

THE CITY OF CHARLOTTE AVIATION DEPARTMENT

SUSTAINABILITY PROGRAM

& PLAN SUMMARY



July 2020

NOTE: This document was mostly completed prior to COVID-19. Photographs and passenger statistics are pre-pandemic.



CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT

Charlotte Douglas International Airport (CLT) leads North Carolina as the top economic engine among the State's airports, contributing more than 23 billion to the economy. With that, comes the responsibility to provide economically viable sustainable solutions to our employees, our tenants, our passengers, and our region.

CLT is committed to sustainability by pursuing fiscally responsible practices that minimize environmental impacts, while aligning with economic goals to achieve a sustainable enterprise for the benefit of our local community. The Aviation Department's Comprehensive Sustainability Plan aligns with the City's vision for sustainability and resilience as well as the Airport's mission and vision.

CLT's Vision for Sustainability

We will become a leader in environmental stewardship by maintaining a balanced, integrated approach to future development and operations based on economic stability, environmental sustainability, and social responsibility.

CLT's Mission

We will serve as an economic engine of the Carolinas, facilitating the movement of people and goods, creating jobs and enterprise and sustaining a higher quality of life.

CLT's Vision

We will be the preferred airport and airline hub by providing the highest quality product for the lowest possible cost.



STRATEGIC ENERGY ACTION PLAN

In June of 2018, the Charlotte City Council passed the Sustainable and Resilient Charlotte by 2050 Resolution, setting aggressive and aspirational goals for municipal and community-wide greenhouse gas emissions reductions. Specifically, it strives to have city fleet and facilities fueled by 100 percent zero-carbon sources by 2030. It also set a community-wide goal for Charlotte to become a low carbon city by 2050. The Strategic Energy Action Plan (SEAP), adopted by City Council in December of 2018, outlines how Charlotte will reach its goals by defining 11 linked action areas focused on transportation, buildings, energy generation, and workforce development/equity.

SUSTAINABILITY

The City of Charlotte recognizes that protecting our natural resources, promoting conservation, and improving the environment is fundamentally important to quality of life and essential to maintaining a vibrant economy. Charlotte will become a global leader in environmental sustainability by:

- Becoming a model environmental community in how it manages energy, air, water and waste;
- Leading by example by practicing environmental stewardship in City operations and facilities as guided through the Strategic Energy Action Plan (SEAP);
- Seeking and supporting collaborative and regional solutions to environmental problems; and
- Analyzing data and applying technologies to reach our environmental goals.



Our Mission

The Charlotte City Council's vision:

Charlotte will become a global leader in environmental sustainability, balancing economic growth with preserving our natural resources.

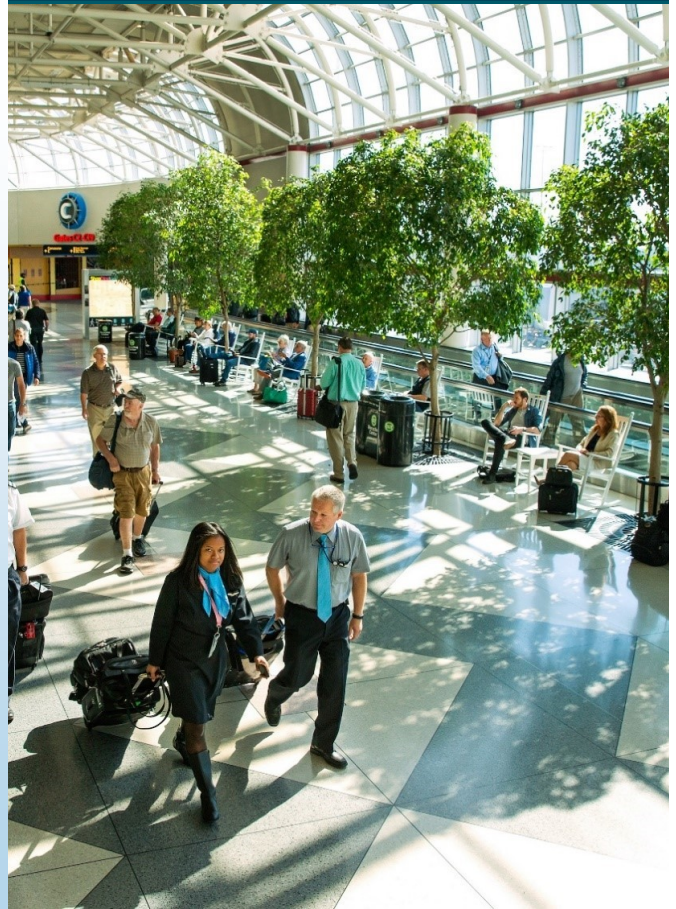
Charlotte will lead, as a global city, by continuously improving, protecting, and preserving the environment, its community, and economy, while ensuring equity and resilience for today's and future generations.



COMPREHENSIVE SUSTAINABILITY PLAN

The City of Charlotte Aviation Department's Comprehensive Sustainability Plan reflects the Airport's commitment in helping the City achieve the objectives outlined in the SEAP. This plan will enable us to become a leader in environmental stewardship by implementing best practices to help minimize the environmental impacts of our operations for the benefit of our local community. Over the next 20 years, we will use this plan as our guide as we adopt new sustainable practices into our daily operations which will help us continue moving toward a more sustainable and resilient future.

Developed in collaboration with staff, stakeholders and community members, our Comprehensive Sustainability Plan is centered around six focus areas, each supported by their environmental, economic, and/or social performance targets and goals. The following pages outline each focus area in more detail with its respective goals, targets and recommended strategies.



Sustainability Initiatives (2019)



CLT routinely recycles crushed concrete and asphalt during construction for reuse in future projects

73,000 tons of concrete were crushed last year

OVER 85

smart waste and recycling stations alert staff when they are nearing capacity



Stations are solar-enabled to be solar-powered whenever possible

CLT's water bottle filling stations helped eliminate waste from approximately 2 million disposable plastic bottles last year



More than 80 percent of the water used to wash CLT's buses is reclaimed for reuse



Energy-efficient lighting and terminal signage



Drought-tolerant landscaping with native plant species



130,000 lbs. of used cooking from the Airport was converted into biofuel



Last year, CLT's electric vehicle charging stations hosted over 3,200 charging sessions

=26,000 kg of greenhouse gas emissions avoided



CLT partnered with Duke Energy in 2010 to install a 235 KW rooftop solar photovoltaic system



In 2019, the panels produced enough power to supply electricity to 30 NC homes for one year



Waste Goals

- ✓ Increase waste diversion
- ✓ Minimize food waste disposal
- ✓ Reduce waste generation

Waste Targets

- ✓ 75% diversion rate from all CLT-controlled operations
- ✓ Zero food waste to landfill (back of house)
- ✓ 10% reduction in total waste volume

WASTE

With more than 125,000 daily passengers at CLT, there is a high volume of waste generated throughout the Airport's operations, including food and packaging waste, airline waste, and construction and demolition waste as the terminals continue to be renovated and expanded. The strategies explored in this focus area include understanding the composition of the waste stream which will subsequently help identify opportunities to reduce the volume of waste generated and to shift the waste stream toward increased diversion, maximizing reuse, recovery and recycling over disposal. A central focus of the effort to reduce waste will be to educate employees, vendors and passengers around waste management best practices.

An overall reduction in waste will lessen the Airport's carbon footprint, which supports the goals of the SEAP.

Recommended Aviation Department Sustainability Strategies

GENERAL WASTE MANAGEMENT

- Conduct waste composition study
- Formalize waste reduction program and track progress
- Pursue zero waste certification

FOOD WASTE

- Participate in EPA food recovery challenge
- Increase food recovery/donation by vendors
- Phase in organics composting

CONCESSIONS

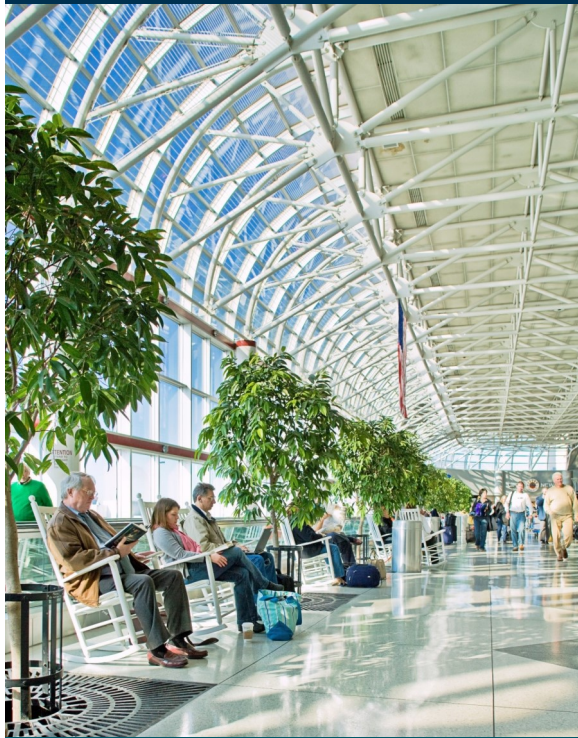
- Introduce waste management policy for concessionaires
- Educate vendors, staff, and passengers
- Reduce single use disposable items

CONSTRUCTION WASTE

- Increase and track construction waste diversion

AIRLINE WASTE

- Improve diversion of waste from flights



Health Goals

- ✓ Support employee, tenant, and passenger health
- ✓ Design spaces to enhance passenger comfort and health

Health Targets

- ✓ Increase employee participation in health and wellness programs
- ✓ Meet or exceed best practice indoor and outdoor air quality standards

HEALTH

The Health focus area considers the physical and mental health and wellbeing of passengers, tenants and employees.

In the context of an airport operation, health conditions can be improved by the design of physical environments, provision of clean drinking water and healthy food options, meeting and exceeding air quality standards, employee wellness programs, and raising awareness about healthy lifestyle choices.

Recommended Aviation Department Sustainability Strategies

CERTIFICATIONS AND DESIGN STANDARDS

- Explore third-party health standard certification

EMPLOYEE PROGRAMS

- Conduct employee and passenger surveys to determine health priorities
- Introduce health and wellness programs based on survey results

AIR QUALITY

- Implement clean construction policy
- Introduce indoor air quality specifications for all materials
- Introduce non-idling policy*

* Aligns with SEAP Action Area 6: Strive toward 100% zero-carbon city fleet by 2030



Energy & Emissions Goals

- ✓ Reduce energy use and emissions from airport operations
- ✓ Increase renewable energy supply and/or purchase
- ✓ Increase use of alternative fuel vehicles

Energy & Emissions Targets

- ✓ Strive towards 100% zero carbon airport-owned buildings
- ✓ Strive towards 100% zero carbon airport-owned fleet

ENERGY & EMISSIONS

The strategies under this focus area align with the SEAP and Charlotte's commitment to reducing citywide greenhouse gas emissions. Strategies to reduce energy use and increase use of clean and renewable energy sources will reduce energy costs and contribute to the financial sustainability of CLT while helping reduce CLT's contribution to climate change.

Recommended Aviation Department Sustainability Strategies

RENEWABLE AND LOW CARBON SUPPLY

- Increase onsite renewable energy*
- Assess feasibility of central energy plant with low carbon energy supply*
- Purchase renewable energy credits or other offsite renewable supply*
- Pursue Airports Council International Carbon Accreditation**

OPERATIONS AND MAINTENANCE

- Use automated "smart" HVAC and lighting controls*
- Track energy use through monitoring and sub-metering*
- Explore feasibility and impact of green roofs*

FLEET AND VEHICLES

- Develop unified fleet strategy*
- Explore feasibility of electric shuttle bus fleet*
- Provide vehicle charging infrastructure at all parking facilities*
- Continue to work with airlines to convert GSE to electric*
- Develop a sustainable logistics delivery policy*

* Aligns with SEAP Action Area 5: Strive toward 100% zero-carbon municipal buildings by 2030

* Aligns with SEAP Action Area 6: Strive toward 100% zero-carbon City-fleet by 2030



Water, Stormwater & Landscape Goals

- ✓ Reduce water use per passenger in terminal
- ✓ Improve stormwater capture, treatment, and reuse
- ✓ Improve quality and reduce impact of landscapes

Water, Stormwater & Landscape Targets

- ✓ Reduce water use per passenger by 15%
- ✓ Capture and treat 50%-90% of stormwater

WATER, STORMWATER & LANDSCAPE

The scale of CLT's operation presents a range of opportunities to reduce potable water use, improve stormwater management practices, and nurture sustainable low impact landscapes.

This focus area includes strategies supporting the reduction in water use by employees and passengers, exploring water reuse opportunities, ensuring that stormwater is effectively managed, and landscaping that utilizes drought-tolerant native plant species and vegetation to maximize stormwater retention.

An overall reduction in potable water use and fuels used in lawn maintenance may lessen the Airport's carbon footprint, which supports goals of the SEAP.

Recommended Aviation Department Sustainability Strategies

POTABLE WATER CONSERVATION

- Install smart meters and sub-meters
- Retrofit fixtures to most efficient models
- Use non-potable water for toilet flushing, irrigation, cleaning and cooling towers

STORMWATER MANAGEMENT

- Assess chemical composition of runoff at lowest points
- Maximize permeable surfaces to slow stormwater

LANDSCAPE

- Select landside plants, focusing on native plants that maximize stormwater retention
- Explore introduction of grazing herd for landscape maintenance



Transportation Goals

- ✓ Reduce single-occupancy vehicle use and increase sustainable modes of transportation
- ✓ Increase alternative fueling infrastructure
- ✓ Reduce congestion and idling

Transportation Targets

- ✓ Increase alternative transportation and ride share to 50% of trips
- ✓ Adopt best practice targets for electric vehicle charging infrastructure

TRANSPORTATION

CLT Airport is a regional transportation hub, with a high volume of individuals traveling to and from the Airport daily. From a sustainability perspective, the variety of available transportation options, ranging from single occupancy gas vehicles, to public transportation and ride shares, have an associated range of environmental impacts. The strategies explored in this focus area support and encourage more sustainable modes of regional and site-specific transit options for passengers and employees, including reducing single-occupancy vehicle travel, increasing the use of alternative fuels for onsite vehicles, and promoting active transportation.

Recommended Aviation Department Sustainability Strategies

EMPLOYEE COMMUTE

- Survey employee commute*
- Expand ride share programs with incentives*
- Improve cycling and pedestrian access to CLT*

REGIONAL TRANSPORTATION

- Serve as an advocate in regional transportation planning*

SURFACE TRANSPORTATION AND PARKING

- Display parking spot availability digitally

* *SEAP Action Area 8: Facilitate rapid uptake of sustainable modes of transportation*



Community, Equity & Economic Development Goals

- ✓ Increase awareness of diversity, equity and inclusion policies
- ✓ Demonstrate commitment to local community capacity building
- ✓ Support employee professional and personal development

Community, Equity & Economic Development Targets

- ✓ 100% of Aviation Department employees to go through diversity and sustainability training
- ✓ Annual employee volunteer hours and participation in outreach programs
- ✓ Annual hours staff education/career development training

COMMUNITY, EQUITY & ECONOMIC DEVELOPMENT

As one of Charlotte's largest employers, CLT is an economic engine for the City and surrounding region. This focus area recognizes the impact of the Airport's operation on the community – including employees, business, and surrounding neighborhoods – and the opportunity to create a positive impact on the social and economic prosperity of the city and region.

This focus area also addresses equity and inclusion among employees and in the broader community by strengthening diversity and inclusion policies and programs. Strategies support the objective of nurturing thriving individuals and communities that are resilient to environmental, social, and economic challenges. It should be noted that the Airport Area Strategic Development Plan (AASDP) addresses a range of community economic development priorities.

Recommended Aviation Department Sustainability Strategies

EMPLOYEE AND HUMAN RESOURCES

- Build upon career and training opportunities for employees and community
- Expand trade school recruitment programs at local community colleges

EQUITY

- Develop diversity and sustainability training for employees
- Continue to provide multi-lingual assistance to passengers

COMMUNITY IMPACT

- Continue employee volunteer program
- Develop a fund to support local community economic development
- Develop strategic community engagement plan