharmaceuticals), miscellaneous manufacturing (such as surgical appliances, supplies and medical instruments) and construction. Companies that produce the largest amount of greenhouse gas emissions from their purchased goods and services practices are AmerisourceBergen, Medline, Medtronic, Becton, Dickinson and Company and Stryker.

<sup>8</sup> Stryker, "Comparative Carbon Footprint of Reprocessed Single Use Medical Devices," https://www.stryker.com/content/dam/stryker/sustainability/resources/Comparative%20Carbon%20Footprint%20for%20LCA.pdf 9 U.S. Food & Drug Administration, "Reprocessing Medical Devices in Health Care Settings: Validation Methods and Labeling," https://www.fda.gov/regulatory-information/search-fda-guidance-documents/repro medical-devices-health-care-settings-validation-methods-and-labeling



2023 Scope 1, 2 and 3 Carbon Emissions (metric tons)

#### Scope 3 Greenhouse Gas (GHG) Emissions Breakdown

#### Medical Devices & Products

Polyvinyl chloride, or PVC, is a synthetic thermoplastic material made by polymerizing vinyl chloride often used in medical devices. However, PVC devices require the input of highly toxic materials during manufacture, such as DEHP, a type of softener often used in PVC plastics. According to Practice Greenhealth, DEHP can leach out of PVC medical devices during disposal (typically done by incineration) which can threaten those exposed.<sup>10</sup>

Because of this, the FDA has recommended a reduction in exposure to DEHP, so OSF has worked to eliminate PVC and DEHP in several products and medical supplies. Prior to 2021, OSF eliminated PVC/DEHP in gloves and breast pumps plus accessories. In the last two years, OSF achieved PVC/DEHP elimination in enteral nutrition products. The team will continue to work towards eliminating the eight categories of medical supplies with high PVC/DEPH, identified by Practice Greenhealth, which accounts for approximately \$30 million in spending for OSF each year.<sup>11</sup>





#### **FURNITURE & FURNISHINGS**

Furniture and furnishings can have hazardous side effects for the environment and the health of our communities due to the chemicals and materials used in their construction. Throughout their lifecycle, from manufacturing to disposal, these chemicals can pose risks that can impact the health of workers, patients and ecosystems across the globe. Hazardous chemicals like formaldehyde, flame retardants, per- and poly-fluorinated alkyl substances (PFAS), polyvinyl chloride (PVC), and antimicrobials, have been linked to a myriad of adverse health effects including a rise in chronic diseases and conditions, cancer, birth defects, infertility, asthma and more.<sup>12</sup>

To promote the safety and well-being of employees, patients and communities, OSF prioritizes the purchase of furnishings that minimize the use of these chemicals. A goal was set to require at least 30% of the furniture that OSF purchased to meet a sustainability standard set by the Business and Institutional Furniture Manufacturer's Association (BIFMA). Due to the dedication of the OSF environmental team, that goal has been far surpassed in the last three years. In 2023, a whopping 80% of the purchased furniture and furnishings met the sustainability standard. The Caper chair, shown here, was the highest purchased item in 2023 with over 1,000 units purchased. This chair features numerous sustainability attributes, including BIFMA certification and recycled content.<sup>13</sup>

10 Practice Greenhealth, "Guidance to Achieve HH Safer Chemicals Challenge - PVC and DEHP Elimination in Medical Devices," https://practicegreenhealth.org/sites/default/files/2019-02/hh\_pvc\_and\_dehp\_elimination\_ guidance\_-\_version\_3.0\_march\_2018%20%281%29.pdf

<sup>1</sup> Practice Greenhealth, "Safer Medical Products and Devices," https://practicegreenhealth.org/topics/safer-chemicals/safer-medical-products-and-devices

<sup>12</sup> Practice Greenhealth, "Healthy Interiors Goal," https://practicegreenhealth.org/tools-and-resources/healthy-interiors-goal
<sup>13</sup> MillerKnoll, "Herman Miller Caper Stacking Chair," https://millerknoll.ecomedes.com/products/hermanmiller/CAP

#### FOOD

Food isn't just sustenance at OSF, it's a powerful tool for promoting both patient health and environmental well-being. OSF recognizes that the choices made about food that is served across the organization can have a ripple effect – impacting both the patients cared for and the planet. To ensure high quality food is served, OSF closely monitors the sustainability attributes of the food that is purchased. This includes factors like certifications (i.e. organic, local, hormone, antibotic-free.), origin and protein sources.

#### Animal Protein

Have you ever wondered how your meals impact the planet? Agriculture and land-use changes contribute to 25% of all global greenhouse gas emissions that are produced annually.<sup>14</sup> But not all food is created equal when it comes to its environmental impact. In fact, animal-based sources require significantly more resources than plant-based options, with beef being the biggest culprit, emitting over 40 kilograms of CO<sub>2</sub>e of meat – that's 10 times the impact of poultry.

In the past several years, OSF has taken a closer look at the consumption and spend of animal protein.<sup>15</sup> That closer look found that beef purchases, while only making up 30% of the weight of the animal protein supplies, are responsible for 75% of related greenhouse gas emissions by OSF. These findings plainly show an area that can be focused on to significantly decrease carbon emissions. For example, if half of the beef purchased in 2023 was replaced with an equal weight of poultry, OSF could slash carbon emissions by 930 metric tons of CO<sub>2</sub>e, which would equal a savings of \$75,000.



Intergovernmental Panel on Climate Change, "Climate Change and Land," https://www.ipcc.ch/site/assets/uploads/2019/11/SRCCL-Full-Report-Compiled-191128.pdf <sup>15</sup> Animal protein values reported below do not include pre-made entrees.





175,245 lb

**Carbon Emissions** 350 CO<sub>2</sub>e (MT)

Seafood



Weight Purchased 22,940 lb

**Carbon Emissions** 50 CO<sub>2</sub>e (MT)

#### **DISPOSABLE CUPS**

OSF purchases nearly 4 million disposable cups a year composed of various materials including paper, plastic and Styrofoam<sup>™</sup>, which is expanded polystyrene foam. However, over 50 chemical byproducts are released during the manufacturing of polystyrene, which can contaminate the air and water of the communities living near the facilities that manufacture them.<sup>16</sup> Polystyrene is made up of multiple units of styrene, which is believed to be a carcinogen according to the Department of Health and Human Services and the International Agency for Research on Cancer.<sup>17</sup>

Because of this revelation, changes were made in 2021 to reduce Styrofoam cup purchases at corporate office locations. These facilities went from purchasing over 167,000 disposable cups in 2020, consisting of 100% Styrofoam, to 134,000 disposable cups in 2023, consisting of only 2% Styrofoam. OSF replaced those Styrofoam cups by purchasing paper cups instead.



### WATER BOTTLE FILLING STATIONS INSTALLED 104

<sup>16</sup> Children's Environmental Health Network, "FAQs: Polystyrene Foam," https://cehn.org/our-work/ eco-healthy-child-care/ehcc-faqs/faqs-styrofoam/

<sup>17</sup> National Toxicology Program, Department of Health and Human Services, "Report on Carcinogens," https://ntp.niehs.nih.gov/sites/default/files/ntp/roc/content/profiles/styrene.pdf <sup>18</sup> Metabolic, "Recycling Unpacked," https://www.metabolic.nl/projects/cmi-recyclingunpacked/#:~:text=In%20today's%20U.S.%20system%2C%20more,percent%20of%20plastic%20 PET%20bottles

<sup>19</sup> Ball Corporation, Comparative Life Cycle Assessment: North America," https://www.ball.com/ getattachment/334d5de9-d11e-4e18-bf36-be278d9aac51/LCA-presentation-US.pdf <sup>o</sup> Center for International Environmental Law, "Plastic & Health: The Hidden Costs of a Plastic Planet," https://www.ciel.org/wp-content/uploads/2019/02/Plastic-and-Health-The-Hidden-Costsof-a-Plastic-Planet-February-2019.pdf

#### WATER BOTTLES

2023

While plastic water bottles might seem convenient, they come with a hidden cost to our environment. From the very beginning, their production releases hazardous air pollutants as they're refined from petroleum and natural gas. Once used, they don't disappear but instead clog landfills for hundreds of years, or worse, break down into microplastics that pollute our soil and waterways. Recycling them is a challenge, and the entire process contributes significantly to climate change, leaving a carbon footprint 70% larger than an aluminum can.<sup>18, 19, 20</sup>

**2020** • 167,000 DISPOSABLE CUPS • 100% STXPOSO414

• 2% STYROFOAM

**19.7%** REDUCTION IN DISPOSABLE CUPS

• 134,000 DISPOSABLE CUPS

In 2023, OSF purchased and/or sold over 726,000 plastic water bottles across the Ministry. Of those, were sold in cafeterias, 22% were provided for free during internal meetings and 4% were sold in on-site vending machines. In an effort to curb the plastic water bottle purchases and sales, 104 water bottle filling stations were installed around the Ministry. Water dispensed from these stations was equivalent to 71,000 plastic water bottles, preventing 3,400 pounds of plastic waste.

#### Green Team Efforts at OSE Saint James

One sustainability effort that the Green Team at OSF Saint James focused on this past year was eliminating plastic bottles in their vending machines. The team found aluminum can alternatives for 86% of their vending machine bottled beverages, which eliminated the need to purchase over 15,000 plastic bottles. This eliminated over 600 pounds of plastic from going into the waste stream.

#### **PLANTING TREES**

Healthy communities thrive on healthy trees. Tree cover isn't just about aesthetics, rather it's a crucial component fighters, capturing carbon dioxide and reducing ground temperatures. They also create inviting spaces for outdoor activity, which benefits both physical and mental health. Recognizing this vital role, the Arbor Day Foundation



## **IN CLOSING**

As Psalm 24 reminds us, "The earth is the Lord's, and everything in it, the world, and all who live in it." This profound truth underscores our responsibility to care for the magnificent planet that God has gifted us. Created with divine wisdom, our world sustains us, and in return, we are called to steward it with love and diligence.

It is up to us, as children of God, to preserve the natural beauty and resources He has bestowed upon us. We are entrusted with the privilege and duty to use these gifts for the benefit of our communities and for the glory of God.

At OSF HealthCare, we believe we have a unique opportunity to take action on a grand scale to protect the wonders of our Creator for future generations. Every step toward better protecting God's earth and the people who call it home is a step in the right direction.

We are called to sustain, protect and enhance His works so that all creation may fulfill the purposes God intended. Our management of the environment is not simply for our own benefit but for God's glory.

We must recognize that all created things belong to God, and we are accountable to Him as stewards of His creation. If we fail to care for the environment in which we live, God's people will suffer as a result. Caring for God's creation is part of our service to God and an integral part of our role as servant leaders.

At OSF, we will continue to work together to protect and preserve this beautiful world, ensuring that it remains a testament to God's glory and a haven for His people for generations to come.

Pax et Bonum

**Sister Judith Ann Duvall, O.S.F.** Chairperson, OSF HealthCare Boards



### GLOSSARY

**Energy to Care Award:** This award, given by the American Society for Health Care Engineering (ASHE), honors healthcare facilities for achievements in healthcare sustainability. The awards celebrate facilities accomplishing sustainability goals that will pave the way for environmental stewardship, social equity and fiduciary responsibility in their organizations to support healthy, equitable and resilient communities.<sup>21</sup>

**ENERGY STAR Program:** Launched by the U.S. Environmental Protection Agency (EPA) in 1992, this program sets energy efficiency specifications for industrial, commercial, utility, state and local organizations. The program uses ENERGY STAR scores, expressed on a scale of 1 to 100, to assess how a building's energy consumption is performing compared to similar buildings nationwide. A score of 50 represents median energy performance while a score of 75 or higher indicates a top performing facility that may be eligible for ENERGY STAR certification.<sup>22</sup> For OSF's hospital locations, this score takes numerous variables into account such as climate, weather, hours of operation, staffed beds, number of MRI machines and more. The ENERGY STAR scale allows OSF to easily compare facilities despite their differences in size and climate zones.

**EUI:** Energy Use Intensity, used to express a building's energy use as a function of its size or other characteristics.<sup>23</sup>

**GHG:** Greenhouse Gas, gases that trap heat in the atmosphere and have effect on climate change by slowing the rate at which the energy escapes to space. The main greenhouse gases are carbon dioxide, methane, nitrous oxide, and fluorinated gases, with carbon dioxide being the primary gas emitted from human activities.<sup>24</sup>

**GWP:** Global Warming Potential, developed to compare the global warming impacts of different gases. GWP measures how much energy the emissions of one ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide. The larger the GWP, the more that a gas will warm the earth compared to carbon dioxide.<sup>25</sup>

**IRR:** Internal Rate of Return, a metric used in financial analysis to estimate the profitability of potential investments. It calculates the annual rate of growth that an investment is expected to generate. Generally, the higher an IRR, the more desirable an investment is.<sup>26</sup>

**kBtu:** One thousand (1,000) British thermal units, a common unit of energy measurement used to convert and combine other energy measurements.<sup>27</sup>

**kWh:** Kilowatt-hour, a unit of energy equivalent to 1,000 watt-hours. It is a standard unit of energy measurement most used to measure the amount of energy consumed by various machines in a given amount of time.<sup>28</sup>



**MMBtu:** One metric million (1MM) British thermal units, a common measurement of heat or energy value. It is often associated with the measurement of natural gas. Thermal units assume a certain energy content of the gas.<sup>29</sup>

**MT CO<sub>2</sub>e:** Metric tons of carbon dioxide equivalent, a measurement used to express a carbon footprint, or how much greenhouse gas something produces.<sup>30</sup>

**Site EUI:** Site Energy Use Intensity, the amount of heat and electricity consumed by a building as reflected in the utility bills.<sup>31</sup> It is calculated by dividing the building's total annual energy consumption (kBtu) by the total floor area (square feet).

Therm: Equal to 100,000 British thermal units (Btu), a unit of measurement for natural gas use over time.<sup>32</sup>

**Weather Normalized Energy:** A metric used to compare a building to itself over time under average (normal) weather conditions. This metric evaluates your building over time and considers that a year may be much hotter or colder than a building's normal climate, however it does not account for differences between your building and other locations that have different average (normal) climates.<sup>33</sup>

<sup>29</sup> IRM Energy, "Explore MMBTU," https://www.irmenergy.com/explore-mmbtu-com/
 <sup>30</sup> WKU, "WKU Office of Sustainability – Carbon Footprint," https://www.wku.edu/sustainability/carbon\_footprint.php#:~:text=Measuring%20our%20carbon%20footprint.&text=Specifically%2C%20a%20carbon%20 footprint%20is,dioxide%20equivalent%20(MT%20eCO2)
 <sup>31</sup> Energy Star, "The Difference Between Source and Site Energy," https://www.energystar.gov/buildings/benchmark/understand-metrics/source-site-difference

Arcadia, "What is a term?" https://www.arcadia.com/blog/what-is-a-therm
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<sup>&</sup>lt;sup>21</sup> ASHE, "Energy to Care Awards," https://www.ashe.org/energytocare/awards-overview

<sup>22</sup> Energy Star, "How the 1-100 ENERGY STAR Score is Calculated," https://www.energystar.gov/buildings/benchmark/understand-metrics/how-score-calculated

<sup>&</sup>lt;sup>23</sup> Energy Star, "What is Energy Use Intensity (EUI)?" https://www.energystar.gov/buildings/benchmark/understand-metrics/what-eui

<sup>&</sup>lt;sup>24</sup> U.S. Environmental Protection Agency, "Overview of Greenhouse Gases," https://www.epa.gov/ghgemissions/overview-greenhouse-gase

<sup>&</sup>lt;sup>25</sup> U.S. Environmental Protection Agency, "Understanding Global Warming Potentials," https://www.epa.gov/ghgemissions/understanding-global-warming-potentials

<sup>&</sup>lt;sup>26</sup> Investopedia, "Internal Rate of Return (IRR): Formula and Examples," https://www.investopedia.com/terms/i/irr.asp

<sup>&</sup>lt;sup>27</sup> Law Insider, "kBtu Definition," https://www.lawinsider.com/dictionary/kbtu

<sup>&</sup>lt;sup>28</sup> Carbon Collective, "Kilowatt-Hour (kWh)," https://www.carboncollective.co/sustainable-investing/kilowatt-hour-kwh

