Sustainability Management Plan & Implementation Roadmaps Summary

DFW's Aspirations for a Healthy and Resilient Airport Ecosystem

Dallas Fort Worth International Airport
March 2025

Contents

Introduction

Letter from the CEO

When DFW became the first carbon neutral airport in North America and the largest in the world, the airport established a leadership position in influencing climate action within the region. I am incredibly proud that we continue to solidify our leadership globally and that we are pushing the boundaries of what is possible in advancing a “net positive” impact for our people and for our planet. Moreover, we are proving that doing so is also good for business.

Our Sustainability Management Plan (SMP) is our cross-cutting strategy to achieve our North Star targets for climate action, water and biodiversity, health and safety, circular economy, energy performance, and equity. Our North Stars will enable DFW to become resilient to the many risks and uncertainties that we face in the future, while leaving a positive imprint on the communities that rely on DFW as a connector to the world around us.

Sean Donohue
Chief Executive Officer

Global Sustainability Leadership

At DFW, we are committed to ongoing sustainability leadership within the aviation sector and beyond. Our North Star goals and supporting strategies presented in this plan are informed by global sustainability best practices from a range of public and private sector leaders.

As a hub for global travel and a major economic engine in the State of Texas, we recognize that our impact reaches far beyond the boundaries of the DFW Airport campus. Further, it’s clear that climate change is a global issue that requires urgent action.

As such, we look to align with organizations across the globe that are adopting emerging tools and technologies and forward-thinking solutions.

This plan provides an overview of our proactive approach to operational resilience and environmental, social, and economic sustainability.

About This Plan

This SMP builds off DFW’s long standing commitment to sustainability and the progress we have made since publication of our 2014 SMP. Initiatives within this plan will enable us to continually adapt as a resilient, future-proof operation, while serving our customers and community.

This plan introduces DFW’s overarching approach to sustainability across airport operations, our commitment to protecting and enhancing the surrounding natural environment, and our ongoing effort to be an asset to the local communities, as an employer and community member.

This plan presents the six North Star goals that we are working to achieve over the next two decades. Our goals are aligned with the airport’s mission and vision and strategic plan, and commitment to sustainability leadership. The SMP introduces a set of strategies at a high level. Further implementation details are articulated in more detail in North Star roadmaps and other supporting plans.

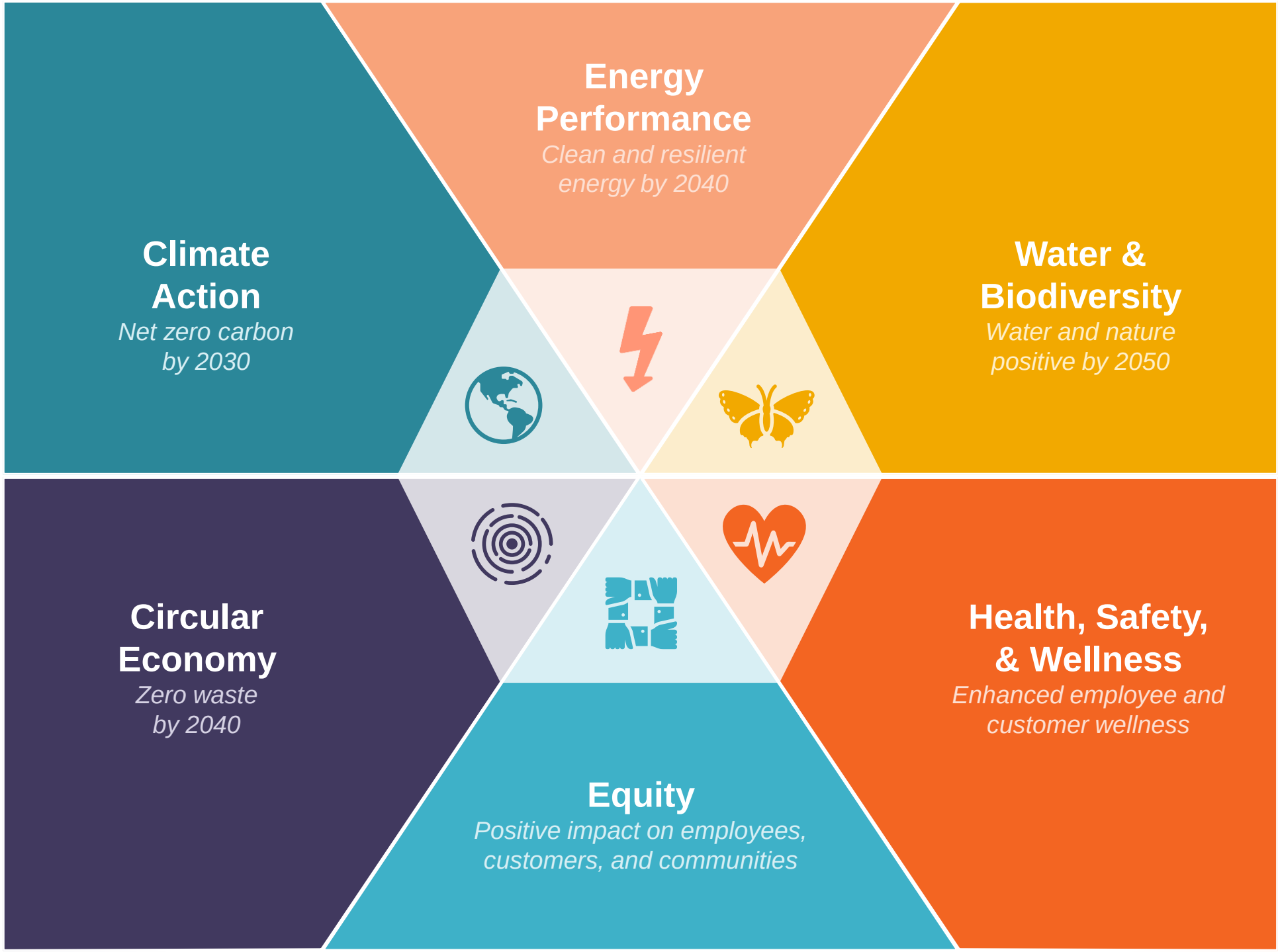
Sustainability North Stars

DFW's Aspirations for a Healthy and Resilient Airport Ecosystem

This SMP focuses on six areas: DFW's Sustainability North Star goals. For each North Star, we will be implementing a set of strategies to achieve our aspirational goal. Achieving the North Star goals will ensure DFW remains a resilient and future-proof operation.

There are several synergies between the strategies outlined in this plan, as many individual strategies deliver co-benefits, supporting other North Star areas, as well as other airport priorities.

These synergies can be considered 'win-wins' and will support our ability to effectively implement the plan, integrate sustainability throughout our operations, and maximize our impact.



Defining Our North Stars

Our Goals

DFW seeks to align with prevailing industry standards and has adopted targets that are considered leading edge across industry sectors. Our targets are informed by universally accepted definitions, where available:

Net Zero Carbon

Net zero is the condition in which human-caused greenhouse gas (GHG) emissions are balanced by removals over a specified period and within specified boundaries. To achieve certification as a net zero airport, DFW must reduce Scope 1 and 2 GHG emissions by at least 90% from our 2010 baseline, address residual emissions through carbon removal, and partner to reduce emissions from our value chain (Scope 3).

Clean and Resilient Energy

Clean energy is created from zero- and low-emission sources such as solar, wind, water, geothermal, bioenergy, and nuclear. Energy resilience is the ability to avoid, prepare for, minimize, adapt to, and recover from energy disruptions to ensure energy availability and reliability. DFW's goal is to transition at least 90% of our total energy supply – including fuels for heating, transportation, and fire training – to clean sources by 2040.

Water Positive

Net water positive occurs when an entity puts more water back into the environment than they extract from it. For DFW, this goal includes a focus on reducing potable water consumption, matching the appropriate water resource to each application, implementing more opportunities for onsite water reuse, and protecting and improving surface water quality. We have established a target to meet 90% of our non-potable water needs using non-potable sources, such as harvested rainwater, closed-loop water systems, and recycled or reclaimed water.

Progress toward a water positive future can be measured by conducting whole-site water balance analyses that consider on-site precipitation (including infiltration and evapotranspiration); quantity of stormwater, greywater, and blackwater water collected (treated, reused, and/or infiltrated); and quantity of water consumed (potable and non-potable water use).

Nature Positive

For DFW, a nature positive future means we will minimize and compensate for the loss of nature measured from its current state. Put simply, it means we will "protect what is left and improve the rest" by incorporating habitat preservation, enhancement, and creation into our land use plan. Nature-positive outcomes can be measured by quantifying changes in biodiversity and ecosystem services over time.

Zero Waste

Zero waste refers to the conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health. We have adopted a definition of 90% diversion from landfills and continue to explore opportunities to apply circular economy principles to our operations.

Positive Impact on Employees, Customers, and Communities

An equitable society is one in which all can participate and prosper. The goals of diversity and inclusivity must be to create conditions that allow all to reach their full potential. We have a proud history of promoting equitable advancement in the community and must continually build on this record to ensure the airport's prosperity can be shared by workers of all backgrounds and businesses of all sizes.

Enhanced Employee and Customer Wellness

Enhanced employee and customer wellness is achieved by addressing the spectrum of health, safety, and wellness issues ranging from vital protection of human life to enhancing health, wellness, and customer and employee experience by proactively addressing physical and mental health.

OUR VISION

A Sustainable Airport Ecosystem

DFW's Aspirations for a Healthy and Resilient Airport Ecosystem

Climate Action

Energy Performance

Circular Economy

Water & Biodiversity

Equity

Health, Safety, & Wellness

Key Elements of Our Plan

For each North Star, our plan outlines the following key elements, which are further supported by individual North Star roadmaps.

Linkage to United Nations Sustainable Development Goals

DFW deliberately mapped our North Stars to the Sustainable Development Goals (SDGs), adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. We map our goals to the relevant SDGs throughout this Plan.

The Big Picture

This section provides an overview of the strategic importance of the North Star topic, a discussion of how it relates to our operation, and a summary of our approach.

Performance Highlights

Here we summarize our current state as it relates to the North Star and provide a snapshot of our performance with relevant metrics from our latest reporting year.

100% renewable electricity

338 tons of food waste composted

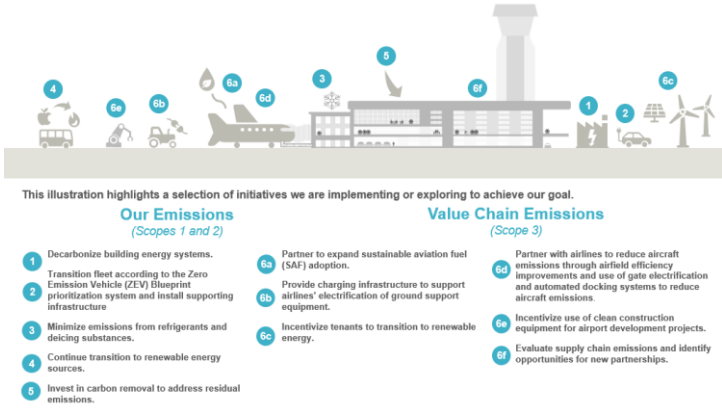
226M+ gallons saved through the use of reclaimed and surface water

Key Strategies

For each North Star, we have identified the key overarching strategies that we are implementing to support achievement of our targets.

Major Initiatives

This section illustrates the primary actions and initiatives that support our key strategies. These initiatives are outlined in detail in our North Star roadmaps.



Roadmap Summaries

NORTH STAR 1

Climate Action

Net zero carbon by 2030

UN Sustainable Development Goals Alignment

STRATEGIC APPROACH

DFW has committed to achieve net zero carbon emissions by 2030 for Scopes 1 and 2. Our net zero focuses on three core areas: decarbonization of our buildings and energy sources, transitioning and optimization of our fleet for emission reductions and improved efficiency, and using carbon removal to address residual emissions. Our *Climate Action Roadmap* details strategies to eliminate the use of fossil fuels throughout our facilities, fleets, and operations. We track our progress through an annual emissions inventory. We are also taking steps to address our indirect, or Scope 3, emissions, resulting from tenants, business partners, and activities along our supply chain.

THE BIG PICTURE

The aviation industry has adopted a long-term climate goal of net zero carbon emissions by 2050, and DFW has committed to our own ambitious goal to achieve net zero carbon emissions by 2030 – two decades ahead of the United Nations' global target.

We recognized the imperative to measure and reduce carbon emissions generated through airport operations early on and became the first airport in North America to achieve carbon neutrality in 2016. In 2020, we became the first airport in the world certified at Level 4+ 'Transition' in the Airport Carbon Accreditation (ACA) program. This certification recognizes our adoption of a target in alignment with the Paris Agreement and climate science and validates our *Climate Action Roadmap*.

Our net zero goal builds upon our climate action achievements to date, positioning DFW among the global leaders committing to best practices in emissions reductions.

PERFORMANCE HIGHLIGHTS

FY2023

Carbon emissions

↓81%

since 2010

Airport Carbon Accreditation Program

Level 4+

Fleet renewable natural gas supply

82%

NORTH STAR 1

Climate Action

Key Strategies

Building Decarbonization

The largest portion of our carbon emissions – almost two-thirds – result from facility heating. These emissions come primarily from the use of natural gas boilers in our Central Utility Plant (CUP) to provide heating for over 6.5 million square feet of terminal space. Achieving net zero requires a solution to decarbonize terminal heating.

In August 2023, we broke ground on a new Electric Central Utility Plant (eCUP). This project is the cornerstone of our net zero strategy. By transitioning the primary energy source for terminal heating from natural gas to renewable electricity, we will reduce emissions from terminal heating by nearly 80%.

The eCUP will also provide operational flexibility and resilience, reduce water use, and yield operations and maintenance cost savings.

For locations where the use of natural gas for facility heating cannot be eliminated, we will explore opportunities to integrate renewable natural gas (RNG).

Fleet Decarbonization

Our second-largest source of emissions is the airport's s fleet of over 1,000 vehicles. Our approach to reducing fleet emission is described in the Zero-Emission Vehicle (ZEV) Blueprint, a study conducted in partnership with the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) that informs our fleet transition plan and infrastructure planning needs.

The ZEV Blueprint establishes a transition priority classification for on-road fleet vehicles. For most vehicle fleets described in the ZEV Blueprint, the fleet sizes are fuel-agnostic, and hydrogen vehicles could be purchased in place of electric. We also plan to partner with a Charging-as-a-Service provider to expand electric vehicle charging infrastructure.

In the near term, we will continue increasing supply of RNG to our compressed natural gas (CNG) bus fleet. Since 2017, we have successfully leveraged RNG as a drop-in solution to reduce fleet emissions. Long-term initiatives include exploring the use of renewable diesel and renewable propane in our fleet.

Carbon Removal

Today, to maintain carbon neutrality, we purchase carbon offsets, which represent an emissions reduction outside the airport's boundaries. Achieving net zero will require us to achieve continued reductions in its carbon footprint – at least 90% from our baseline – and to leverage carbon removal to address residual emissions.

Residual emissions are projected to come from hard-to-eliminate sources including refrigerant losses, heavy-duty equipment without an alternative fuel equivalent, deicing substances, fire training activities, and a small portion of our heating load.

To address residual emissions in 2030, we will invest in carbon removal. For each ton of residual CO_2 emissions, one metric ton will be removed from the atmosphere. All removals will be required to adhere to quality criteria outlined by the ACA program. We will evaluate feasibility, scalability, and the environmental, social, and economic return on investment of potential solutions.

Scope 3 Value Chain Engagement

Scope 3 includes indirect emissions generated from sources not owned and/or controlled by the airport – in other words, our upstream and downstream value chain. Scope 3 sources are located both inside and outside the airport's geographic boundary.

For DFW, aircraft emissions represent the bulk of Scope 3 emissions. We partner with airlines to reduce idling emissions from auxiliary power unit (APU) usage by offering access to gate electrification systems, including pre-conditioned air (PCA) and 400 Hz ground power. We will also leverage airfield efficiency improvements and use automated docking systems to reduce fuel burn. We have partnered with airlines to expand and upgrade charging infrastructure for airline-owned electric ground support equipment (eGSE). We are also engaged with research partners and industry working groups to address sustainable aviation fuel (SAF) supply chain challenges.

Initiatives focused on other Scope 3 sources are further detailed in our Stakeholder Partnership Plan.

NORTH STAR 1

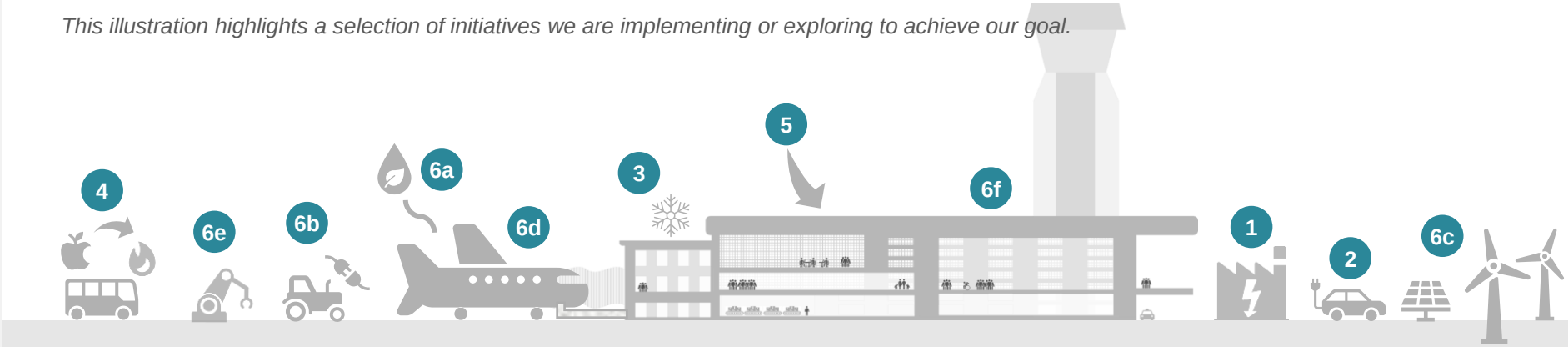
Climate Action

Key Strategies Continued

Net zero carbon by 2030

- **Building decarbonization (+eCUP)**
- **Fleet decarbonization**
- **Carbon removal**
- **Scope 3 value chain engagement**

This illustration highlights a selection of initiatives we are implementing or exploring to achieve our goal.



Our Emissions (Scopes 1 and 2)

1. **Decarbonize building energy systems**
2. **Transition fleet according to the Zero Emission Vehicle (ZEV) Blueprint prioritization system and install supporting infrastructure**
3. **Minimize emissions from refrigerants and deicing substances**
4. **Continue transition to renewable energy sources**
5. **Invest in carbon removal to address residual emissions**

Value Chain Emissions (Scope 3)

- **6a** **Partner to expand sustainable aviation fuel adoption**
- **6b** **Provide charging infrastructure to support airlines' electrification of ground support equipment**
- **6c** **Incentivize tenants to transition to renewable energy**
- **6d** **Partner with airlines to reduce aircraft emissions through airfield efficiency improvements, gate electrification, and automated docking systems**
- **6e** **Incentivize use of clean construction equipment for airport development projects**
- **6f** **Evaluate supply chain emissions and identify opportunities for new partnerships**

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NORTH STAR 1

Climate Action

Implementation Roadmap

Initiative		Underway	By 2027	By 2030	By 2040
1	**Decarbonize building energy systems**				
1a	Construct Electric Central Utility Plant (eCUP)				
1b	Identify and complete building retrofit projects to electrify remaining gas heating equipment				
2	**Transition fleet according to ZEV Blueprint prioritization system and install supporting infrastructure**				
2a	Transition priority vehicles (large buses, pickups, sedans) to electric/hydrogen/hybrid; continue increasing supply of RNG to remaining CNG bus fleet				
2b	Transition mid-tier vehicles (cutaway buses, SUVs, and vans) to electric or hybrid				
2c	Transition remaining vehicles and equipment (heavy trucks, ARFF, motorcycles, misc.) to electric, hybrid, or renewable fuel				
2d	Partner with a Charging as a Service (CaaS) provider to expand electric charging infrastructure and/or similar model for hydrogen fueling infrastructure				
3	**Minimize emissions from refrigerants and deicing substances**				
3a	Identify funding and replace refrigerants with cleaner 'next generation' refrigerants				
3b	Explore innovative emissions free methods for deicing				
4	**Continue transition to renewable energy sources**				
4a	Develop supply partnerships with renewable fuels providers				
4b	Continue investment in 100% renewable electricity				
5	**Invest in carbon removal to address residual emissions**				
5a	Continue to procure emissions reduction offsets for near term residual emissions				
5b	Transition to investments in carbon removal offsets by 2030				
6	**Partner to reduce Scope 3 emissions**				
6a	Partner to expand SAF adoption				
6b	Incentivize tenants to transition to renewable energy				
6c	Provide charging infrastructure to support airlines' electrification of ground support equipment				
6d	Partner with airlines to reduce aircraft emissions through airfield efficiency improvements, gate electrification, and automated docking systems				
6e	Incentivize use of clean construction equipment for airport development projects				
6f	Evaluate supply chain emissions and identify opportunities for new partnerships				

NORTH STAR 2

Energy Performance

Clean and resilient energy by 2040

UN Sustainable Development Goals Alignment

STRATEGIC APPROACH

DFW is committed to efficiency, resilience, and innovation around energy performance. The airport also has long focused on continuously exploring opportunities to implement energy retrofits in existing facilities and incorporating high-performance design standards in new construction. New priorities in our strategy include using onsite renewable energy generation and storage as demand management tools and leveraging digital twin technology to optimize building system operations. We will continue to evaluate and invest in cost-effective, resilient solutions to improve our ability to anticipate, prepare for, respond to, and recover from disruptions. Potential future disruptions included in our planning efforts include extreme weather, cyberattacks, and technological failures.

THE BIG PICTURE

Maintaining an exceptional customer experience and a safe and secure environment requires large amounts of energy to heat and cool vast interior spaces, manage various electronic systems, and operate hundreds of fleet vehicles across the airport's 26.9 square mile-campus. As we continue to decarbonize our operations and transition to clean energy sources, energy resilience remains paramount.

The risks and opportunities around energy management are rapidly evolving with technological innovations and increasing constraints brought on by external threats such as climate change. 'Smart' technologies, real-time energy monitoring, and modeling and simulation tools can help adapt operations to eliminate inefficiencies and maximize performance.

As the North Texas region continues to grow, further strain will be placed on existing energy systems, particularly the electric grid. In the summer of 2023, the Texas grid, operated by ERCOT, set 10 new all-time peak demand records. Demand is growing not just across the state and region but at DFW; we expect our electricity demand to double in the next five to ten years to meet the needs of increased facility loads and adoption of electric vehicles. Developing smarter, cleaner, and more efficient energy systems onsite will ensure we are equipped to meet the challenge of energy resilience.

PERFORMANCE HIGHLIGHTS

FY2023

69%
of all energy came from renewable sources, the highest in DFW history

100%
renewable electricity since 2017

11.8%
reduction in energy intensity per passenger since 2010

NORTH STAR 2

Energy Performance

Key Strategies

Clean and resilient energy by 2040

Optimize Energy Demand

Managing energy demand is becoming increasingly crucial as we expand our facilities, serve an increasing number of passengers, and shift toward electrification. By optimizing how and when energy is used, we can alleviate strain on the local electrical grid, reduce utility costs, and make better use of renewable energy sources, which are often intermittent.

Better building materials and high-performance design play a pivotal role in managing energy demand, reducing the energy needed for heating, cooling, and lighting. The integration of digital controls and sensors is another essential component in optimizing energy use. Sensors can monitor parameters such as temperature and light levels, then dynamically adjust building systems to optimize conditions with minimal energy expenditure. Advanced energy management systems can also provide real-time data and predictive analytics, enabling proactive adjustments to prevent waste. This technology-driven approach allows for more precise control over energy use, further aligning consumption with availability and enhancing overall efficiency.

Clean Energy Supply

Our current energy mix includes electricity, transportation fuels, heating fuels, and fire training fuels. Transitioning to clean energy sources will require a comprehensive supply strategy focused on the procurement and sourcing of renewable electricity, RNG, renewable diesel, renewable propane, and other renewable fuels.

The deployment of batteries and other distributed energy resources (DERs) is vital for enhancing the reliability of the grid. Batteries enable the storage of excess renewable electricity generated during periods of high production.

Integrating these renewable energy sources and technologies will require coordinated efforts to stay abreast of policy changes, market development, federal investment priorities, and evolving infrastructure needs.

In August 2023, we broke ground on the construction of a new, electric Central Utility Plant (eCUP). This project will support future airport growth and is emblematic of our commitment to a clean energy future.

Resilient Energy Infrastructure

Ensuring a continuous, reliable energy supply is essential to airport operations, as operational disruptions can result in adverse impacts such as delays, safety risks, and cost implications.

Our approach to resilient infrastructure encompasses onsite power generation, advanced energy storage technologies, and efficient distribution systems that can withstand and quickly recover from adverse events such as extreme weather, cyberattacks, or equipment failures.

Microgrids will play a role in managing the cost and grid impacts associated with increased electrification by providing peak shaving and load management. By generating and using stored power during peak demand periods, microgrids can decrease the amount of energy drawn from the grid when prices are highest. We will identify opportunities to integrate DERs such as batteries and solar photovoltaics at strategic locations to ensure a stable power supply during periods of peak demand or grid outages.

Innovation and Partnerships

Innovation and partnerships are crucial elements of an effective energy performance strategy particularly for large, complex entities like airports.

Innovation drives continuous improvement through the new technologies and methodologies. Digital twins, dynamic glass, and smart grid technologies are examples of innovations that enable real-time monitoring and control of energy use, improving efficiency and reliability.

Partnerships bring together diverse expertise and resources, facilitating the development and implementation of innovative energy solutions. Collaborating with research institutions, technology providers, academia, and industry leaders allows airports to stay at the forefront of energy efficiency and sustainability practices. These partnerships can also provide access to funding, technical assistance, and new technologies that might otherwise be inaccessible. Our partnership with NREL exemplifies the benefits of collaboration in an energy performance strategy.

~~NORTH STAR 2~~

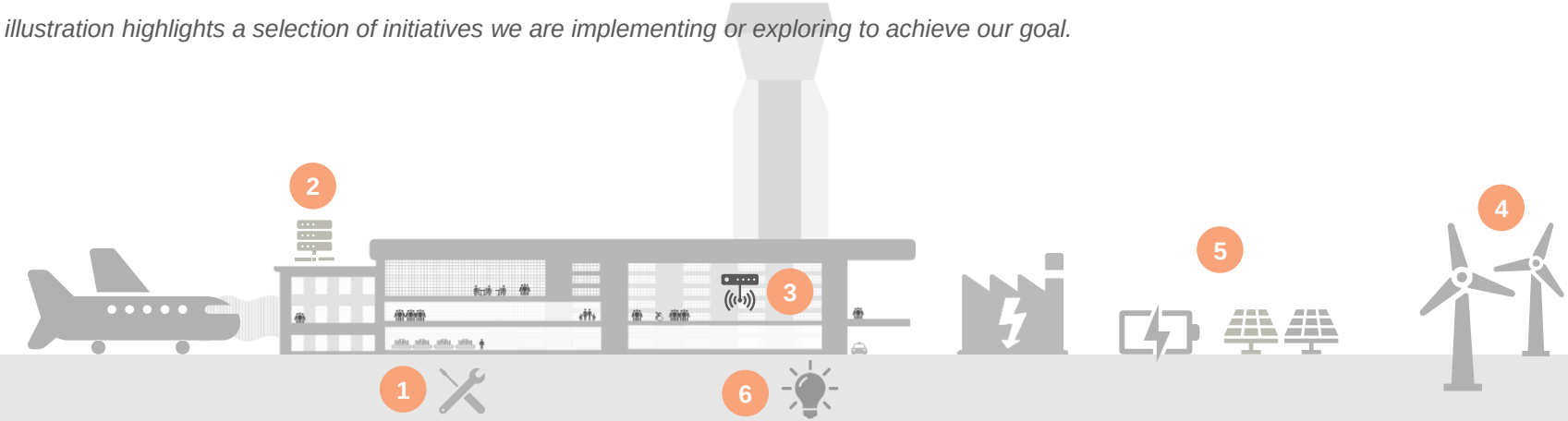
Energy Performance

Key Strategies **Continued**

Clean and resilient energy by 2040

- Reduce energy demand
- Clean energy supply
- Resilient energy infrastructure
- Innovation and partnerships

This illustration highlights a selection of initiatives we are implementing or exploring to achieve our goal.



1. **Develop policy and governance structures to facilitate advancements in energy performance**
2. **Accelerate digital transformation to enable proactive and predictive energy management**
3. **Ensure new facilities incorporate best available energy technologies**
4. **Advance long-term renewable energy procurement strategy**
5. **Invest in resilience for electric infrastructure**
6. **Promote innovation through thought leadership and key partnerships**

DFW

NORTH STAR 2

Energy Performance

Implementation Roadmap

Clean and resilient energy by 2040

Initiative		Underway	By 2027	By 2030	By 2040
1	**Develop policy and governance structures to facilitate advancements in energy performance**				
1a	Develop Strategic Energy Master Plan that incorporates campus-wide energy audits, decarbonization initiatives, demand management, and supply strategy				
1b	Establish an energy performance program office to consolidate strategy, policy, planning, and operational functions and to support conservation, decarbonization, and cost savings objectives				
1c	Proactively track grants, incentives, rebates, and credits to fund energy initiatives				
1d	Implement an energy savings performance contract to provide facility operations and maintenance services and drive long-term cost savings				
2	**Accelerate digital transformation to enable proactive and predictive energy management**				
2a	Leverage digital twin technology to optimize energy use across airport facilities and operations, automate fault detection and diagnostics, and improve system resilience				
2b	Expand submeter deployment to monitor energy end-uses and identify opportunities for savings				
2c	Standardize requirements for building management systems across all facilities				
2d	Benchmark and continuously evaluate energy performance and set goals for annual efficiency improvements				
3	**Ensure new facilities incorporate best available energy technologies**				
3a	Establish and enforce new construction standards in alignment with energy performance and resilience priorities				
3b	Require digital controls in new facilities to manage mechanical, electrical, lighting, and other systems				
3c	Require enhanced commissioning for all new buildings				
4	**Advance long-term renewable energy procurement strategy**				
4a	Establish specifications and standards for clean energy procurement				
4b	Update long-term renewable energy procurement strategy to integrate evolving technologies, market developments, and innovative procurement approaches				
5	**Invest in resilience for electric infrastructure**				
5a	Conduct feasibility assessments to identify and prioritize locations campus-wide for microgrid applications				
5b	Deploy microgrids at strategic locations through "microgrid as a service" business model				
5c	Develop a strategy to support widespread electrification of aircraft, vehicles, and equipment; incorporate demand-side flexibility and supply-side developments into long-term planning				
5d	Deploy supporting infrastructure for electrification through "charging as a service" business model				
5e	Identify opportunities to deploy DERs to provide clean and reliable backup power				
6	**Promote innovation through thought leadership and key partnerships**				
6a	Expand partnerships with industry leading subject matter experts				
6b	Further develop relationships in key policy areas to promote legislative alignment with DFW goals				

NORTH STAR 4

Circular Economy & Waste

Zero waste by 2040

UN Sustainable Development Goals Alignment

STRATEGIC APPROACH

To reduce impacts from waste generation associated with airport operations and ongoing construction activities, DFW has established a goal to achieve zero waste.

DFW defines zero waste as 90% diversion from landfills, and the goal encompasses both municipal solid waste (MSW) and construction and demolition (C&D) waste. The 90% diversion definition has been adopted by several international and U.S. organizations as well as certification bodies, such as Green Business Certification Inc. (GBCI). Achieving zero waste will require the airport to shift from a linear model of consumption and disposal to a circular model. In a circular economy, waste and pollution are minimized as resource life cycles are extended. Outside of our zero waste goal, we also aim to improve management of our regulated waste streams.

THE BIG PICTURE

North Central Texas has only an estimated 36 years of landfill capacity remaining. The scale of the airport presents opportunities to close loops on material consumption, as exemplified by our successes at reusing concrete for road construction and recycling used cooking oil as a feedstock for renewable fuel production.

Our strategy aligns with the waste management hierarchy, which describes a progression of strategies aimed first at addressing the root causes of waste generation through the redesign of systems and rethinking of purchasing practices. This is followed by implementation of the traditional '3 R's" of reduce, reuse, and recycle (including compost).

Source: U.S. Environmental Protection Agency

In our terminal waste audit, we found that approximately half of the material in our waste stream is not recyclable or compostable today and has no alternative destination but the landfill. Our strategy must therefore address waste at its upstream source.

PERFORMANCE HIGHLIGHTS

FY2023

94%
construction waste diversion

15.9%
municipal solid waste diversion

338
tons of food waste composted

195
tons of used cooking oil recycled as a feedstock for renewable fuel

DFW

NORTH STAR 4

Circular Economy & Waste

Key Strategies

Comprehensive Zero Waste Commitment

Achieving zero waste requires a holistic approach to address approximately 30,000 tons of waste generated each year. Our goal includes MSW generated from four main sources over which DFW exercises varying levels of control: airport administration (“Board”) buildings, terminals, catering kitchens, and tenants.

This roadmap details initiatives to scale up existing programs for recycling, reuse, and composting; improve education for employees and contractors; optimize collection infrastructure and processes; update contract requirements; and partner to improve data sharing. Ultimately, achieving zero waste will require transformative change to reduce waste at its source. Ongoing evaluation of the composition of our waste stream through periodic waste audits will be used to refine our strategy.

Green Procurement

Our strategy must address waste at its source, and so we are exploring opportunities to use procurement as a lever to reduce materials consumption, avoid waste generation, and improve diversion. A green procurement policy will specify durable and reusable materials and will reduce the purchase or use of single use materials and products that cannot be reused, recycled, or composted. DFW will use data from a review of purchasing activities and from waste audits to identify materials that can be replaced with environmentally preferable materials.

A green procurement policy can also specify materials with low embodied carbon – emissions associated with materials extraction, manufacture, and transportation – thus supporting goals around both waste and Scope 3 emissions reductions.

Organic Waste Recovery

Our waste audit findings from 2020 showed that approximately one quarter of waste generated in the terminals is organic, such as food scraps and paper towels. To meet our goals, our strategy must address organic waste. In 2021, we launched a composting program to collect and compost food waste offsite. Moving forward, we are planning to build an anaerobic digester to process organic waste onsite and generate digestate and biogas. Nutrient-rich digestate can be turned into fertilizer, and the biogas can be used to produce heat, electricity, or transportation fuel. This ability to turn waste into a resource will be a cornerstone of our circularity efforts and reduce the volume of material sent to landfill. The success of our organic waste diversion efforts will rely on developing efficient processes to collect material from geographically dispersed locations as well as engaging with tenants, employees, and customers about separation and sorting of organic waste.

Circular Construction

In recent years, DFW has successfully maintained high levels of construction waste diversion and achieved a 99% diversion rate in 2020. Our success is facilitated by our capacity for onsite storage of construction waste – including concrete, asphalt, and topsoil – at our East Materials Management Site, which reduces demand for new materials in subsequent projects.

To build on this success and maintain a diversion rate above 90%, we plan to develop a strategy for specifying and sourcing reusable, durable materials and explore ‘design for deconstruction and disassembly’ approaches into future projects.

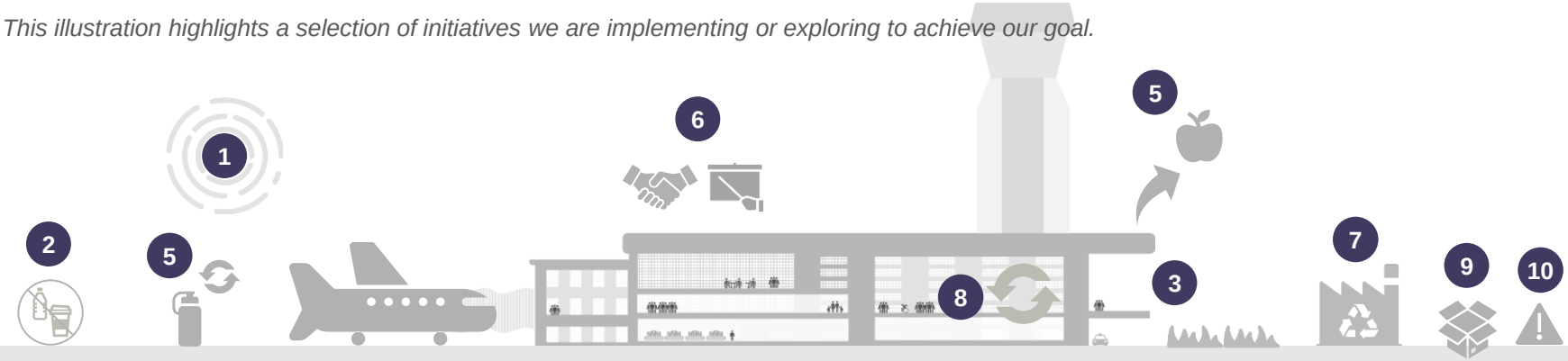
NORTH STAR 4

Circular Economy & Waste

Key Strategies Continued

- Comprehensive zero waste commitment
- Organic waste recovery
- Green procurement
- Circular construction

This illustration highlights a selection of initiatives we are implementing or exploring to achieve our goal.



1. Secure comprehensive zero waste commitment
2. Reduce waste at the source through procurement policy and product phase-outs
3. Reduce waste at the source through modifications to operations and infrastructure
4. Expand recycling and reuse programs
5. Expand organic waste collection and diversion
6. Create zero waste training and engagement programs
7. Upgrade waste equipment and infrastructure
8. Adopt circular design and construction practices
9. Improve construction and demolition waste management procedures
10. Optimize regulated waste management

DFW

NORTH STAR 4

Circular Economy & Waste

Implementation Roadmap

Initiative		Underway	By 2027	By 2030	By 2040
1	**Secure comprehensive zero waste commitment**				
1a	Integrate zero waste requirements into ‘Sustainability’ Board policy				
1b	Develop zero waste certification approach and identify targets for individual facilities				
1c	Continuously refine zero waste strategy through comprehensive and ongoing waste audit process				
1d	Improve data management and performance tracking through use of software tools				
2	**Reduce waste at the source through procurement policy and product phase-outs**				
2a	Develop environmentally preferred purchasing policy				
2b	Phase out non-recyclable items and single-use plastics in terminal concessions and Board buildings				
2c	Incorporate zero waste priorities into contracts with business partners (tenants, concessionaires, airlines, haulers, etc.)				
3	**Reduce waste at the source through modifications to operations and infrastructure**				
3a	Install additional water bottle refill stations throughout terminals				
3b	Install liquid disposal stations at security checkpoints				
3c	Introduce office paper use reduction program				
3d	Leave grass clippings in place in mowed areas; Mulch tree trimmings for use onsite, or donate to local organizations				
4	**Expand recycling and reuse programs**				
4a	Continue to expand and improve mixed and stream-specific recycling programs				
4b	Require tenant participation in recycling programs and data sharing				
4c	Require terminal concessionaire participation in recycling and composting programs				
4d	Continue ramp cleanliness initiative				
4e	Continue pallet recycling program				
4f	Optimize surplus sales yard				
4g	Implement donation program for surplus goods and "lost and found" items				

NORTH STAR 4

Circular Economy & Waste

Implementation Roadmap Continued

Initiative		Underway	By 2027	By 2030	By 2040
5	**Expand organic waste collection and diversion**				
5a	Expand food waste collection and composting program				
5b	Expand food donation program				
5c	Introduce paper towel composting program (or eliminate use of paper towels)				
6	**Create zero waste training and engagement programs**				
6a	Design and implement zero waste employee engagement program				
6b	Implement contractor engagement and training program				
6c	Implement partner recognition program				
6d	Engage customers on zero waste actions and objectives				
7	**Upgrade waste equipment and infrastructure**				
7a	Standardize and optimize waste collection equipment				
7b	Design and construct an on-site anaerobic digestor for organic waste				
7c	Design and construct an on-site Central Receiving and Distribution Center (CRDC) to consolidate delivery of goods to the terminals				
7d	Design and construct an onsite Materials Recovery Facility (MRF) to sort recyclable materials from municipal solid waste				
8	**Adopt circular design and construction practices**				
8a	Increase adoption of circular design principles through Green Building Standards and Design Criteria Manual updates				
8b	Develop catalog of circular materials				
8c	Pursue innovative partnerships				
9	**Improve construction and demolition waste management procedures**				
9a	Maintain and improve existing construction and demolition waste management programs				
9b	Augment and standardize waste management requirements in construction contracts				
9c	Require a Waste Management Plan				
10	**Optimize regulated waste management**				
10a	Properly manage, reduce, and eliminate regulated waste streams				

NORTH STAR 3

Water & Biodiversity

Water and nature positive by 2050

UN Sustainable Development Goals Alignment

STRATEGIC APPROACH

While DFW has long been committed to responsible stewardship, our goals to be water and nature positive reflect our ambition to move beyond doing less harm and to strive for a positive impact on both the natural environment and surrounding communities.

Nature positive is a concept describing a future state of nature (e.g., biodiversity, ecosystem services, and natural capital) that is greater than the current state. Put simply, it means that the airport will “protect what is left and improve the rest.” For DFW, becoming nature positive means that we will minimize and compensate for the loss of nature as measured from our current state.

For DFW, water positive means protecting the quality of our surface waters, using water more efficiently, and returning more water back to the environment than we consume by employing rainwater capture, closed-loop water systems, and recycled or reclaimed water for all non-potable uses.

THE BIG PICTURE

DFW’s 17,000-acre campus is located at the confluence of two ecoregions: the Cross Timbers and the Texas Blackland Prairies, which form a diverse mosaic of forest and grassland habitats. The airport manages 26 miles of creeks and channels and more than 250 miles of storm sewer pipes that discharge into eight distinct watersheds and eventually, the Trinity River. A university study found the largest watershed, Bear Creek, provides an exceptional rating for aquatic life. The initiatives outlined in this roadmap reflect our alignment with global goals to halt and reverse losses to water and nature.

As the impacts of climate change become increasingly acute for the growing North Texas region, it is crucial to continuously evaluate both the impacts of our resource use on our society and the environment as well as the potential impacts of extreme weather, heat stress, and water stress on our operations and infrastructure. Using tools to quantify existing conditions and resource use provides a baseline from which to ensure that DFW grows responsibly.

PERFORMANCE HIGHLIGHTS

FY2023

226M
gallons of potable water saved annually by using reclaimed & surface water

2002
watershed management program established

Top 20
Texan by Nature 20 recognition for conservation and sustainability work

DFW

NORTH STAR 3

Water & Biodiversity

Key Strategies

Net Positive Impact on Biodiversity

DFW aims to achieve a net positive impact on biodiversity, also referred to as “biodiversity net gain.” This will require DFW to adopt a mitigation hierarchy approach, which calls for businesses to first attempt to avoid negative impacts to biodiversity. If this objective cannot be accomplished, then businesses must minimize, restore, and offset unavoidable impacts.

To inform this strategy, we conducted a baseline biodiversity assessment and quantified the biodiversity value of the airport’s various habitat types. Achieving a net positive impact on biodiversity will require DFW to implement significant habitat preservation, enhancement, and creation to balance habitat lost through development activities.

This effort will require a revision to our Land Use Plan to preserve forested areas and locate development in grassland areas with lower biodiversity. Habitat creation through the incorporation of green roofs, green walls, and additional tree planting in urban areas will also be required.

Enhance Water Quality and Protect Watershed Health

DFW is committed to protecting the quality of local water bodies, both on-airport and downstream. We aim to ensure that water leaving the airport is cleaner than the regional baseline and that watershed health programs are tailored to meet this goal.

To further promote watershed health and water quality management, DFW will expand our use of ‘blue-green infrastructure,’ an approach that incorporates natural or semi-natural systems of blue elements (e.g., ponds, floodplains, bioswales) and green elements (e.g., tree planting, green roofs) into urban land planning. Blue - green infrastructure is recognized for its effectiveness at stormwater management and urban heat island mitigation – two strategies that are crucial for climate change adaptation. Blue-green infrastructure can also be leveraged to increase biodiversity and provide other ecosystem services.

Furthermore, increased habitat protection and enforcement of existing standards for Green Stormwater Infrastructure/Low Impact Development (GSI/LID) and tree conservation will further protect watershed health by providing buffer areas around local surface waters that naturally filter out pollutants.

Promote Water Efficiency, Conservation, and Reuse

Our water positive goal requires one hundred percent of the airport’s non-potable water needs to be supplied from non-potable water sources while increasing the efficiency of potable water use. To achieve this goal, we must implement advanced water efficiency and conservation tactics and advance toward water circularity by reusing site and building water. Water positive outcomes can be measured by conducting whole-site water balance analyses that consider on-site precipitation (including infiltration and evapotranspiration); quantity of stormwater, greywater, and blackwater water collected (treated, reused, and/or infiltrated); and quantity of water consumed (potable and non-potable water use).

To formalize the approach and reduce potable water use across all operations, we will conduct a complete assessment of major potable water systems and evaluate increased integration of stormwater capture and reuse, recycling of greywater and process water, expansion of reclaimed water lines, and introduction of standard flow rates for fixtures, appliances, and processes across all facilities. We will engage airline tenants, concessionaires, rental car companies, and other significant non-potable water users through this effort.

NORTH STAR 3

Water & Biodiversity

Key Strategies Continued

Prioritize Flood Mitigation and Climate Adaptation Measures

Our comprehensive approach to climate resilience aims to reduce risks associated with flooding, extreme weather, and other hazards.

To implement this approach, we published a Stormwater Drainage Master Plan with guidance for green stormwater infrastructure (GSI) installations. We also plan to update our Design Criteria Manual with new heat mitigation requirements for roofs, sidewalks, and parking lots so that climate adaptation is integrated into future capital projects. Furthermore, integrated site strategies and land use provisions, such as expansion of protected land to include the 500-year flood zone, will provide flood mitigation and long-term resilience benefits while guiding responsible development.

Other flood mitigation strategies that will be used to reduce runoff and improve filtration include porous pavement, enhanced soil water holding capacity, dry detention ponds, and bioswales.

We will continue to undertake climate risk assessments and mitigation projects on an ongoing basis.

Quantify and Safeguard Ecosystem Services

We are committed to improving our understanding of the benefits we derive from nature, known as ecosystem services. These include provisioning services such as food and water; regulating services such as managing stormwater runoff, drought, land degradation, and disease; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other non-material benefits.

To formalize this approach, we plan to map and quantify the impact of several key services, such as stormwater runoff reduction, erosion protection, carbon sequestration, mitigation of the urban heat island effect, pollutant filtering, and aesthetic value. This analysis will be used to communicate the *Return on Conservation*, defined by Texan by Nature as “the total return realized by investing in conservation, encompassing all variables – financial, human, and natural resources.”

Ultimately, we aim to implement actions to safeguard, restore, and increase key ecosystem services. The results of the mapping and quantification assessment will be used to inform DFW’s ecosystem services strategy and will complement the habitat preservation and enhancement efforts conducted to achieve a net positive impact on biodiversity.

Protect Water and Biodiversity Along the Supply Chain

DFW’s commitment to water and biodiversity extends beyond our geographic boundaries. We will evaluate opportunities to reduce impacts across our supply chain and ultimately integrate these measures into procurement policy and solicitations.

A baseline analysis of DFW’s supply chain will be conducted and used to identify priority sectors to target for vendor engagement. Vendor engagement may include meetings, performance tracking, and reporting recommendations.

DFW

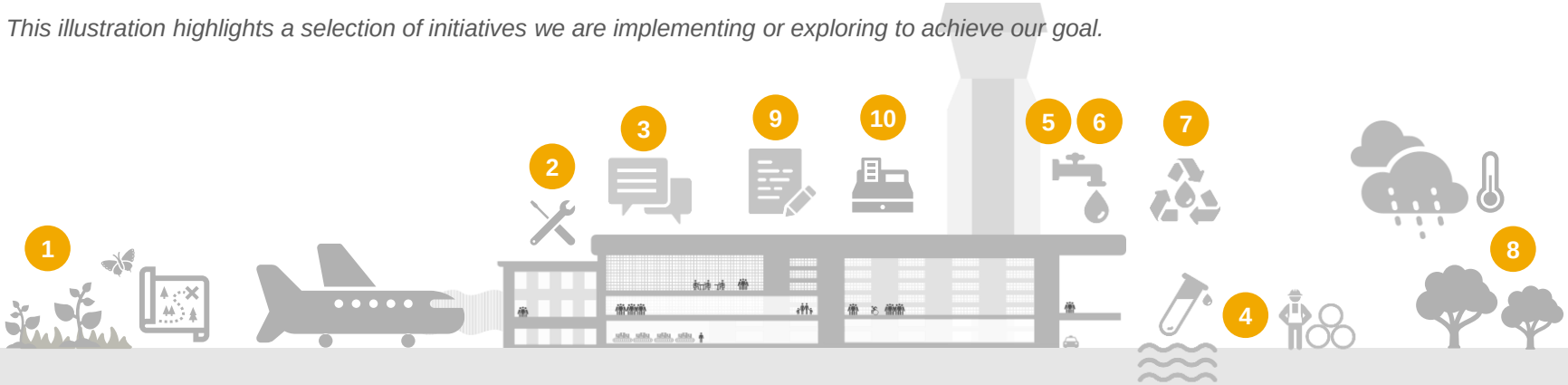
NORTH STAR 3

Water & Biodiversity

Key Strategies Continued

- Net positive impact on biodiversity
- Enhance water quality and protect watershed health
- Water efficiency, conservation, and reuse
- Flood mitigation and climate adaptation
- Quantify and safeguard ecosystem services
- Protect water and biodiversity along the supply chain

This illustration highlights a selection of initiatives we are implementing or exploring to achieve our goal.



1. Protect natural ecosystems to preserve and improve biodiversity
2. Implement water and nature positive policy and programs
3. Improve water and biodiversity education and data management
4. Improve watershed health and protect water quality
5. Improve water use efficiency of DFW operations
6. Improve water use efficiency of tenant operations
7. Reduce use of potable water to meet non-potable water demands
8. Improve resilience through integration of climate adaptation measures for operations and infrastructure
9. Maintain compliance with permits, plans, and regulations
10. Develop a responsible purchasing policy

NORTH STAR 3

Water & Biodiversity

Implementation Roadmap Continued

Initiative		Underway	By 2027	By 2030	By 2040
1	**Protect natural ecosystems to preserve and improve biodiversity**				
1a	Utilize biodiversity metric tool to conduct a baseline assessment and inform a revision to DFW's Land Use Plan; designate areas for habitat preservation, enhancement, and creation; complete a multi-criteria decision-making scorecard to assess new development options				
1b	Commit to onsite habitat preservation and enhancement through site selection; update and implement Tree Conservation Plan				
1c	Commit to offsite habitat enhancement through local collaboration				
2	**Implement water and nature positive policy and programs**				
2a	Integrate water and nature positive requirements into 'Sustainability' Board policy				
2b	Integrate water and nature positive incentives into tenant leases and ensure solicitations used for contracts or vendor acquisition align with water and nature positive goals				
2c	Evaluate water positive certification pathways				
2d	Quantify the value of ecosystem services to enable comparison of management alternatives, such as the benefits and costs of green infrastructure, habitat restoration, or use of green spaces				
3	**Improve water and biodiversity education and data management**				
3a	Identify and empower water and nature positive champions across departments; implement employee engagement program; implement stormwater public engagement program				
3b	Improve data management and reporting				
4	**Improve watershed health and protect water quality**				
4a	Restore streambank by removing concrete channels as development occurs				
4b	Improve erosion monitoring and channel restoration of Bear Creek and its tributaries				
4c	Expand and enforce Green Stormwater Infrastructure / Low Impact Development program				
4d	Improve stormwater quality monitoring through sensor installations				
4e	Improve emergency spill response and deicing programs to reduce the frequency of spills and releases to the environment				
4f	Improve collection and management of concentrated spent glycol from aircraft deicing. Evaluate opportunities for glycol recycling				

NORTH STAR 3

Water & Biodiversity

Implementation Roadmap Continued

Initiative		Underway	By 2027	By 2030	By 2040
5	**Improve water use efficiency of DFW operations**				
5a	Update Design Criteria Manual and other relevant standards to require high-efficiency appliances in new construction				
5b	Develop a Water Conservation Plan with specific measures and annual savings targets for existing facilities				
5c	Reduce irrigation demand through use of remote sensing and by codifying and enforcing conservation strategies for existing facilities; require native/adapted vegetation or xeriscaping for new facilities				
5d	Evaluate opportunities to reduce process water demand at the Central Utility Plant				
5e	Conduct a potable water distribution system study to evaluate the potential to replace oversized pipes				
5f	Reduce water losses from system leaks through improved monitoring and preventative maintenance				
5g	Improve domestic water use monitoring in terminals to inform targeted conservation measures				
6	**Improve water use efficiency of tenant operations**				
6a	Update Design Development Guidelines and other relevant standards to require tenants to install or transition to high-efficiency appliances				
6b	Require native and adapted vegetation or xeriscaping for new landscaping				
6c	Partner with American Airlines and other major tenants to further reduce potable water use in terminals, hangars, and other facilities				
7	**Reduce use of potable water to meet non-potable water demands**				
7a	Increase purchase of reclaimed water and expand distribution infrastructure				
7b	Conduct feasibility study and implement onsite water reuse systems				
7c	Integrate opportunities for increasing non-potable water usage in new facility design				
8	**Improve resilience through integration of climate adaptation measures for operations and infrastructure**				
8a	Conduct a physical climate risk assessment to evaluate potential impacts of climate change				
8b	Update Design Criteria Manual and other relevant standards to incorporate heat mitigation measures such as high-albedo roofs and paving, shade trees for sidewalks and parking lots, insulation, and dynamic glass				
8c	Continue protecting land within the FEMA floodplains and DFW Inundation Areas				
8d	Improve flood modeling to understand and mitigate the impact of development activities				

NORTH STAR 3

Water & Biodiversity

Implementation Roadmap Continued

Initiative		Underway	By 2027	By 2030	By 2040
9	**Maintain compliance with permits, plans, and regulations (*regulatory)**				
9a	Maintain and exceed stormwater permit provisions				
9b	Protect the natural environment through NEPA review				
9c	Protect natural resources through handling of regulated garbage in accordance with federal regulations				
9d	Continue to identify and mitigate hazardous wildlife attractants				
9e	Protect active nests during construction activities				
10	**Develop a responsible purchasing policy**				
10a	Develop a preferred purchasing policy to reduce biodiversity and water impacts in the supply chain				
10b	Develop and implement a vendor engagement plan				

NORTH STAR 5

Equity

Positive impact on employees, customers, and communities

UN Sustainable Development Goals Alignment

STRATEGIC APPROACH

DFW is committed to creating opportunity and reflecting the diversity of the Dallas-Fort Worth region. Our current strategic plan states, “At DFW, we strive to create a respectful and inclusive work environment that capitalizes on the diversity of all our employees, ensuring that everyone can develop, contribute and be fully engaged.” DFW continues to focus on equity as an operational principle, moving toward a culture of inclusion both within the organization and externally, for customers and for local disadvantaged communities, through procurement policies, creating business opportunities, training and capacity building, partnerships, fundraising, and volunteerism. In 2023, DFW updated our DEI strategy to better meet the needs of our employees and our community partners. Our new strategy focuses on the workplace, the workforce and the marketplace.

THE BIG PICTURE

An equitable society is one in which all can participate and prosper. The goals of equity must be to create conditions that allow all to reach their full potential. Marginalized communities and individuals have lacked access to opportunities and are disproportionately impacted by extreme weather, economic downturn, or pollution and health hazards.

Airports – as neighbors, employers, economic engines for the communities in which they are situated -- have a role to play in transforming that status quo by removing barriers and increasing opportunities for vulnerable and underserved communities and individuals. DFW has a proud history of promoting equitable advancement in the community and we must continually build on this record to ensure the airport's prosperity can be shared by workers of all backgrounds and businesses of all sizes.

PERFORMANCE HIGHLIGHTS

FY2023

25%
of employees are a part of an employee resource group

40%
of expenditures were with minority and women-owned business enterprises

2,857
volunteer hours logged bbenefiting 150 organizations

NORTH STAR 5

Equity

Key Strategies

Continue to Implement Strategies for Inclusion & Belonging

In 2023, DFW implemented a new DE&I strategy, and we are continuously evolving policies and programming to ensure a diverse workplace and that all employees have a sense of belonging (inclusion) and experience a feeling of fairness (equity). The new strategy focuses on the workplace, the workforce, and the marketplace.

DFW's Strategic Leadership Council is a cross-functional team of executive and senior leaders who meet monthly to discuss strategies, provide guidance, and engage with leadership to implement DE&I initiatives. The council provides governance and oversight to drive accountability amongst all leaders of the organization.

We are working to ensure that inclusion, belonging, and equity is foundational in all stages of the employee lifecycle. Employees also participate in inclusion and respectful workplace training to help all understand the importance of creating a work environment where all can thrive.

Education, Partnerships and Capacity Building

At DFW, we engage in strategic partnerships to grow capacity and create opportunities for diverse businesses. Our growing network of advocacy partners across North Texas is creating opportunities for small, minority- and women-owned businesses to benefit from the economic impact of DFW.

Additionally, to attract diverse talent in the region, we partner with North Texas Leaders and Executives Advocating Diversity. DFW is focusing on how to continue to diversify our talent pools to ensure our workforce mirrors the North Texas community.

Supplier Diversity

DFW is a recognized innovator in advocating for supplier diversity, job creation, and significant investment in the North Texas Region. Our Capacity Building Program Series offers courses to assist newly certified firms and help grow existing businesses that do business with DFW.

DFW's Supplier Diversity initiative extends to procurement of goods and services, architecture, engineering and construction contracts, and concessions. Since 2012, we have consistently met our target of awarding more than 30% of business contracts to diverse firms.

We help remove barriers to doing business at DFW through the Rolling Owner Controlled Insurance Program, which provides general liability insurance coverage to contractors, allowing access to a safe, secure environment to accomplish business and operational goals.

Environmental Justice

As a member of the North Texas community, DFW is committed to be a good neighbor and positively engaging with surrounding communities. DFW continues to collaborate with local community leaders, elected officials, City staff members, and the public providing transparency related to projects and equitable project education and engagement opportunities.

DFW includes education and awareness related to its pollution reduction programs to improve public health, has emissions reduction commitments well above the industry goals, and a robust noise program public engagement through its Noise Compatibility Office. DFW also provides significant resources to small and disadvantaged business participation, inclusive contracting, and projects.

NORTH STAR 5

Equity

Key Strategies Continued

- Diversity, equity and inclusion strategy
- Education, partnerships and capacity building
- Supplier diversity
- Environmental justice

This illustration highlights a selection of initiatives we are implementing or exploring to achieve our goal.

1. Maintain an active Strategic DEI Leadership Council
2. Broaden organizational impact through new DEI strategy
3. Ensure inclusion and belonging practices are imbedded in all stages of the employee lifecycle
4. Continue engagement with network of advocacy partners
5. Increase participation in DFW CARES
6. Maintain effective implementation of programs supporting supplier diversity goals
7. Continue expanding supplier capacity building program
8. Facilitate opportunities and remove barriers for D/M/WBE and small businesses
9. Continue best practice management of air, water, and noise impacts
10. Engage regularly with local government and neighboring communities
11. Continue to engage regulatory community to highlight environmental justice issues and solutions

NORTH STAR 5

Equity

Implementation Roadmap

Initiative		Underway	By 2027	By 2030	By 2040
1	**Continue to implement Diversity, Equity, and Inclusion Strategy**				
1a	Maintain an active Strategic DEI Leadership Council				
1b	Broaden organizational impact through new DEI strategy				
1c	Ensure inclusion and belonging practices are imbedded in all stages of the employee lifecycle				
2	**Invest in education, partnerships, and capacity building**				
2a	Continue engagement with network of advocacy partners				
2b	Increase participation in DFW CARES				
3	**Maintain leadership position in equitable economic development**				
3a	Maintain effective implementation of programs supporting supplier diversity goals				
3b	Continue expanding supplier capacity building program				
3c	Facilitate opportunities and remove barriers for disadvantaged, minority, and women-owned business enterprises (D/M/WBE) and small businesses				
4	**Proactively address environmental justice issues**				
4a	Continue best practice management of air, water, and noise impacts				
4b	Engage regularly with local government and neighboring communities				
4c	Continue to engage regulatory community to highlight EJ issues and solutions				
5	**Increase participation in DFW Cares**				
5a	Increase participation in DFW Cares				
6	**Maintain effective implementation of programs supporting supplier diversity goals**				
6a	Maintain effective implementation of programs supporting supplier diversity goals				
7	**Continue expanding supplier capacity building program**				
7a	Continue expanding supplier capacity building program				
8	**Facilitate opportunities and remove barriers for D/M/WBE and small businesses**				
8a	Facilitate opportunities and remove barriers for D/M/WBE and small businesses				
9	**Continue best practice management of air, water, and noise impacts**				
9a	Continue best practice management of air, water, and noise impacts				

NORTH STAR 5

Equity

Implementation Roadmap Continued

Initiative		Underway	By 2025	By 2030	By 2040
10	**Engage regularly with local government and neighboring communities**				
10a	Engage regularly with local government and neighboring communities				
11	**Continue to engage regulatory community to highlight environmental justice issues and solutions**				
11a	Continue to engage regulatory community to highlight environmental justice issues and solutions				

NORTH STAR 6

Health, Safety, & Wellness

Enhanced employee and customer wellness

UN Sustainable Development Goals Alignment

STRATEGIC APPROACH

As a Healthiest Employer in Texas, DFW continues to deliver on our commitment to employee health and human sustainability through initiatives including LiveWell and a holistic wellbeing campaign with defined pillars of: Career, Community/Spiritual, Environmental, Emotional/Physical, Financial, and Social. In addition to a focus on employee health and well-being, we have implemented operational policies and designed principles to address health and well-being for customers and surrounding communities, through adoption of best practices addressing issues such as social determinants of health, air quality, emotional and financial wellbeing, and connection to a sense of purpose and belonging. Our commitment to safety includes implementation of a security master plan developed in 2020, and addressing risk, resilience, and public safety.

THE BIG PICTURE

Organizations across industries recognize supporting health, safety, and wellness as a business imperative that can serve as a competitive advantage. The aviation industry is essential to our lives and global commerce, and, even as industries shifted to remote or hybrid operations, airports will consistently be a place where large numbers of people come together. DFW is aligning with aviation leaders to address the spectrum of health, safety, and wellness issues ranging from vital protection of human life, to accidents and communicable diseases, to enhancing health, wellness, and customer and employee experience by proactively addressing all aspects of health and wellbeing (i.e., the whole person).

PERFORMANCE HIGHLIGHTS

FY2023

#1

Healthiest Employer in Texas and top 100 Healthiest Workplaces in America in 2023

90%

employee participation in LiveWell wellness program

100%

participation in job specific safety training

DFW

NORTH STAR 6

Health, Safety, & Wellness

Key Strategies

Employee Engagement and Training

Effective health, safety, and wellness programs require awareness and participation of all employees. That's why employee education and development is a cornerstone of our approach to health, safety, and wellness at DFW.

From defensive driver training to workplace violence prevention, to engagement with law enforcement, our engagement and training reflects the complex and comprehensive nature of the airport operation.

Our evolving engagement and training programs now include enhanced cleaning and ventilation protocols, to ensure everyone knows their role in preventing spread of communicable diseases.

Wellness Programs

In FY 2023, 90% of employees participated in our LiveWell wellness program, which provides all employees an opportunity to make their health and wellbeing a priority. Participants have access to an on-site health clinic, 18 on-site wellness centers, behavioral health coaching, group exercise classes, fitness courses and online health and wellness modules.

DFW launched Safe Landings in 2020. The program is an evolution of the employee assistance program, with an increased focus on emotional well-being and broadened awareness of employee resources. Participation in Safe Landings at DFW surpasses the national average.

One of DFW's pillars of wellness is financial wellbeing. In 2023, we began to focus on the financial well-being of our employees. We are evaluating and enhancing our retirement offerings and conducting outreach and training.

Risk and Safety

At DFW, our operations are rooted in risk-based decision making. We proactively address risk and safety across all service areas and business functions. Our approach to risk management is dynamic and responsive to evolving needs – action planning is informed by our annual "safe and secure" employee survey.

DFW's Risk Management team oversees delivery of the Risk Management Framework, and is responsible for managing incidents, safety issues and claims. DFW's Risk Council embeds Safety Captains across all departments to disseminate information and act as advocates on behalf of their colleagues.

We use a Safety Index – an annual report card – to track effectiveness year on year, with a goal of achieving 95% or greater.

Indoor Environmental Quality

Indoor environmental quality (IEQ) affects the health, comfort, and experience of both passengers and employees. DFW is developing a proactive approach to ensuring consistently high IEQ.

While we will continue to respond to occupant concerns, we are developing a plan to proactively monitor the IEQ in all occupied facilities to ensure a safe, healthy environment for all building occupants. This includes installing IEQ sensors to continually monitor our interior space and optimize building system operations based on the results.

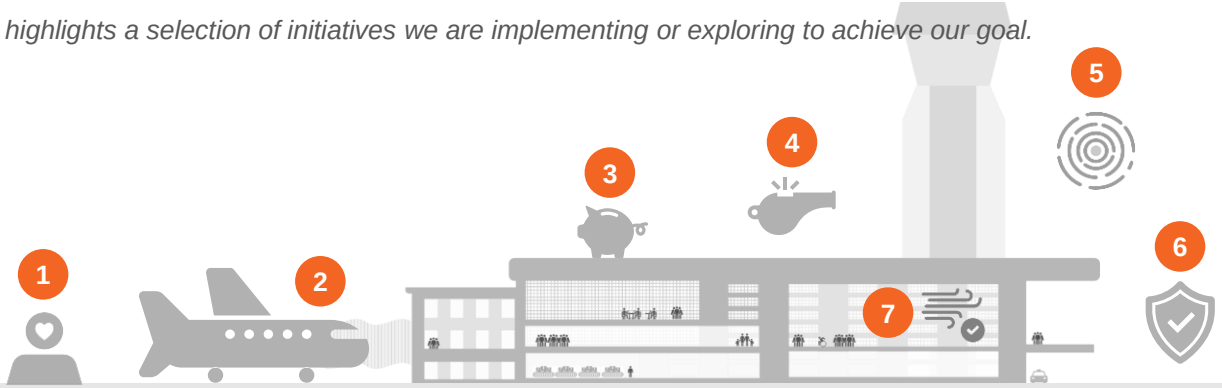
NORTH STAR 6

Health, Safety, & Wellness

Key Strategies Continued

- Employee engagement and training
- Wellness programs
- Risk and safety
- Indoor environmental quality

This illustration highlights a selection of initiatives we are implementing or exploring to achieve our goal.



1. Continue to grow LiveWell program
2. Expand Safe Landings program
3. Support employee financial wellbeing
4. Continue Safety Captains Program
5. Identify hazards related to resilience and human health
6. Continue Risk Council programs
7. Proactively monitor all occupied facilities to ensure a safe and healthy environment for all users

NORTH STAR 6

Health, Safety, & Wellness

Implementation Roadmap

Initiative		Underway	By 2025	By 2030	By 2040
1	**Continue to grow LiveWell program**				
1a	Continue to grow LiveWell program				
2	**Improve employee awareness and action around physical and mental health**				
2a	Develop and launch new wellness strategy for the LiveWell Program based on the 6 pillars of wellbeing				
2b	Continue to enhance employee offerings for the Safe Landings Program				
2c	Enhance financial wellbeing offerings to employees				
3	**Deliver best in class risk and safety programs**				
3a	Continue Safety Captains Program				
3b	Identify hazards related to resilience and human health				
3c	Continue Risk Council Programs				
4	**Ensure high standards of indoor air quality**				
4a	Proactively monitor all occupied facilities to ensure a safe and healthy environment for all users				
5	**Identify hazards related to resilience and human health**				
5a	Identify hazards related to resilience and human health				
6	**Continue Risk Council programs**				
6a	Continue Risk Council programs				
7	**Proactively monitor all occupied facilities to ensure a safe and healthy environment for all users**				
7a	Proactively monitor all occupied facilities to ensure a safe and healthy environment for all users				

Key Terms

Climate Action

Greenhouse Gas (GHG): GHGs are Atmospheric gases that absorb and emit infrared radiation and contribute to the greenhouse effect and global climate change (GRI and WBCSD 2013, Required Greenhouse Gases in Inventories). Many different GHGs are produced as a result of human activities, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and industrial gases. The ACA program requires airports to report the emissions of all the GHGs required by the UNFCCC/Kyoto Protocol to achieve certification at Level 5 'Net Zero.'

CO_2 equivalent (CO_2e): The universal unit of measurement to indicate the global warming potential (GWP) of a greenhouse gas, expressed in terms of the GWP of one unit of carbon dioxide. It is used to evaluate releasing (or avoiding releasing) different greenhouse gases against a common basis (GRI and WBCSD 2009, GHG Protocol: A Corporate Accounting and Reporting Standard).

Carbon Neutral: Condition in which during a specified period there has been no net emission of greenhouse gases (GHGs) to the atmosphere as the carbon footprint of the subject has been counterbalanced by offsetting (ACA 2023, Offset Guidance Document).[1]

Net Zero: Condition in which human-caused residual GHG emissions are balanced by human-led removals over a specified period and within specified boundaries (ISO 2022, Net Zero Guidelines)[1]

Offsets: Emissions reduction or removal resulting from an action outside the organization's boundaries, used to counterbalance the organization's residual emissions (ACA 2023, Offset Guidance Document).[1] DFW adheres to the quality criteria outlined in the ACA "Offset Guidance Document," (December 2023).[1,2]

Residual Emissions: Unabated GHG emissions remaining after implementing all technically and economically feasible GHG emission reductions. To achieve net zero, residual emissions cannot exceed 10% of baseline emissions (ISO 2022, Net Zero Guidelines).[1]

GHG Removal: Also referred to as carbon removal. Withdrawal of a GHG from the atmosphere as a result of deliberate human activities (ACA 2023, Offset Guidance Document)[1]

Emissions Factor: A representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume, distance, or duration of the activity emitting the pollutant (U.S. EPA 2023, Basic Information of Air Emissions Factors and Quantification).

Global Warming Potential: The measure of how much energy the emissions of one ton of a gas will absorb over a given period of time, relative to the emissions of one ton of carbon dioxide (U.S. EPA 2023, Understanding Global Warming Potentials).

Refrigerant Losses: Emissions from refrigeration and air conditioning systems occurring from leakage and service over the operational life of the equipment. These gases' GWP can be greater than 1,000 times that of CO_2, so their potential impact on climate change can be significant (U.S. EPA 2023, GHG Inventory Guidance: Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, and Industrial Gases). Refrigerant losses are reported in units of carbon dioxide equivalent (CO_2e).

[1] Key definitions adopted in the "Airport Carbon Accreditation Offset Guidance Document," December 2023, https://www.airportcarbonaccreditation.org/technical-documents/. ACA definition sources are ISO 2022, "Net Zero Guidelines, Accelerating the Transition to Net Zero," IWA 42:2022(E); ISO/DIS 14068(en) "Greenhouse gas management and climate change management and related activities — Carbon neutrality;" and Greenhouse Gas Protocol, "Land Sector and Removals Guidance, Part 2: Calculation Guidance, Supplement to the GHG Protocol Corporate Standard and Scope 3 Standard," Draft for Pilot Testing and Review, (September 2022).

[2] Offsets are usually represented by a credit (i.e., tradeable certificate representing the mitigation of a specified amount of GHG emissions) that that has been retired or cancelled in a registry by or on behalf of the organization that is seeking to counterbalance residual GHG emissions. A registry is a platform that allows organizations to track, manage and trade GHG emissions. Only offsets that are removals can be used to counterbalance residual emissions to achieve net zero.

Key Terms

Energy Performance

Clean energy: Energy created from sources such as solar, wind, water, bioenergy, hydrogen, geothermal, and nuclear (U.S. Department of Energy 2023, Clean Energy)

Resilience: The ability to prepare for threats and hazards, adapt to changing conditions, and withstand and recover rapidly from adverse conditions and disruptions (United States White House Office 2023, National Climate Resilience Framework)

Energy security: Uninterrupted availability of energy sources at an affordable price (International Energy Agency 2023, Energy Security).

Energy storage: Encompasses an array of technologies that enable energy produced at one time, such as during daylight or windy hours, to be stored for later use (U.S. Department of Energy 2023, Sector Spotlight: Energy Storage). Energy storage is critical enabler for the large-scale deployment of renewable energy and a key component of the future-ready grid (U.S. Department of Energy 2023, Energy Storage).

Deep energy retrofit: A whole-building analysis and construction/renovation process that achieves much larger energy and energy cost savings— sometimes more than a 50% reduction—than those of conventional energy retrofits. While advanced technologies are sometimes employed, deep retrofit projects most involve off-the-shelf technologies such as high efficiency HVAC and heat recovery equipment, LED lighting, occupancy sensors and other building controls, as well as cool and highly insulated roofs (U.S. Department of Energy n.d., Deep Energy Retrofit Challenge).

Commissioning: A quality-assurance process used to verify a building's performance aligns with the original design and needs (U.S. Department of Energy 2023, Commissioning in Federal Buildings)

Demand response: Balancing the supply and demand of energy by reducing energy usage during peak hours (U.S. Department of Energy 2023, Demand Response).

Digital twin: A virtual representation of an object or system that is updated from real-time data and uses simulation, machine learning, and reasoning to help decision-making (IBM 2023, What is a Digital Twin?).

Building energy modeling: The practice of using computer-based simulation software to perform a detailed analysis of a building's energy use and energy-using systems. This modeling can be used to compare project efficiency options, comply with codes or green building certification requirements, predict savings, and inform actual performance (Rocky Mountain Institute 2017, Building Energy Modeling for Owners and Managers).

Building information modeling (BIM): BIM is a digital representation of physical and functional characteristics of a facility that serves as a shared knowledge resource throughout the building life cycle. BIM data can be accessed through standard data structures and used to develop energy modeling input values (Rocky Mountain Institute 2017, Building Energy Modeling for Owners and Managers).

Key Terms

Water & Biodiversity

Biodiversity: The variability among living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (Convention on Biological Diversity 1992, Article 2).

Biodiversity baseline study: The work done to collect and interpret information on the biodiversity values occurring at a site, their current condition, and trends before a project commences (Cross Sector Biodiversity Initiative 2015, Good Practices for the Collection of Biodiversity Baseline Data).

Biodiversity unit: Biodiversity units are used to describe relative biodiversity value and can be used to assess existing habitat as well as how a development or change In land management will impact the biodiversity value (Natural England 2023, The Statutory Biodiversity Metric).

Strategic significance: Describes the local significance of the habitat based on its location and the habitat type (Natural England 2023, The Statutory Biodiversity Metric).

Distinctiveness: A measure based on the type of habitat and its distinguishing features. This includes consideration of species richness and rarity, the extent to which the habitat is protected by designations, and the degree to which a habitat supports species rarely found in another habitat (Natural England 2023, The Statutory Biodiversity Metric).

Ecosystem: A dynamic complex of plant, animal and micro-organism communities of species and their non-living environment interacting as a functional unit (Cross Sector Biodiversity Initiative 2015, Good Practices for the Collection of Biodiversity Baseline Data).

Ecosystem services: Benefits people obtain from ecosystems including provisioning services such as food and water; regulating services such as regulation of floods, drought, land degradation, and disease; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other non-material benefits (Cross Sector Biodiversity Initiative 2015, Good Practices for the Collection of Biodiversity Baseline Data). In other words, the contributions of ecosystems to the benefits that are used in economic and other human activity (United Nations et al. 2021, System of Environmental-Economic Accounting – Ecosystem Accounting).

Nature positive: A high-level goal and concept describing a future state of nature (e.g., biodiversity, ecosystem services, and natural capital) that is greater than the current state (Science Based Targets Network 2023, SBTN Glossary of Terms). More specifically, a nature-positive future means that we, as a global society, halt and reverse the loss of nature measured from its current status, reducing future negative impacts alongside restoring and renewing nature, to put both living and non-living nature measurably on the path to recovery (International Union for Conservation of Nature 2022, Towards an IUCN nature-positive approach).

Nature positive global goal: Halting and reversing nature loss by 2030, measured from a baseline of 2020, and full recovery by 2050 (Global Goal for Nature Group[1,2,3]). Nature-positive outcomes can be measured by quantifying the improvement of natural processes, ecosystems and species against a baseline (Nature Positive Initiative 2023, The Definition of Nature Positive). In December 2022, the UN CBD COP 15 adopted the Kunming-Montreal Global Biodiversity Framework (GBF) whose mission is to ‘halt and reverse biodiversity loss by 2030’, and by 2050, biodiversity is valued, conserved, restored and widely used, maintaining ecosystems services, sustaining a healthy planet and delivering benefits essential for all people’, which is consistent with the Nature Positive goal. Central to the definition of nature positive is that we ‘protect what is left and improve the rest’. While some losses will be unavoidable, we do need to secure the most significant areas for biodiversity, and to limit and compensate for other losses according to the mitigation and conservation hierarchy approach (Nature Positive Initiative 2023, The Definition of Nature Positive).

Key Terms

Water & Biodiversity, continued

Mitigation hierarchy: The mitigation hierarchy is the sequence of actions to anticipate and avoid, and where avoidance is not possible, minimize, and, when impacts occur, restore, and where significant residual impacts remain, offset for biodiversity-related risks and impacts on affected communities and the environment (Cross Sector Biodiversity Initiative 2015, A Cross Sector Guide for Implementing the Mitigation Hierarchy: Executive Summary and Overview).

Natural capital: The stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people (Capitals Coalition 2016, Natural Capital Protocol).

Water Positive: Net water positive occurs when an entity is putting more water back into the environment than they are extracting from it. For DFW, water positive means that one hundred percent of the airport's non-potable water needs are supplied through captured precipitation, closed-loop water systems, and/or recycled or reclaimed water such that the airport is offsetting potable water use and is, ultimately, putting more water back into the environment through infiltration than what is being extracted. Water positive outcomes can be measured by conducting and tracking whole-site water balance analyses that consider on-site precipitation (including infiltration and evapotranspiration); quantity of stormwater, greywater, and blackwater water collected (treated, reused, and/or infiltrated); and quantity of water consumed (potable and non-potable water use). This definition was adapted from the International Living Future Institute (ILFI).

Net positive: An approach that means doing more good than bad. It goes beyond 'doing less harm' and urges businesses to have a positive impact on the world. The concept advocates a holistic approach, positioning core business activity at the heart of actions towards sustainable practice and encourages acknowledgement and prioritization of impacts that are linked to business profitability, risk and opportunity (United Nations 2023, Net Positive Water and Carbon by 2040).

Blackwater: Everything that comes out of the sewer pipe. This includes toilets and urinals (flush fixtures), kitchen sinks, and other process water. Blackwater has a heavy organics load and harder to treat to a reusable standard.

Greywater: Water produced by showers, lavatory sinks, and laundry machines. Greywater is generally cleaner and easier to reuse than blackwater.

Process water: Water that is used for specific needs within the building, such as food service, cooling tower condensate, maintenance, etc.

Rainwater: Rain runoff from roofs or terraces. Rainwater has few contaminants.

Stormwater: Rain runoff from the ground surface (e.g., parking lots, landscape, or hardscape). Stormwater contains more pollutants than rainwater, although it is often still quite clean depending on the surface it runs across before collection.

Blue-green infrastructure: A collective term used when blue and green applications are integrated to mitigate urbanization and adapt to climate change by providing multiple benefits for urban areas affected by unmanaged stormwater and high heat; consists of natural and semi-natural systems that can be integrated with conventional drainage systems. (Almaaitah et al. 2021, The potential of blue-green infrastructure as a climate change adaptation strategy).

Potable water: Water that meets the standards for drinking purposes of the State or local authority having jurisdiction, or water that meets the quality standards prescribed by the U.S. Environmental Protection Agency's National Primary Drinking Water Regulations in 40 CFR 141 (29 CFR 1910.141(a)(2)).

Non-potable water: Water that does not meet the standards required for human consumption and is not to be used for drinking, washing, or cooking purposes.

Key Terms

Circular Economy & Waste

Zero waste: Conservation of all resources through responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning or discharges to land, water, or air that threaten the environment or human health (Zero Waste International Alliance 2018, Zero Waste Definition). Some certification programs require 90 percent or greater overall diversion from landfill, incineration, and the environment for solid, nonhazardous wastes GBCI 2023, Are you eligible for TRUE Zero Waste Certification?).

Zero waste hierarchy: Describes a progression of policies and strategies to support the Zero Waste system, from highest and best to lowest use of materials. It aims to provide more depth to the internationally recognized 3Rs (Reduce, Reuse, Recycle); to encourage policy, activity and investment at the top of the hierarchy; and to provide a guide for those who wish to develop systems or products that move us closer to Zero Waste. It enhances the Zero Waste definition by providing guidance for planning and a way to evaluate proposed solutions. Users are encouraged to develop policies and actions starting at the top of the hierarchy (Zero Waste International Alliance 2023, Zero Waste Hierarchy of Highest and Best Use 8.0).

Municipal solid waste (MSW): MSW is comprised of various items consumers throw away. These items include packaging, food, yard trimmings, furniture, electronics, tires and appliances. MSW does not include industrial, hazardous or C&D waste. Sources of MSW include residential waste, as well as waste from commercial and institutional locations, such as restaurants, grocery stores, other businesses, schools, hospitals and industrial facilities. Industrial facility waste includes waste from sources such as offices, cafeterias and packaging, but not process waste (U.S. EPA 2020, Advancing Sustainable Materials Management: 2018 Fact Sheet).

Construction and demolition (C&D) debris: A type of waste not included in MSW. Materials included in C&D debris are steel, wood products, drywall and plaster, brick and clay tile, asphalt shingles, concrete and asphalt concrete (asphalt pavement). These materials are used in buildings, roads and bridges, and other structures (U.S. EPA 2020, Advancing Sustainable Materials Management: 2018 Fact Sheet).

Circular economy: A systems solution framework that calls for a sustainable paradigm shift from a “take make waste” linear system to a circular system. Circular economy can be achieved through long lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling (United Nations Development Programme 2023, Circular Economy).

Recycling: The recovery of useful materials, such as paper, glass, plastic and metals, from the MSW stream, along with the transformation of the materials, to make new products to reduce the amount of virgin raw materials needed to meet consumer demands (U.S. EPA 2023, Guide to the Facts and Figures Report about Materials, Waste and Recycling).

Composting: The decomposition of organic materials by aerobic microorganisms. Composting facilities manage the amount of moisture and oxygen and the mixture of organic materials for optimal composting conditions. The composting process emits heat, water vapor and biogenic carbon dioxide, reducing the raw organic materials in mass and volume to create compost.

Anaerobic digestion: A process in which bacteria breaks down organic matter, such as manure, food waste, or crop residues, without the use of oxygen (U.S. Environmental Protection Agency 2023, How Does Anaerobic Digestion Work?).

Embodied carbon: Also known gas embodied GHG emissions; refers to the amount of GHG emissions associated with the upstream stages of a product’s life, including extraction, production, transport, and manufacturing (U.S. EPA 2023, What is Embodied Carbon?).

Green procurement: The integration of corporate social responsibility principles into a company's procurement processes and decisions while ensuring they still meet the requirements of stakeholders (Ecovadis 2023, Sustainable Procurement Glossary). Green procurement can be thought of as the range of processes by which such green products and services can be acquired; a green products or service is one that has a significantly smaller environmental footprint than the average or standard product or service of the same type (U.S. Environmental Protection Agency 2010, Green Procurement: Overview and Issues for Congress).

Key Terms

Equity and Health, Safety, & Wellness

D/M/WBE: Disadvantaged, minority, and women-owned business enterprises (DFW Airport 2023, Business Diversity and Development).

Environmental justice: Fair treatment and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This goal is achieved when everyone enjoys the same degree of protection from environmental and health hazards, as well as equal access to decision-making processes to have a healthy environment in which to live, learn, and work (U.S. Environmental Protection Agency 2023, Environmental Justice).

Net positive impact: Putting more back into society, the environment, and the global economy than you take out (Forum for the Future, WWF, and The Climate Group 2014, What is Net Positive?).

Indoor environmental quality (IEQ): Encompasses the conditions inside a building—air quality, lighting, thermal conditions, ergonomics—and their effects on occupants or residents (U.S. Green Building Council 2023, Green Building 101: What is indoor environmental quality?).