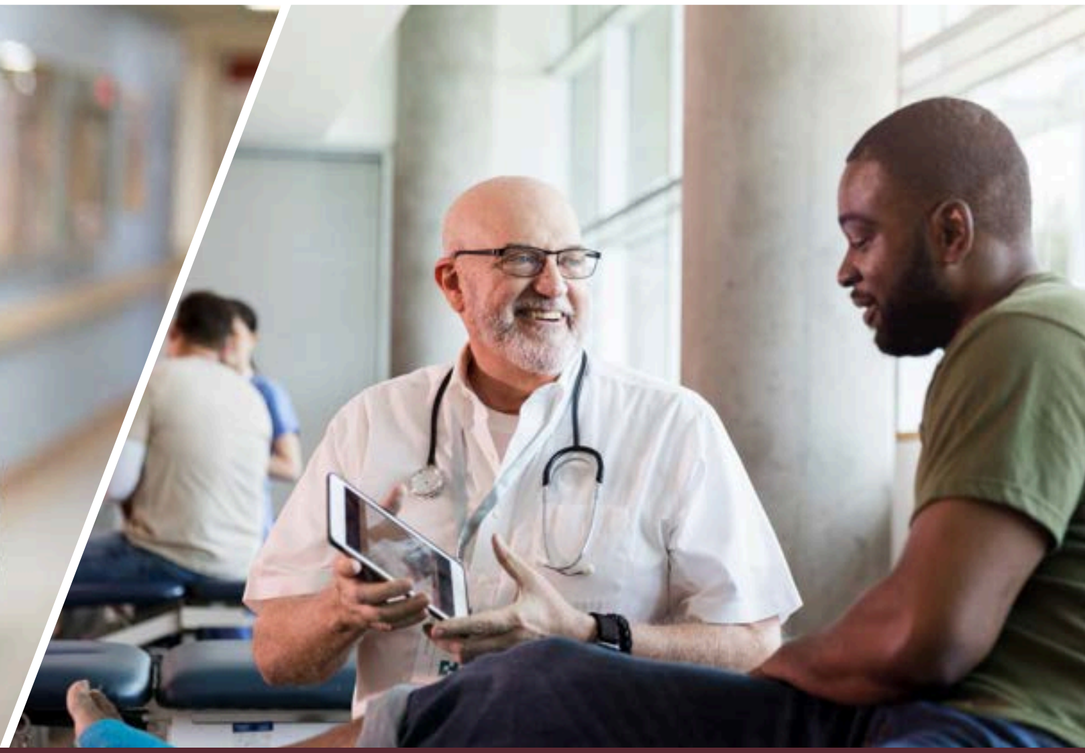
DHA
Defense Health Agency ®

Sustainability Report | 2024



UNWAVERING MOMENTUM

With a sense of pride and purpose, the DHA Sustainability Program presents our annual report, showcasing the remarkable strides made across the Military Health System (MHS). As our program expands its reach to encompass Navy and Air Force sites, it's increasingly evident that sustainability is woven into the very fabric of the MHS. From energy-efficient practices to robust recycling initiatives and waste reduction strategies, DHA facilities are demonstrating a commitment to environmental stewardship. This dedication extends to our personnel – active duty, civilian, and contract staff alike – who have enthusiastically embraced sustainability through training, workshops, and data collection efforts.

This year's report marks an exciting turning point, as we welcome the unique perspectives and strengths of our Navy and Air Force partners. Together, we are poised to tackle shared challenges with innovative solutions and forge a path toward a more sustainable future for military healthcare. The data and stories within these pages highlight not only our progress in key areas such as building emissions, sustainable fleets, and climate literacy but also underscore the tangible benefits – improved performance, enhanced resilience, and cost savings – that arise from a steadfast focus on sustainability. We are particularly proud to recognize Fort Liberty's Womack Army Medical Center (WAMC) for their exceptional achievements in reprocessing single-use medical devices, earning them the esteemed Stryker Sustainability Solutions Environmental Excellence Platinum Award for fiscal year 2023. As we move forward, we remain committed to fostering a culture of sustainability across the MHS, empowering every member to contribute to a healthier planet and a more resilient healthcare system.

Commitment to Sustainability and Leadership Transition

The Defense Health Agency (DHA) remains committed to sustainability at Military Treatment Facilities (MTFs), following industry standards set by Practice Greenhealth. In 2023, our sustainability report highlighted a significant achievement; 38 tons of single-use devices were diverted from waste streams across 31 reporting MTFs. Over the past year our facilities have intensified their focus on MTF design, construction, and energy performance to ensure environmentally responsible operations. Strong efforts to reduce anesthetic gas emissions, physical waste, and emissions from pressurized metered-dose inhalers have been ongoing. Reusable products and lower-carbon alternatives have been implemented successfully.

In FY 2024, 13 more DHA MTFs will join Practice Greenhealth and Environmental Programs, including Navy and Air Force facilities. The sustainability team looks forward to continued progress under COL Thurman Saunders' leadership. As I transition leadership over to COL Saunders, I trust in DHA's dedication to sustainability. I am grateful for the team's unwavering support in caring for our warfighters.

COL Pamela DiPatrizio

Sustainability Vision

We are leaders in delivering world class health care solutions with a minimal environmental footprint to support those who serve in the defense of our country. We focus on securing a sustainable and resilient future for all.

Sustainability Mission

Enhance Military Health System readiness and resiliency by safeguarding human health and the environment through the efficient use of resources and on-going process improvement.

Year At A Glance

For the 31 MTFs that reported sustainability metrics, the following services were provided in calendar year 2023:

93,927 Inpatient Care Discharges

3,891,517 Radiology Services

13,008,074 Prescriptions

15,462 Births

18,629,565 Outpatient Care Encounters

808,365 Dental Services

12,016,454 Laboratory Services

2,194,367 Immunizations

326,111 Occupied Beds

THESE SERVICES REQUIRED

5.1B kBTUs of Energy at **$158M**

25.5K tons of Municipal Solid Waste (MSW) at **$1.9M**

4.1M gallons of Water at **$1.4M**

1 DHA Financial Operations

2 Practice Greenhealth

Sustainability Performance Metrics

DHA performs an annual data call for tracking sustainability progress and compliance. This table depicts the metrics we track and their associated Focus Areas. In early 2024, DHA MTFs completed the Practice Greenhealth Partner for Change award application for their CY23 performance metrics. Awards received by participating MTFs are shown on page 10.

Sustainability Metrics for the 31 MTFs Reporting in CY23

$27.8M
Total Cost Savings

30%
of DHA fleet includes alternative fuel vehicles

5,004 tons
diverted from municipal solid waste

31 tons
single use devices diverted from waste stream

1,771 tons
diverted from hazardous waste streams

76%
of facilities more energy efficient than PG median*

38.6%
% reduction in Scope 1 GHG emissions associated with desflurane anesthesia gases

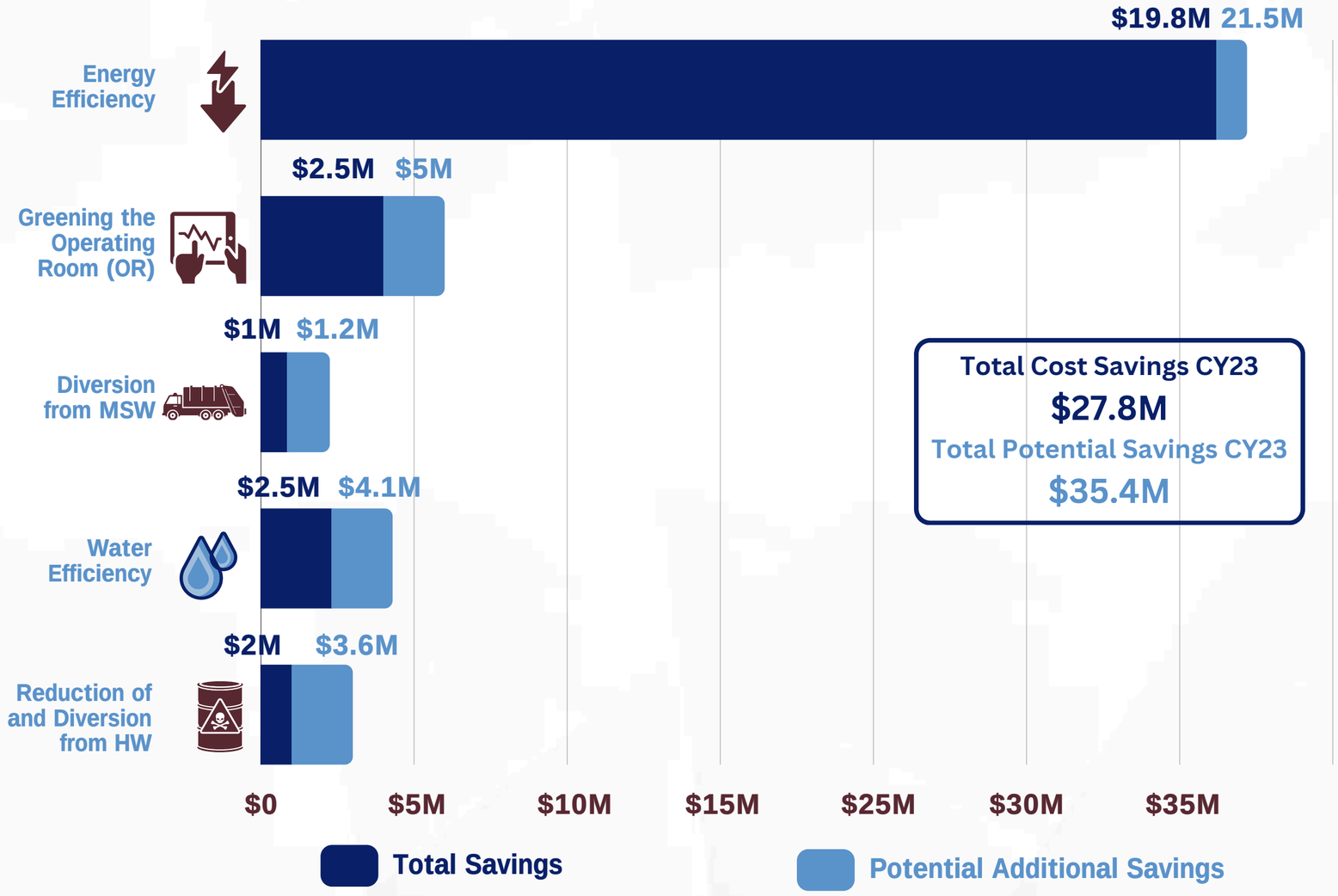
60%
of facilities more water efficient than PG median*

For the DHA Enterprise

72
Sustainability training attendees

8
Newly trained sites

Cost Savings



Total Cost Savings CY23

$27.8M

Total Potential Savings CY23

$35.4M

In 2024, the DHA made significant strides in advancing its sustainability initiatives across MTFs. We analyze our sustainability data to estimate the cost avoidance and savings associated with operating more efficiently and reducing our environmental impact. In CY23, DHA realized over $27.8 million (M) in savings, as shown by the dark blue bars in the chart. This demonstrates that sustainability is a wise business practice. We also extrapolated potential additional savings if the 31 participating MTFs were to perform as well as their peers within the Agency, represented by the light blue bars on the chart. Based on our projections, DHA could have realized an additional $35.4M in CY23 if all 31 MTFs improved their sustainability practices. (Refer to the back cover for a description of the methods applied for these calculations).

The 2024 report illustrates the significant progress made by the DHA in reducing operational costs through sustainability initiatives. These increased savings directly result from the focus on green practices in the OR, such as diverting single-use devices (SUD), implementing reprocessing strategies, and using reusable sterilization containers. Approximately 70% of our ORs exceed the PGH median in sustainability efforts, resulting in total savings of $2.5M. Additionally, our MTFs have demonstrated impressive performance in terms of energy efficiency. Around 78% of our facility's energy use intensity (EUI) values are lower than the PGH-reported healthcare industry median. The improved efficiency has enabled the DHA to counteract the impact of increased energy costs observed in CY23.

MILITARY TREATMENT FACILITIES PERFORMANCE OVERVIEW AND SUSTAINABILITY SUCCESSES

The U.S. Environmental Protection Agency's most to least preferred ways to avoid food waste

This year's report highlights a significant advancement in sustainability across the DHA's MTFs. An impressive **65%** of MTFs performed above the 90th percentile in one or more sustainability metrics, placing them among the top **10%** in their respective categories. These facilities have shown exceptional leadership in environmental stewardship, operational efficiency, and innovative practices. Simultaneously, a broader group of installations demonstrated remarkable progress, performing above the median in key sustainability metrics, positioning themselves as strong contributors to DHA's sustainability goals.

Top Performers: Leading the Charge

Brooke Army Medical Center (BAMC), Dwight D. Eisenhower Army Medical Center, and **Madigan Army Medical Center** collectively achieved leading scores in **15** metrics spanning **eight** sustainability areas. Their commitment to excellence in waste reduction, energy efficiency, and sustainable procurement reflects a broader shift toward environmentally conscious healthcare. Notably, **BAMC** distinguished itself as the only facility exceeding the **90th** percentile in reducing carbon emissions associated with animal products, underscoring its proactive approach to lowering its environmental footprint. Similarly, **Madigan's** Green Team, in collaboration with supply chain leadership, led the charge in sustainable food procurement, achieving the **100th** percentile for local food and beverage spending, reflecting its dedication to both environmental and community health.

Naval Medical Center San Diego set a new standard in waste management. By enforcing strict waste minimization policies with its contractors, the facility became the only MTF to surpass the **90th** percentile for recycling construction and demolition (C&D) waste—an accomplishment particularly notable given the scale of ongoing projects.

Focus on Greening the OR

Greening the OR initiatives emerged as a prominent theme among the top-performing installations. **60%** of the leading MTFs excelled in surgical efficiency by reviewing and optimizing their operating room kits, incorporating reusable products, and utilizing sustainable materials in their operations. **Dwight D. Eisenhower Army Medical Center** stood out by reducing its use of Desflurane, thus becoming the only MTF to exceed the **90th** percentile for minimizing carbon emissions related to anesthesia, illustrating its commitment to reducing the environmental impact of medical procedures. **Madigan Army Medical Center** and **Carl R. Darnall Army Medical Center** also ranked in the **100th** percentile for implementing Heating Ventilation and Air Conditioning (HVAC) setbacks in their operating rooms, demonstrating an unwavering commitment to energy efficiency during surgeries.

Above-Median Performers: Significant Contributions to Sustainability

A broader range of MTFs also demonstrated commendable performance, achieving results above the Practice Greenhealth median across various sustainability metrics. Noteworthy facilities such as **Kenner Army Health Clinic** showcased outstanding regulated medical waste (RMW) management, with RMW diversion rates of **89%**, far surpassing the median. **Keller Army Community Hospital** excelled in recycling, sustainable procurement practices, water, and energy efficiency (EUI), reflecting a holistic approach to environmental stewardship. Similarly, **Kenner Army Health Clinic** achieved impressive results in energy efficiency and water conservation, with notable improvements in energy scope 1 and 2 MTCO2e reductions.

Sequential Compression Devices (SCDs) are a common reprocessed single-use device

Alexander T. Augusta Military Medical Center (ATAMMC) and **Winn Army Community Hospital** were recognized for their excellence in water use reduction and greening the OR initiatives. **Winn's 83%** success rate in reprocessing single-use devices and its strong performance in reusable product integration exemplifies the ongoing efforts to minimize waste and optimize resources in surgical settings. Additionally, **ATAMMC** excelled in renewable energy adoption and water use efficiency, achieving **89%** in water reduction efforts.

Womack Army Medical Center stands out for its consistent performance across various sustainability metrics, including energy use intensity and recycling, ranking in the **83rd** percentile within its cohort. The facility's focus on expanding its hybrid vehicle fleet and installing solar charging stations further demonstrates its dedication to sustainability beyond the hospital walls.

Key Themes and Opportunities for Growth

Overall, waste management emerged as a significant area of strength, with reporting MTFs demonstrating high performance in recycling, RMW management, and overall waste reduction efforts. Additionally, sustainable procurement showed promising results, with several facilities reporting over **50%** of their procurement spend on green-certified products. The increased adoption of alternative fuel vehicles further underscores the broader commitment to sustainability across the DHA system.

However, opportunities for growth remain, particularly in the areas of energy efficiency and water use reduction. While many installations performed well, continued investment in facility-wide initiatives targeting EUI and water conservation could drive further improvements. Strengthening infrastructure, promoting behavior change, and expanding renewable energy adoption will be essential to advancing sustainability across all MTFs.

Summary

This year's report reflects a solid commitment to sustainability across DHA's reporting MTFs, with both top-performing and above-median facilities making significant strides in waste reduction, energy efficiency, and sustainable procurement. By building on these successes and focusing on key areas for growth, DHA can continue to lead the way in sustainable healthcare practices, setting an example for military and civilian healthcare systems alike.

COL Thurman J. Saunders

From the Chief Sustainability Officer

Hello,

As we bid farewell to COL Dipatrizo, I want to take a moment to recognize the incredible impact she has made during her time as Chief Sustainability Officer of the Defense Health Agency. Her leadership and unwavering dedication to sustainability have set a strong foundation for the DHA's efforts to build a more efficient, resilient, and environmentally responsible health system. Through her vision, COL Dipatrizio has helped advance key initiatives that have not only improved operations but also inspired a culture of sustainability across the entire Military Health System.

Her passion for optimizing processes and reducing waste has moved the DHA closer to fulfilling its strategic goals, and her legacy will undoubtedly continue to influence our work for years to come. As she embarks on her next chapter, we thank COL Dipatrizio for her service, leadership, and commitment to a healthier and more sustainable future. She will be greatly missed, and we wish her all the best in her future endeavors.

As the newly appointed Chief Sustainability Officer of the Defense Health Agency, I am thrilled to collaborate with a dedicated team that shares a deep commitment to enhancing the efficiency and resilience of our operations while addressing the critical issue of climate change. I'm eager to lead DHA's sustainability initiatives in the year ahead, driving meaningful progress toward a more sustainable future across the Military Health System.

Yours in Service,

COL Thurman J. Saunders

Defense Health Agency

2024 Practice Greenhealth Awards

2024
Practice Greenhealth
GREENHEALTH PARTNER FOR CHANGE
AWARD

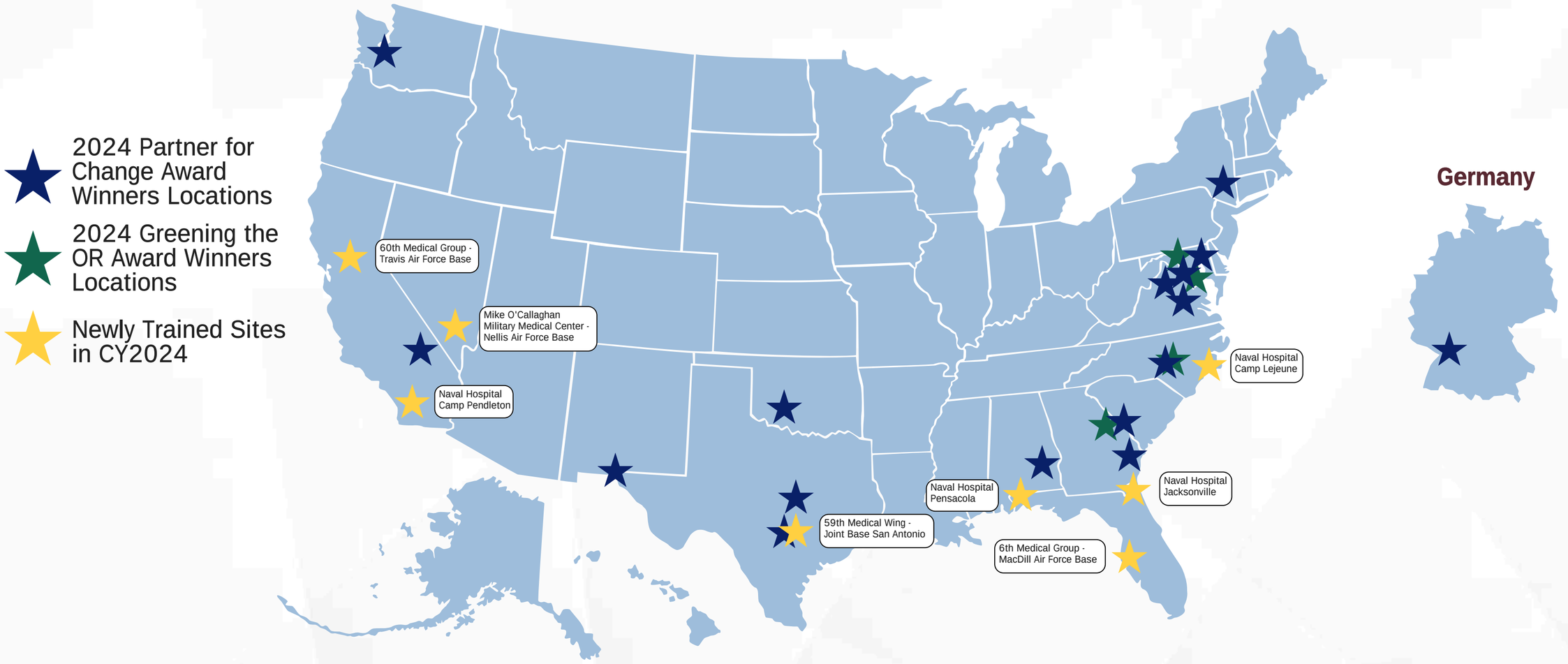
- Alexander T. Augusta Military Medical Center
- Brooke Army Medical Center
- Carl R. Darnall Army Medical Center
- Dwight D. Eisenhower Army Medical Center
- Keller Army Community Hospital
- Kenner Army Health Clinic
- Kimbrough Ambulatory Care Center
- Landstuhl Regional Medical Center
- Lyster Army Health Clinic
- Madigan Army Medical Center
- Reynolds Army Health Clinic
- Walter Reed National Military Medical Center
- Weed Army Community Hospital
- William Beaumont Army Medical Center
- Winn Army Community Hospital
- Womack Army Medical Center

2024
Practice Greenhealth
GREENING THE OR RECOGNITION
AWARD

- Alexander T. Augusta Military Medical Center
- Dwight D. Eisenhower Army Medical Center
- Womack Army Medical Center
- Walter Reed National Military Medical Center

Continuing a Legacy of Success

As the DHA Sustainability Program continues to roll out across the entire DHA enterprise, we look forward to including data from a wide variety of new sites from the Navy and the Air Force. This map shows the locations of the sites that achieved the Practice Greenhealth's 2024 Partner for Change and Greening the OR Award. It also includes new sites trained in Calendar Year 2024 which will start reporting their sustainability metrics during the 2025 Annual Data Call.



Calculation Details Actual and Potential

The calculation details for actual cost savings during the calendar year (CY) and projected potential savings are based on self-reported data from all 31 (100%) participating MTFs. However, not all MTFs reported data for every category. Some calculations have been normalized by removing apparent outliers to ensure accuracy.

Diversion from Municipal Solid Waste (MSW). ***Actual Cost Savings***: The DHA achieved considerable savings in CY2023 by diverting MSW from landfills. Based on the average disposal cost per ton across 75% of reporting MTFs, actual savings totaled **$1 million**. ***Cost Savings Potential***: If all participating MTFs adjusted their solid waste removal Installation Service Support Agreements (ISSAs) to better suit their needs, the DHA could achieve potential savings of **$1.2 million**.

Diversion from Hazardous Waste (HW). ***Actual Cost Savings***: HW management remains an essential component of DHA's sustainability efforts. In CY2023, 35% of reporting MTFs implemented HW diversion strategies, resulting in a totaled savings of **$2 million**. ***Cost Savings Potential***: With broader participation, the DHA could achieve even greater financial benefits. If all MTFs fully implemented hazardous waste diversion programs, potential savings could rise to an estimated $3.8 million.

Greening the OR – Diversion from Regulated Medical Waste (RMW). ***Actual Cost Savings***: Implementing green practices in the OR to reduce RMW has resulted in significant cost savings for CY2023. This includes single-use device (SUD) diversion, reprocessing strategies, and the use of reusable sterilization containers, resulted in a total savings of **$2.5 million**. Savings were realized through several key initiatives. SUDs diversion from RMW contributed **$41,000** in savings. By opting for reprocessed SUDs instead of new ones, the DHA saved an additional **$1.7 million**. The use of reusable sterilization containers contributed another **$64,000** in savings. Fluid management systems in the OR reduced RMW, leading to savings of **$163,000**, and the reformulation of OR kits to include only necessary items saved **$514,000**. ***Cost Savings Potential***: These successes point to the broader potential for further cost reductions. If all participating MTFs implemented similar strategies, the DHA could save an additional **$142,000** from enhanced adoption of SUD diversion strategies, **$2.7 million** from expanded reprocessing SUDs practices, **$297,000** from expanded use of reusable containers, **$512,000** from fluid management systems, and up to **$1.4million** from broadening the use of reformulated OR kits.

Energy Efficiency. ***Actual Cost Savings***: MTFs that are more efficient than the "PGH median Energy Use Intensity (EUI)" can save on utility costs. We estimate these savings by comparing energy costs for **22 MTFs**, which are more efficient than the PGH median EUI, with the energy costs at the PGH median EUI. Please note that **3 out of 31 MTFs** provided inaccurate energy usage information and were excluded as outliers. ***Cost Saving Potential***: By operating less efficiently than the PGH median EUI, **9 participating MTFs** have the potential for savings if they reduce their EUIs. This assumes that these facilities could reduce their difference in energy usage costs to match the more energy-efficient MTFs above the PGH median EUI.

Water Efficiency. ***Actual Cost Savings***: MTFs that are more efficient than the "PGH median Water Use Intensity (WUI)" can save on utility costs. We estimate these savings by comparing water consumption costs for **19 MTFs**, which are more efficient than the PGH median WUI, with the water consumption costs at the PGH median WUI. Please note that **2 out of 31 MTFs** provided inaccurate water consumption information and were excluded as outliers. ***Cost Saving Potential***: By operating less efficiently than the PGH median WUI, **13 participating MTFs** have the potential for savings if they reduce their WUIs. This assumes that these facilities could reduce their difference in energy usage costs to match the more energy-efficient MTFs above the PGH median WUI.

Definitions

Alternative Fuel Vehicles: Alternative Fuel Vehicles (AFVs) consist of low-emitting and fuel-efficient vehicles and alternate fuel vehicles as defined by Section 301 of the Energy Policy Act of 1992, as amended (4 U.S.C. 13211). Please see the following links for a list of AFVs and alternative fuels, respectively: https://practicegreenhealth.org/sites/default/files/upload-files/transportation_toolkit_definitions_0.pdf and https://afdc.energy.gov/fuels/
Alternative Fuels Data Center: Vehicle Acquisition and Fuel Use Requirements for Federal Fleets (energy.gov)

Scope 1 GHG Emissions: Scope 1 emissions are direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by an organization (e.g., emissions associated with fuel combustion in boilers, fleet vehicles, refrigerants, and anesthetic gases).

Scope 2 GHG Emissions: Scope 2 emissions are indirect GHG emissions resulting from the generation of electricity, heating and cooling, or steam generated off site but purchased by the entity, and the transmission and distribution losses associated with purchased utilities (e.g., chilled water, steam, and high temperature hot water).

SCAN ME

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