JOURNEY TO »
SUSTAINABILITY

ECONOMIC | ENVIRONMENTAL | SOCIAL | SUSTAINABILITY MANAGEMENT PLAN

EXECUTIVE SUMMARY

MKE
GENERAL **MITCHELL**
INTERNATIONAL AIRPORT

WORKING TOWARD A MORE SUSTAINABLE MKE »

Sustainability for airports means more than just "going green." It means planning ahead and thinking broadly about the social, economic, and environmental consequences of providing air transportation.

For years, Milwaukee County's General Mitchell International Airport – MKE – has been working to lower costs and reduce its environmental footprint. Now, by developing a Sustainability Management Plan (SMP), to prioritize and coordinate those activities, the airport can actively support the social, environmental, and economic well-being of its customers, its employees and our region. The effort to achieve more sustainable operations takes commitment and time. That's why our SMP is called *Journey to Sustainability*.

Grounded in the aviation sustainability planning process and inspired by the industry's definition for airport sustainability, the SMP attempts to build a holistic management approach "to ensure the integrity of the economic viability, operational efficiency, natural resource conservation and social responsibility of the airport." The MKE Sustainability Management Plan was developed with an iterative process that integrated stakeholder values to determine the sustainability elements to be measured, evaluated, and prioritized.

To develop the Sustainability Management Plan, MKE:

1. Developed a sustainability vision

2. Identified sustainability Focus Areas

3. Invited stakeholder and community participation

4. Completed a baseline inventory in each focus area

5. Established goals to improve sustainability performance

6. Identified and prioritized specific actions to achieve established goals

PLANNING FOR SUSTAINABILITY»

A successful sustainability management plan is built on a foundation of shared values and priorities. For MKE, that foundation was developed through a comprehensive stakeholder involvement program including contributions from airport staff and management, regulatory agencies, tenants, airlines, travelers and airport neighbors. Each step in the SMP included opportunities for contribution, and it started with stakeholders coming together to develop a sustainability vision statement. The statement describes a future MKE, one that is focused on environmental, economic, and social sustainability. The vision statement inspired all future planning steps.

Next, Sustainability Focus Areas were identified for detailed investigation. The Focus Areas include those environmental, social, or economic topics airport stakeholders consider opportunities to address or improve sustainability. The Focus Areas serve as the basis for evaluating current performance (i.e., the baseline evaluation) and the development of goals and actions that the airport will implement to improve sustainability. The Focus Areas were developed in collaboration with and through feedback from internal and external stakeholders, both by in-person meetings and through an on-line survey.

The airport's Sustainability Vision and Focus Areas established the categories for benchmarking the airport's current sustainability performance, as well as setting targets for the future. They provided the foundation for investigating the airport's sustainability performance.

MKE SUSTAINABILITY VISION

MKE is the airport of choice for Wisconsin and beyond. Striving for sustainable operations, we will:

▶ Provide the best customer service experience by minimizing waiting times, creating a comfortable environment for travelers and supporting the success of our staff and tenants

▶ Provide exemplary service at the lowest possible expense with the least possible waste of resources, materials and time and minimal impact on the environment

▶ Be the best possible neighbor to our community and Lake Michigan

▶ Link Milwaukee to the world

To Parking

MKE'S SUSTAINABILITY BASELINE »

The baseline analysis provides a snapshot of MKE's performance across each of the 11 Focus Areas. Quantitative and qualitative data present a picture of the airport's resource consumption, greenhouse gas (GHG) emissions and waste generation, contributions to the region's economy, social engagement, and customer and employee relationships. The baseline was built from data gathered from airport staff and records, public sources and through intensive "deep dives" and facility assessments in Waste Management, Energy Management, and GHG Emissions.

Highlights of the baseline analysis findings are presented here across a selection of Economic, Environmental and Social Focus Areas.

SELECT MKE SUSTAINABILITY BASELINE VALUES

Greenhouse Gas Emissions
33,921 metric tons CO_2

Recycled Waste 90.7 tons

Electric Use 39 million kWh

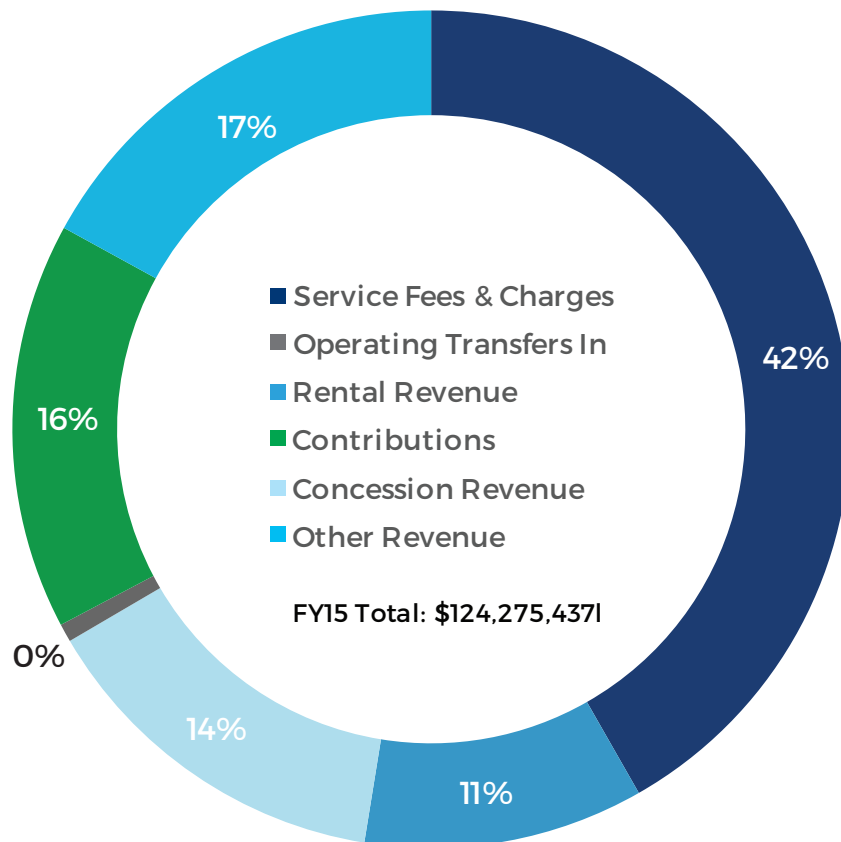### Water Use 238.7 million gallons

Solid Waste 801 tons

ECONOMIC FOCUS AREAS BASELINE HIGHLIGHTS »

The Economic Focus Areas include Economic Prosperity, Operational Efficiency, and Sustainable and Resilient Buildings and Infrastructure. These Focus Areas reflect MKE's efforts to improve financial performance by reducing costs and enhancing revenue streams.

Economic Prosperity and Airport Activity. The airport is a major generator of economic activity in southeastern Wisconsin. Thousands of jobs are either directly or indirectly related to MKE's operation. Millions of passengers and thousands of tons of cargo pass through its gates every year. Airport revenue in 2015 totaled $124 million, including significant contributed capital. This figure represents more than 20% growth over 2013. Service charges and fees make up 42% of MKE's revenue, and just over half of that portion is comprised of parking fees.
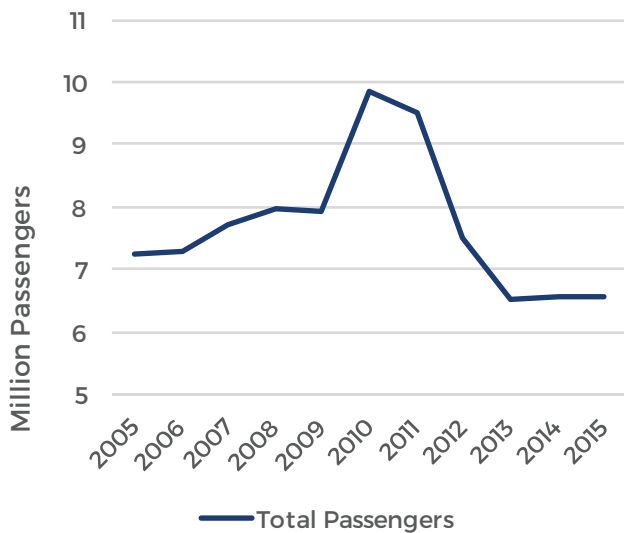
Like nearly all medium hub airports in the US, passenger traffic declined during the recession, when activity slowed and airlines began consolidating. Passenger activity at MKE peaked in 2010, and is recovering slowly, with modest but steady growth since 2013. The same is true of air cargo handled at MKE.
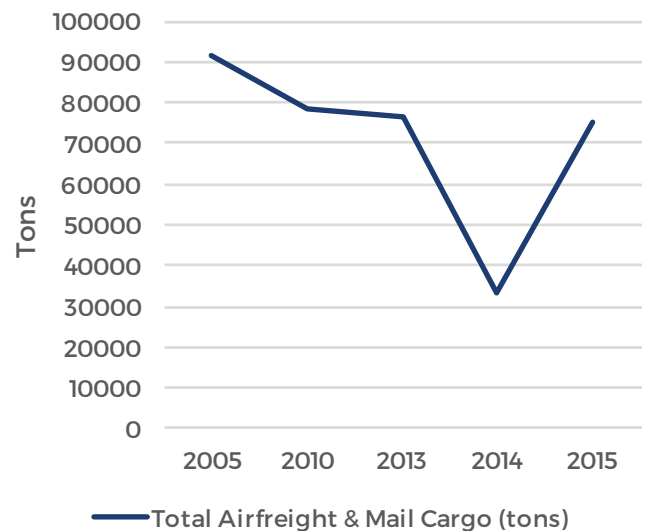
MKE REVENUE, FY 15

- ■ Service Fees & Charges
- ■ Operating Transfers In
- ■ Rental Revenue
- ■ Contributions
- ■ Concession Revenue
- ■ Other Revenue

FY15 Total: $124,275,437l

42%

17%

16%

0%

14%

11%

HISTORICAL PASSENGER VOLUME TREND

Million Passengers (y-axis: 5 to 11)

x-axis: 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

—— Total Passengers

HISTORICAL AIR CARGO / FREIGHT VOLUMES

Tons (y-axis: 0 to 100000)

x-axis: 2005, 2010, 2013, 2014, 2015

—— Total Airfreight & Mail Cargo (tons)

Operational Efficiency. Despite this challenging economic climate, the efficiency of MKE's performance is made clear when revenue is expressed in relation to passenger activity: revenue generated per passenger increased more than 10% between 2013 and 2015. Gains such as these are supported by initiatives to control costs, including reducing energy use –as happens at the new LEED certified baggage claim area and are driven by projects such as the retro-commissioning project for the main terminal building. These efforts are reflected in both the airport's bottom line and its performance on environmental Focus Areas.
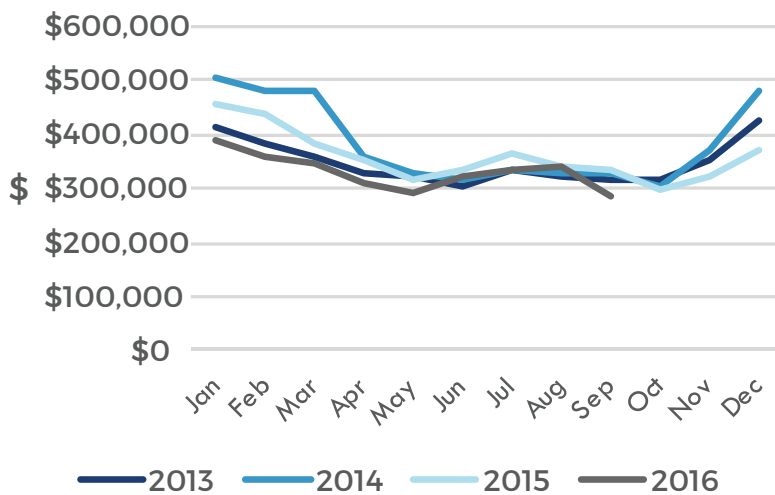
ENVIRONMENTAL FOCUS AREAS
BASELINE HIGHLIGHTS »

The Environmental Focus Areas include a snapshot of the airport's performance on the use of natural resources: energy management, air emissions and climate change, waste and water management.
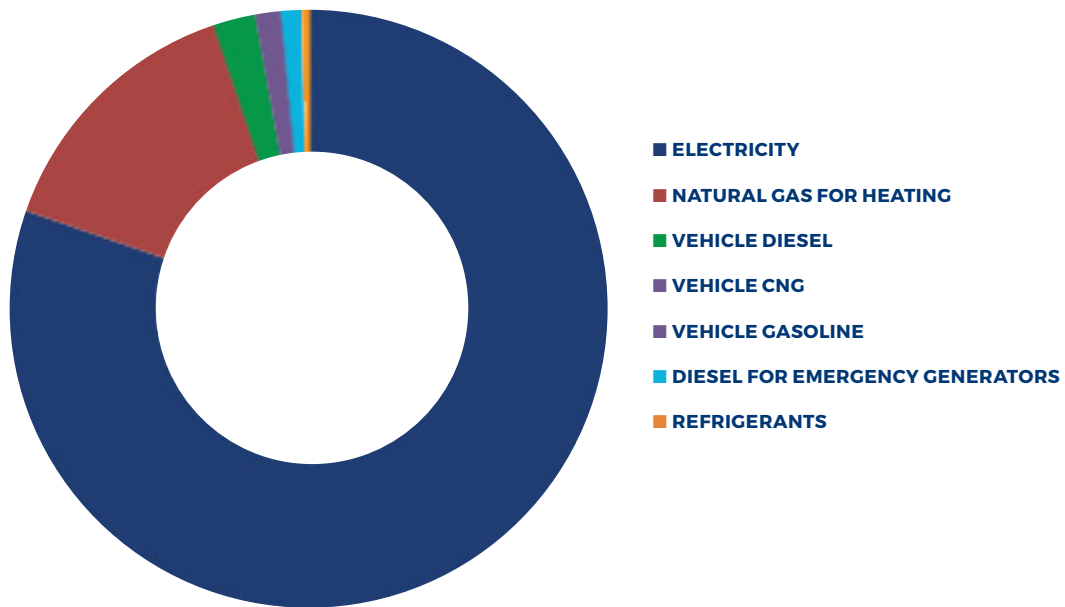
Energy Management. Energy use is of primary importance for sustainability because of costs to the airport and the impact of energy consumption on the environment. In the winter, the airport has spent up to half a million dollars monthly for electricity and natural gas, which means that energy is a considerable cost item for the facility. However, even without an overall energy management plan, MKE has been implementing measures to conserve energy, and overall energy use was reduced more than 5% between 2014 and 2015.

Air Emissions and Climate Change. This Focus Area establishes a baseline of air emissions caused by activities under the control of MKE, as well as those related to Milwaukee County's use of electricity at MKE. Between 2014 and 2015, the airport reduced its overall air emissions by nearly 2%. Most of this change was due to reduced use of natural gas for boilers and a decrease in diesel fuel used for airport vehicles. In all, more than 90% of GHG emissions from airport operations are caused by energy use, indicating that initiatives that conserve energy will benefit both air emissions and operating costs.

MKE AIRPORT TOTAL ENERGY COST

MKE GREENHOUSE GAS EMISSIONS SOURCES

- ELECTRICITY
- NATURAL GAS FOR HEATING
- VEHICLE DIESEL
- VEHICLE CNG
- VEHICLE GASOLINE
- DIESEL FOR EMERGENCY GENERATORS
- REFRIGERANTS

Waste Management. Airport operations produce significant amounts of waste, ranging from typical solid waste to hazardous materials and other substances that require special treatment for disposal. MKE has an established recycling program and facilities both inside the passenger terminals and for internally generated waste, although it has no written policies, education or staff training specific to recycling. For the baseline assessment, it was found that the airport diverts about 10% of its waste stream to recycling; however, the diversion rate does not accurately capture MKE's actual diversion rate as weight tracking data was not available for several materials that were recycled. A recycling opportunities assessment identified food waste and expanding the range of solid waste materials diverted as particularly promising opportunities for improvement.

SOCIAL FOCUS AREAS BASELINE HIGHLIGHTS »

The Social component of sustainability considers how the airport operates as a socially responsible business and considers its relationship to stakeholders that are critical to airport activities, such as employees, passengers, and the Milwaukee community.

Customer Satisfaction. MKE passengers are regularly surveyed on their satisfaction with airport experiences. Overall customer satisfaction with MKE is high, generally hovering around 4.0 on a 5-point scale. MKE's overall satisfaction is higher than for peer airports and is currently higher than at any time in the last three years.

Satisfaction with structural factors – those under direct control of the airport administration – shows that travelers approve of the airport's signage and wayfinding systems and restroom availability. However, travelers are somewhat less satisfied with the quality, availability and variety of concessions. Furthermore, traveler satisfaction with staff interactions is quite high at MKE. Experiences with airport security are particularly highly rated, both for wait durations and professionalism of security staff.

SATISFACTION: STRUCTURAL FACTORS

Wayfinding — Restroom Availability — Concessions
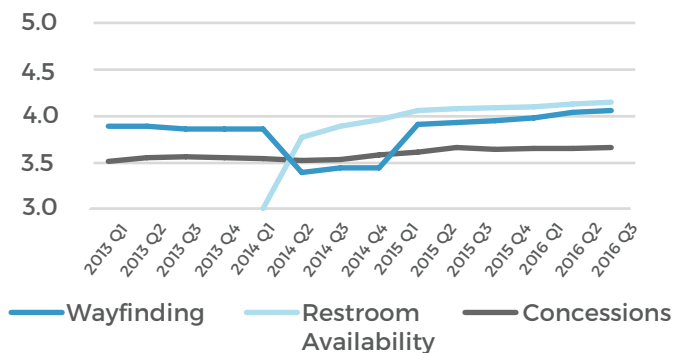
SATISFACTION: PERSONNEL FACTORS

Restroom Cleanliness — Security Queue Times — Security Personnel
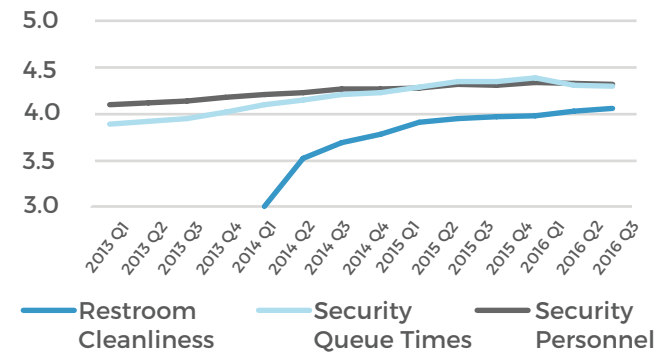
PEER AIRPORT COMPARISON »

MKE is a medium hub airport. A comparison of peer airport performance across several focus areas reveals that MKE's performance is on par with similar facilities elsewhere in the country. MKE exhibits highly efficient and productive staffing, creating high levels of customer satisfaction with a relatively low number of direct full time employees. Furthermore, MKE has moderate electricity expenditures compared to peer airports.
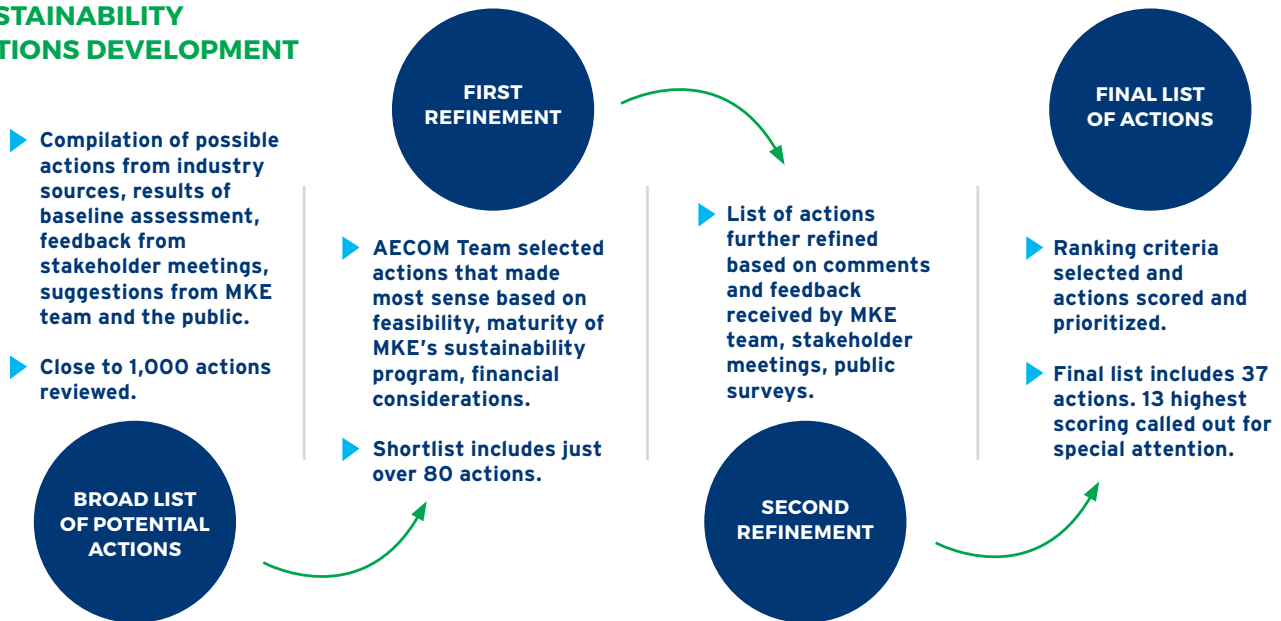
The baseline inventory effort was the first major assessment of sustainability activities and performance for MKE and serves as a reference point for evaluating current and projected sustainability impacts and actions. In general, the baseline analysis shows that MKE has access to the data necessary to monitor its performance, but the current system being used for the airport is not sufficient to cover ongoing management and performance improvement assessment in all Focus Areas. In some cases, information is either not actively managed or is managed at the individual level (i.e., there is no comprehensive data management tool). For areas that are effectively managed, it provides a basis for monitoring improvements in the future and also reveals areas with the greatest potential for change - these include energy usage, waste management and overall operational efficiency, as well as focusing on improving the quality and variety of vendors to further increase customer satisfaction.

SUSTAINABILITY GOALS AND ACTIONS »

Following the completion of the baseline analysis, the planning process focused on identifying a set of actions that would empower MKE to improve environmental and social outcomes and progress toward realizing the airport's sustainability vision. Actions were developed for each Focus Area, along with a set of high level goals. The sustainability actions are the heart of the SMP, the blueprint for enabling MKE to reduce its environmental footprint and positively contribute to the region's social and economic well-being.

The development process for sustainability actions and, to a lesser extent, goals, involved both internal and external airport stakeholders. The actions were culled from an initial list of nearly 1,000 potential actions drawn from aviation industry best practices, airport staff suggestions and a survey of Milwaukee travelers and businesspeople. These actions represented both the leading edge of industry sustainability practices and ideas specific to MKE, generated by the people most familiar with the airport. Following action refinement and ranking and goal review by stakeholders, a set of 18 goals, 37 broad actions and 138 tactics (supporting actions) was finalized.

SUSTAINABILITY ACTIONS DEVELOPMENT

BROAD LIST OF POTENTIAL ACTIONS

- ▶ Compilation of possible actions from industry sources, results of baseline assessment, feedback from stakeholder meetings, suggestions from MKE team and the public.
- ▶ Close to 1,000 actions reviewed.

FIRST REFINEMENT

- ▶ AECOM Team selected actions that made most sense based on feasibility, maturity of MKE's sustainability program, financial considerations.
- ▶ Shortlist includes just over 80 actions.

SECOND REFINEMENT

- ▶ List of actions further refined based on comments and feedback received by MKE team, stakeholder meetings, public surveys.

FINAL LIST OF ACTIONS

- ▶ Ranking criteria selected and actions scored and prioritized.
- ▶ Final list includes 37 actions. 13 highest scoring called out for special attention.

Through the ranking process, 13 key actions were identified as priorities for MKE, with the remaining actions being logged for future consideration. The sustainability actions address a broad spectrum of 'impact' opportunities – some are internally-focused on the way the airport operates, and some focus on how MKE relates to its neighbors and workforce. Together, they have the potential for effectively reducing the airport's environmental footprint, improving efficient operations, and raising customer and employee satisfaction.

Each action is supported by a set of tactics – activities that incrementally support the implementation of the overall action. Some of the SMP's most creative ideas are found in the tactics, which include everything from creating MKE-branded water bottles to reduce the use of disposable plastic bottles to creating an "Environment and Energy handbook" for tenants and devoting space in the terminal for the display of work by local artists to create a unique sense of place at the airport.

SUSTAINABILITY GOALS FOR MKE

FOCUS AREAS	GOALS
Economic Prosperity	• Enhance MKE's economic performance by developing cost containment strategies and increasing revenue streams. • Build the airport's role as an economic engine in the region.
Operational Efficiency	• Improve performance tracking by adopting management systems and developing new metrics and specific procedures.
Sustainable and Resilient Buildings and Infrastructure	• Adopt sustainable design and construction practices for MKE's buildings and infrastructure. • Ensure MKE is prepared to face emergencies by improving resiliency through mitigation and adaptation strategies.
Air Emissions and Climate Change	• Develop a carbon reduction management program. • Take a regional leadership role on carbon and climate change.
Energy Management	• Reduce MKE's energy consumption by developing a formal energy management program that relies both on energy efficiency and renewable energy.
Waste Management	• Increase waste diversion through enhanced waste management program, including education and training programs, formal policies and procedures, increase waste revenue streams and avoided disposal costs.
Water Management	• Support the Milwaukee area in becoming a national hub for water related innovation and technology • Reduce MKE's water consumption by managing use, monitoring data and implementing efficiency strategies.
Employee Engagement	• Attract workers from throughout Milwaukee County • Retain employees and build employee satisfaction • Provide opportunities for advancement.
Community Engagement	• Create lasting partnerships to enhance reputation and be responsive to community needs • Communicate airport's leadership related to sustainability.
Health and Safety	• Maintain a robust health and safety program.
Customer Experience	• Maintain or improve high customer satisfaction.

Finally, the Sustainability Management Plan includes a set of implementation activities and tools to guide the airport in carrying out the sustainability initiatives. The Implementation Plan is an intuitive spreadsheet management tool that features estimates of time and costs to implement each action, identifies internal champions and their responsibilities, notes how progress may be monitored and lists potential barriers to implementation. A complementary tool to the implementation plan is the sustainability data tracking spreadsheet, which includes energy, water, and waste data and can generate graphs and trends for ongoing performance monitoring.

PRIORITY SUSTAINABILITY ACTIONS FOR MKE

Focus Area	Action	Tactic	Potential to Improve		
			Economics & Operations	Environment	Customers & Community
Sustainable Buildings and Resilient Infrastructure	Develop airport-specific sustainable planning, design and construction guidelines and consider pursuing LEED certification for airport buildings	Require a green operating commitment from non-airport controlled buildings undergoing construction.	📈	🍃	
Waste Management	Enhance waste management and recycling program.	Add liquid dumping station before security and install water bottle filling stations right after security to reduce throwaway plastic bottle use.	📈	🍃	👥
Energy Management	Implement Energy Conservation Measures	Upgrade airport Controls Systems and install a building automation system.	📈	🍃	
Customer Experience	Create a unique sense of place, specific to Milwaukee	Improve variety of vendors (add local, healthy, unique options)	📈		👥
Economic Prosperity	Develop and implement an Asset or Infrastructure Management Plan.	Compile existing information on MKE's assets and infrastructure to develop an up-to-date inventory.	📈		
Water Management	Develop a dedicated water management and efficiency program.	Install sub meters in different buildings and areas to track water usage.	📈	🍃	
Employee Engagement	Involve employees directly in the SMP and airport sustainability program.	Adapt Milwaukee County's "find it-fix it" program to enable employees to address sustainability concerns directly.			
Community Engagement	Involve airport business and community stakeholders in the development and implementation of MKE's sustainability program	Organize clean-up events to collect bulk items from tenants, airlines, and airport employees for recycling, donation, or disposal.		🍃	👥
Operational Efficiency	Evaluate the feasibility of expanding the use of Cityworks to add monitoring of sustainability actions.	Use a maintenance log to track resource use (fuel, water, waste, materials) and sustainability issues and ideas.	📈		
Sustainable Buildings and Resilient Infrastructure	Use the Envision rating system to assess the sustainability of airport infrastructure projects.	Identify an upcoming project for potential Envision certification or complete an Envision assessment as a trial project.		🍃	👥
Water Management	Improve stormwater management through green infrastructure and watershed restoration in collaboration with MMSD	Install rain gardens, bioswales, infiltration features, and other stormwater management facilities to reduce runoff throughout the airport (including roads) and to beautify terminal areas.		🍃	
Economic Prosperity	Establish a dedicated budget and methodically identify grant opportunities to fund sustainability initiatives.	Allocate savings from sustainability initiatives such as energy and water efficiency towards the implementation of sustainability programs.	📈	🍃	
Operational Efficiency	Evaluate the airport's operation and maintenance manual to ensure it is sufficient and comprehensive in regard to sustainability.	Coordinate with Cityworks to support this action	📈	🍃	

THE FUTURE OF SUSTAINABILITY AT MKE »

MKE is committed to doing its part to create a more sustainable future for Southeastern Wisconsin. Our sustainability mission includes minimizing our environmental footprint, building the economy of our region and bringing our communities together as we link Milwaukee to the world. Journey to Sustainability is our flight plan for getting there. Please join us on this journey – read the plan, follow our progress, and contribute your ideas for a more sustainable MKE at www.mitchellairport.com/gogreen. Welcome aboard!