Chapter Three
SUSTAINABILITY

3.1 EWK SUSTAINABILITY MISSION STATEMENT

The Newton City-County Airport (EWK) Master Plan Advisory Committee (PAC), comprised of Airport Commissioners, Public Officials, City and County staff and airport users helped to identify elements of sustainability that were most important and applicable to EWK. During a sustainability work session, the consultant team led the PAC participants through an exercise to identify the following mission statement:

The Newton City/County Airport will:

- be a leader in sustainable airport practices;
- balance present and future needs;
- maximize operational efficiency;
- anticipate and take advantage of emerging economic, technological, environmental and social trends;
- leverage all potential funding sources;
- support positive economic growth; and
- partner with local schools and civic groups.

Triple Bottom Line

Although the PAC had a broad definition of sustainability, which is outlined in the vision statement, all agreed that any successful operation needs to have the ability to be nimble. The organization must also anticipate changes from economic, social or environmental factors. This is commonly referred to as the "Triple Bottom Line:"

- maintain economic growth;
- reduce environmental impacts; and
- advance social progress that recognizes the needs of all airport stakeholders.

Communication

EWK's Sustainability Mission Statement and associated goals, objectives and actions will be formally communicated to the airport's employees, tenants, users and the public through the following:

- Informational signs at strategic locations throughout the airport;
- the EWK web site; and
- an annual Sustainability Progress report to track and document the Plan's progress.

3.2 FAA SUSTAINABLE MASTER PLAN PILOT PROGRAM

EWK was selected as a pilot project by the FAA as one of 10 airports around the country for the development of an airport sustainability master plan. The 10 airports are listed in **Table 3-1**. This pilot program is intended to evaluate ways to make sustainability a core objective for future airport mater plans.

Traditional FAA-funded airport master plans address each facility's impact on the natural environment. The pilot program is intended to expand beyond typical environmental impacts to address a wider spectrum of sustainability issues and opportunities to be considered throughout the master plan process. In this way, sustainability becomes a core theme for the master plan that touches every element and serves as the framework for the development of the final plan recommendations.

Table 3-1. Airports Participating in FAA Sustainable Master Plan Pilot Program

Airport	State
Denver International Airport	Colorado
Fresno Yosemite International Airport	California
Hartsfield-Jackson Atlanta International Airport	Georgia
Nashville International Airport	Tennessee
Newark Liberty International Airport	New Jersey
Newport News/Williamsburg International Airport	Virginia
Newton City-County Airport	Kansas
Outagamie County Regional Airport	Wisconisn
Renton Municipal Airport	Washington
Teterboro Airport	New Jersey

3.3 WHAT IS SUSTAINABILITY?

The United Nations convened the Brundtland Commission to address the growing concern about the deterioration of natural resources. This commission defined sustainability as: "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*."

Based on this definition, a sustainable master plan should carefully evaluate how programs and initiatives impact existing and future users and also consider the wider impact on the surrounding community and natural environment.

3.4 WHY BE SUSTAINABLE?

The key benefit of addressing sustainability within the airport master plan is that it allows airport operators and users to think holistically about how the airport functions now and in the future. Along with improving the community and the natural environment, sustainability can make good business sense. Airports that have adopted sustainable practices have found substantial benefits including but not limited to the following:

- greater utilization of assets;
- reduced life cycle costs
- reduced operating costs;
- improved work environment for employees;
- reduced energy consumption;
- reduced waste;
- reduced emissions;
- improved water quality; and
- positive community relationships.

3.5 HOW DOES SUSTAINABILITY RELATE TO EWK?

Airports large and small have the ability to implement a sustainability master plan based on the needs and resources of each individual facility. Although the FAA does not mandate sustainability to be part of the airport master

plan, requirements may change in the future. Through the sustainability master plan pilot program, the FAA will determine the elements that work best for a wide range of airports to consider. As with other federal agencies and programs, new federal, state and local directives may require projects to incorporate sustainability principles. Often, federally funded projects require sustainable practices, such as LEED® certification.

The ReNewton 2030 Comprehensive Plan (ReNewton Plan), encourages the City to take a leading role in promoting sustainable practices. Throughout the ReNewton Plan process, the community identified sustainability as a core value that will help guide future City policies and initiatives. Community leaders also identified opportunities to leverage future investment in the Kansas Logistics Park. Tindall Corporation, the park's first tenant, is constructing a large manufacturing facility to assemble the company's patented concrete wind tower base system. This base allows a traditional wind turbine tower to be extended an additional 90 feet into higher wind currents. The City and County will build on this momentum by making sustainability a significant part of the branding and marketing to attract future "Green" companies and industries to area.

The key reason for addressing sustainability within the EWK master plan is that the Airport Commission believes it is a strategic investment to leverage the facility's full potential. Although EWK has not formally undertaken a sustainability program to date, many existing practices fall within the sustainability realm including but not limited to use of recycled materials for construction, use of available local materials and use of recycled stormwater. As a core part of the master plan, all identified sustainable initiatives and activities will be documented and tracked through a formal process.

3.6 SUSTAINABILITY SUCCESS MEASURES

Like any initiative, sustainability measures need to be formally documented and tracked to measure progress. Today, the most common set of sustainability metrics include a rating system developed by the United States Green Building Council (USGBC). The Leadership in Environmental Design (LEED®) program was developed to quantify sustainability measures. LEED® provides four levels of certification: Platinum, Gold, Silver and Certified. Each level is reached by obtaining points from a LEED® rating system.

Although LEED® is often associated with buildings, many components can be applied to airports and overall site design and planning for airports. The limitations of LEED® is that it does not address airport operations and administration. In addition to LEED®, several other recognized sustainability measurement systems include:

- Energy Star®;
- Whole Building Design Guide;
- Green Globes; and
- Sustainable Aviation Guidance Alliance (SAGA)

SAGA is a broad volunteer coalition of aviation interests formed in 2008 to assist airport operators of all sizes in planning, implementing, and maintaining a sustainability program. SAGA has undertaken an effort to consolidate existing guidelines and practices into a comprehensive, searchable resource that can be tailored to the unique requirements of individual airports of all sizes and in regions throughout the United States. The SAGA Resource Guide that identifies sustainable practices, some of which have LEED® applicability.

Selected Success Measures for EWK

A sample of applicable success measures were collected and presented to the PAC for consideration and discussion. Applicable SAGA and LEED® success measures were

used as a starting point for discussion. Some of these were measures were not applicable due to the EWK's size, operations, amenities and available infrastructure. PAC members clearly articulated that the selected success measures should be scaled appropriately for EWK. It was noted that EWK was one of the smallest airports in the Sustainability Pilot Program. However, PAC members also noted that EWK should be a leader in sustainability for similar-sized airports throughout the Country. Based on input from the PAC work session, applicable sustainability concepts and success measures were selected, refined and formulated into goals, objectives and actions.

3.7 SUSTAINABILITY GOALS, OBJECTIVES AND ACTIONS

The sustainability goals, objectives and actions provide the framework that will help lead the airport into the future in a more sustainable manner. This framework was developed based on existing resources including SAGA, LEED®, the City's Stormwater BMP manual, an analysis of existing airport practices and input from the PAC.

The EWK sustainability goals, objectives and actions are organized under the following categories:

1. Administration
2. Stormwater Management
3. Water Efficiency
4. Ground Transportation
5. Land Use
6. Energy Efficiency
7. Operations and Maintenance
8. Construction
9. Community Outreach

Future EWK projects, procedures and policies will be evaluated based on their alignment with the sustainability goals, objectives and actions outlined within this chapter. For the purposes of this plan, goals, objectives and actions are defined on the following page:

Goals: Provide a broad aspirational directive for each sustainability category intended to help the airport to achieve the sustainability mission statement.

* **Objectives:** Define general approaches, initiatives or strategies intended to help achieve each goal.

> **Actions:** Provide a specific direction for achieving each objective. Each action is assigned a general time line for completion:

- Short-Term: 1 to 5 years
- Mid-Term: 5 to 10 years
- Long-Term: 10+ years

Goal 1 Administration: EWK will set the standard sustainable practices for similar airports across the country by integrating sustainable approaches and practices into day-to-day operations.

* **Objective 1.1:** Inventory existing airport practices and operations to develop a baseline for comparing progress toward achieving sustainability objectives and actions.

> **Action 1.1.1:** Inventory electrical usage, water usage, solid waste volumes, stormwater discharges, maintenance schedules and procurement practices.

- Time Frame: Short-Term

> **Action 1.1.2:** Track up-front and overall life-cycle maintenance costs for airport facilities, vehicles, equipment and other infrastructure.

- Time Frame: Short-Term

> **Action 1.1.3:** Develop an annual Sustainability Report that summarizes past and present airport practices and tracks progress toward meeting key sustainability goals, objectives and actions. This report will be provided to the Airport Commission for review and comment. Upon approval by the Commission, the report will be provided to airport tenants, users and the community-

at-large through the airport and City web sites.

- Time Frame: Mid-Term

* **Objective 1.2:** Make sustainability a significant part of future airport branding and marketing.

> **Action 1.2.2:** Proactively work with the Newton Chamber of Commerce and the Harvey County Economic Development Authority continue to attract "Green" businesses and industries.

- Time Frame: Short-Term

> **Action 1.2.1:** Integrate sustainability into airport marketing initiatives.

- Time Frame: Short-Term

* **Objective 1.3:** Effectively communicate all airport sustainability initiatives to airport employees, tenants, users and the community.

> **Action 1.3.1:** Post the Sustainability Mission Statement at strategic locations throughout the airport including but not limited to the lobby of the administration building, airport staff offices, common areas, pilot lounge areas, and the airport conference room;

- Time Frame: Short-Term

> **Action 1.3.2:** Develop a communication plan to highlight airport sustainability projects and initiatives. Use a variety of medium to reach employees, tenants, users and the public including but not limited to information signs, the airport web site and an annual Sustainability Progress Report.

- Time Frame: Short-Term

> **Action 1.3.3:** Provide sustainability training and awareness presentations for employees and airport tenants.

- Time Frame: Short-Term

> **Action 1.3.4:** Identify and apply for national, state, and local grants to support sustainability initiatives.

- Time Frame: Short-Term

* **Objective 1.4:** Integrate sustainable practices for airport meetings.

> **Action 1.4.1:** When practical, distribute documents including but not limited to airport staff reports, meeting minutes, memos, electronically through e-mail or the airport web site.

- Time Frame: Short-Term

> **Action 1.4.2:** When hard-copy documents are necessary, use recycled-content office paper and materials.

- Time Frame: Short-Term

* **Objective 1.5:** Identify sustainable goals and expectations in future Request for Qualifications (RFQs) and Request for Proposals (RFPs) for airport projects.

> **Action 1.5.1:** Require LEED® accredited professionals at all levels of planning and design.

- Time Frame: Short-Term

Goal 2: Stormwater Management: Improve onsite stormwater management practices including increasing infiltration, reducing impervious surface coverage, and eliminating contaminants.

* **Objective 2.1:** All new airport construction projects will exceed the guidelines outlined in the City of Newton's Best Management Practices (BMP) Manual for construction and post construction.

> **Action 2.1.1:** Update the airport Stormwater Management Plan to reflect the Master Plan goals, objectives and actions.

- Time Frame: Short-Term

> **Action 2.1.2:** Future airport construction projects and renovations will be designed to ensure no net increase in rate and quantity of stormwater runoff.

- Time Frame: Short-Term

> **Action 2.1.3:** Identify opportunities to use new stormwater management technologies and methods to demonstrate practical BMP

applications on airport property.

- Time Frame: Short-Term

> **Action 2.1.4**: Identify opportunities to install permeable pavement including but not limited to porous asphalt, porous concrete and cobble pavers to reduce stormwater runoff. Pervious pavement options are well suited for areas not exposed to high volumes of traffic or heavy equipment.

- Time Frame: Mid-Term

> **Action 2.1.5**: Where practical, treat and reuse and/or recycle stormwater on site.

- Time Frame: Mid-Term

* **Objective 2.2:** Stormwater BMPs on airport property will be designed to avoid standing water that my attract birds and other wildlife.

> **Action 2.2.1**: Incorporate underground infiltration systems such as dry wells or infiltrated drain pipe.

- Time Frame: Short-Term

Goal 3 Water Efficiency: Maximize water efficiency within buildings and airport property to reduce the burden on the municipal/county water supply.

* **Objective 3.1**: Implement targeted strategies intended to significantly reduce water use without negatively affecting existing day-to-day airport operations.

> **Action 3.1.1**: Educate airport employees, tenants, users and others about water saving tips such as turning off faucets while lathering.

- Time Frame: Short-Term

> **Action 3.1.2**: Identify opportunities to collect and use reclaimed graywater and/or harvested stormwater for landscape irrigation, aircraft wash and other non-potable needs.

- Time Frame: Mid-Term

> **Action 3.1.3**: Install automatic sensors on toilets, urinals and faucets to conserve water.

- Time Frame: Mid-Term

> **Action 3.1.4**: Install high efficiency plumbing fixtures to reduce water usage and wastewater volumes.

- Time Frame: Mid-Term

Goal 4 Ground Transportation: Help encourage reduced emissions and implement the ReNewton Plan vision of "Innovations in Transportation" by providing opportunities for multiple transportation modes.

* **Objective 4.1:** Identify ways to encourage fuel efficient cars, bicycles and walking.

> **Action 4.1.1**: Provide a system of sidewalks, pedestrian paths and trails to connect uses throughout the airport. Identify opportunities to connect to the City/County trail system.

- Time Frame: Long-Term

> **Action 4.1.2**: Provide incentives to airport staff, tenants, users and the public to encourage the usage of alternative fuel vehicles.

- Time Frame: Short-Term

> **Action 4.1.3**: Provide preferred parking for fuel-efficient vehicles.

- Time Frame: Short-Term

> **Action 4.1.4**: Encourage Hertz Rent-a-Car to provide access to its "Green Collection" of fuel efficient cars.

- Time Frame: Short-Term

> **Action 4.1.5**: Ensure day-to-day activities do not require significant amounts of vehicle idling.

- Time Frame: Short-Term

Goal 5 Land Use: Reduce the environmental impact from airport operations, airport development and surrounding uses.

* **Objective 5.1:** Develop airport property for purposes that support airport activities or, at a minimum, are compatible with airport activities.

> **Action 5.1.1**: Proactively work with the City and County to promote

compatible land uses for properties adjacent to EWK. Provide incentives to attract "Green" businesses and industries.

- Time Frame: Short-Term

> **Action 5.1.2**: Plan for future expansion to reduce development footprint and preserve natural systems.

- Time Frame: Long-Term

* **Objective 5.2:** Minimize wildlife hazards at the airport.

> **Action 5.2.1**: Work cooperatively with the Kansas Department of Wildlife and Parks (KDWP) and other agencies to ensure that wildlife hazards are addressed to ensure safe airport operations.

- Time Frame: Short-Term

Goal 6 Energy Efficiency: Maximize energy efficiency through airport operations, building design and systems.

* **Objective 6.1:** Implement energy efficiency standards to promote efficiency and long-term cost savings.

> **Action 6.1.1**: New airport and operated buildings will comply with ASHRAE/IESNA Standard 90.1.

- Time Frame: Long-Term

> **Action 6.1.2**: Future noninsulated airport buildings such as T-Hangers will incorporate applicable energy efficient standards.

- Time Frame: Long-Term

> **Action 6.1.3**: Install occupancy sensors to turn off lighting when rooms are unoccupied.

- Time Frame: Short-Term

> **Action 6.1.4**: Incorporate skylighting to increase natural daylight and reduce heating costs during the winter. For hangars, skylighting design will need to account for liability issues associated with severe weather including hail storms that may damage planes and associated equipment.

- Time Frame: Long-Term

> **Action 6.1.5**: Use High Pressure Sodium (HPS) lamps instead of Metal Halide (MH) lamps.

- Time Frame: Short-Term

* **Objective 6.2:** Reduce energy consumption through use of alternative fuel options for vehicles and aircraft.

> **Action 6.2.1**: When deemed cost effective, consider conversion of airport fleet vehicles to alternative fuels.

- Time Frame: Mid-Term

> **Action 6.2.2**: Recognizing that the airport currently receives a significant portion of its revenue from aircraft fuel sales, evaluate evolving aircraft fuel technologies and consider alternatives when the it is deemed to be cost effective and makes fiscal sense for the airport.

- Time Frame: Long-Term

Goal 7 Operations and Maintenance: Use sustainability principles to maximize operational efficiency, reduce long-term maintenance costs and to improve the environment.

* **Objective 7.1:** Integrate sustainability into every day airport operation and maintenance practices.

> **Action 7.1.1**: Develop an operation and maintenance manual that outlines required schedules and procedures to maintain sustainable performances.

- Time Frame: Short-Term

> **Action 7.1.2**: Purchase recycled content materials including but not limited to toilet paper, paper towels, cups, garbage bags, etc.

- Time Frame: Short-Term

> **Action 7.1.3**: Consider use of a cloth toweling system or electric hand dryer in airport bathrooms.

- Time Frame: Short-Term

> **Action 7.1.4**: Provide easily

accessible recycling receptacles throughout the airport. Provide signs within these areas that clearly identifies what can and cannot be recycled.

- Time Frame: Short-Term

> **Action 7.1.5**: Procure and use environmentally friendly cleaning products.

- Time Frame: Short-Term

> **Action 7.1.6**: Avoid using fertilizers and chemicals for landscape maintenance.

- Time Frame: Short-Term

> **Action 7.1.7**: Identify no-mow zones that do not create wildlife hazards to reduce grounds maintenance needs.

- Time Frame: Short-Term

> **Action 7.1.8**: Specify durable, long lasting materials and finishes to extend material life and reduce maintenance requirements. Avoid products that require frequent replacement or regular maintenance.

- Time Frame: Short-Term

Goal 8 Construction: Integrate sustainable principles, methods and procedures throughout procurement, construction and post construction for all airport projects.

* **Objective 8.1**: Develop sustainability standards for new airport construction.

> **Action 8.1.1**: Require all new airport owned and operated buildings greater than 7,500 square feet to achieve a minimum LEED® Silver rating.

- Time Frame: Short-Term

> **Action 8.1.2**: Encourage all private development on airport property to be LEED® Certified. The City and County will consider incentives to encourage use of LEED® standards.

- Time Frame: Mid-Term

* **Objective 8.2**: Maximize use of recycled materials for airport construction projects.

> **Action 8.2.1**: Recycle and reuse construction waste including but not limiter to concrete, asphalt and building debris.

- Time Frame: Short-Term

> **Action 8.2.2**: Where practical, reuse and/or repurpose existing structures on the airport grounds.

- Time Frame: Short-Term

* **Objective 8.3**: Identify and use sustainable materials for renovation and/or new construction projects.

> **Action 8.3.1**: Give preference to local businesses and sources within the procurement process.

- Time Frame: Short-Term

> **Action 8.3.2**: Work with contractors and vendors to identify a list of durable, long-lasting and natural materials to be considered for airport renovation and/or new construction projects. Information will include a breakdown of the up-front and overall life cycle costs including maintenance considerations to determine the payback period for the initial investment.

- Time Frame: Mid-Term

> **Action 8.3.3**: Require use of low maintenance, drought resistant and non-wildlife attractive landscape. Planting design should address aesthetics as part of overall design guidelines for the airport.

- Time Frame: Short-Term

Goal 9: Community Outreach: Make the airport more visible to the community through dedicated public outreach.

* **Objective 9.1**: Identify targeted community outreach programs to interested citizens, civic groups and institutions.

> **Action 9.1.1**: Document airport sustainability projects on the City, County and airport web sites to educate visitors about the sustainable aspects of completed projects.

- Time Frame: Short-Term

> **Action 9.1.2**: Partner with local schools, colleges and other educational groups to help promote and advance the airport's sustainability initiatives.

- Time Frame: Short-Term

> **Action 9.1.3**: Coordinate with schools and civic groups to arrange for field trips and presentations to demonstrate airport sustainability projects and initiatives.

- Time Frame: Short-Term

> **Action 9.1.4**: Partner with Hesston College and other schools to develop, demonstrate and evaluate new innovative sustainability technologies on air-port property.

- Time Frame: Short-Term

> **Action 9.1.5**: Develop an up-to-date "green" conference facility at the airport as a resource for airport staff, tenants, users and the public.

- Time Frame: Mid-Term

3.8 TRACKING PROGRESS

As mentioned in Section 3.6, the Sustainability Plan's goals, objectives and actions need to be formally documented and tracked to measure progress over time. To accomplish this task, an inventory and assessment will be completed to establish a baseline for comparison. Progress will be tracked and recorded in an annual progress report.

Inventory and Assessment
The inventory and assessment will be completed by airport staff in advance of the Sustainability Plan. The consultant provided airport staff with a inventory and assessment worksheet to formally quantify and document existing practices and procedures for the following:

- Airport fuel consumption
  - total fuel consumed by gallons
  - airport vehicle fleet (average MPG)
  - other equipment (mowers, etc.)
- Airport utilities consumption
  - natural gas
  - electricity
  - water
- Airport grounds maintenance
  - irrigation
  - fertilizer
- Airport recycling efforts
  - construction materials
  - site paving materials
  - office paper and products

This inventory will be used to provide a baseline for refining the Sustainability Plan's objectives and actions. This inventory and assessment worksheet is included as an **Appendix A**.

Annual Sustainability Progress Report
Airport staff will update the assessment worksheet and track progress on a quarterly basis. This information will be provided to the Airport Commission in a formal staff report for their comment and review. This will allow the Commission to track progress and, if necessary, make any adjustments throughout the year to ensure that the Sustainability Plan's objectives and actions are being met and/or implemented. This information will be compiled and summarized into an Annual Sustainability Report that will be posted on the airport web site for users, tenants and the public.

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