RS&H

September 24, 2024

# Charles M. Schulz – Sonoma County Airport Sustainability Baseline Report

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Prepared by RS&H, Inc. at the
direction of Sonoma County Airport

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# 1 Introduction

Charles M. Schulz - Sonoma County Airport's (STS, Airport) is a public-use facility supporting commercial service and general aviation operations, with some limited use by transient military aircraft. The Airport is located in central Sonoma County, about seven miles northwest of downtown Santa Rosa, 55 miles northwest of San Francisco, and 18 miles inland of the Pacific Ocean. The climate around STS is characterized as temperate coastal. STS manages 1,200 acres of land and serves an average of around 614,000 passengers and around 290,000 pounds of cargo annually. Owned by the County of Sonoma and operated as an Enterprise fund within the County of Sonoma Department of Public Infrastructure, under the jurisdiction of the Federal Aviation Administration (FAA), STS is an essential asset to the North Bay area. The Aviation Commission serves as an advisory body, conducting public meetings, serving as a liaison between the Airport and tenants, providing general support to Airport staff, and advising the Board of Supervisors. Historic enplanements for the Airport are shown in **Table 1** below.

Table 1: Historic Enplanements

| Year | Total Passenger Number |
|---|---|
| 2019 | 488,179 |
| 2020 | 195,303 |
| 2021 | 435,427 |
| 2022 | 614,481 |

The County of Sonoma has emerged as a leader in the sustainability planning space as the twenty-first century presents evolving challenges. The County of Sonoma Strategic Plan was approved in March of 2021 and includes five strategic pillars: Healthy and Safe Communities, Climate Action and Resilience, Racial Equity and Social Justice, Resilient Infrastructure, and Organizational Excellence. The County Climate Action and Resiliency Division (CARD) is also in the process of developing a list of actions that will be implemented across all sectors as a part of a Comprehensive Action Plan.

STS is currently in the process of developing a Sustainability Management Plan (SMP) for the Airport in alignment with the FAA's Sustainability Planning Program, as well as the County's sustainability efforts. The SMP will establish a sustainability vision, baseline, goals, initiatives, and implementation strategy for the Airport to grow its sustainability program. This report represents an important step in that effort by establishing a baseline for the sustainability performance of STS's operations.

Successful sustainability planning processes incorporate a strategic approach involving a well-defined mission and vision, focus areas, a data-driven performance baseline, stakeholder engagement, and Specific, Measurable, Achievable, Relevant, and Time-Bound (SMART) goals. Potential sustainability initiatives should be evaluated using triple-bottom-line and cost-benefit

analyses to determine those which will provide the greatest benefits and best use of resources. In addition, plans should be made for securing funding, implementing initiatives, and monitoring their performance once implemented. STS's final SMP will encompass all of these elements.

Throughout the development of the SMP, Airport staff and stakeholders engaged through a variety of measures including workshops and Sustainability Working Groups (SWGs). Workshops are designed to provide updates on SMP progress, gain insights from attendees, and to ensure the SMP is aligned with County goals. The SWGs will have members with knowledge about a wide variety of operations across the Airport and will include one or more representatives from Sonoma County. The groups will meet to refine vision, goals, projects, and implementation mechanisms relevant to the focus areas overseen by respective SWGs.

This memorandum presents the draft mission and vision statements, SMP focus areas, and a sustainability performance baseline for the Airport. It is organized around STS's focus areas and the individual baseline elements that fall into each focus area. It also summarizes a benchmarking study of peer airports, as well as results from a survey administered to staff and stakeholders. Finally, preliminary goals for the SMP are proposed for feedback and further refinement by the SWGs.

# 2 Mission and Vision

Establishing clear mission and vision statements is essential to the success of a sustainability program. These statements serve as guiding principles, aligning stakeholders and staff towards a common objective while also providing strategic focus and inspiration. By communicating STS's purpose and aspirations, the mission and vision statements aid decision-making, ensuring activities and resources support the Airport's core purpose and long-term goals. They also allow STS to evolve and grow while maintaining its core values and direction, ultimately shaping its culture, strategy, and success.

A mission statement typically speaks to the everyday operations of an organization, by defining its objectives and approaches to achieving them. This statement provides the organization's purpose and reason for existence. A vision statement serves as a "North Star," providing direction by describing the organization's desired future position.

As a part of STS's process of developing the SMP, a Visioning Workshop was held with a variety of Airport staff and stakeholders. The purpose of the workshop was to establish a shared understanding of sustainability, review the results of benchmarking and the survey that was previously sent out, and to begin developing mission and vision statements as well as focus areas for the SMP. The following mission and vision statements were developed using input from attendees of the Visioning Workshop and in collaboration with the SMP Project Team. Draft mission and vision statements from the Workshop were further revised and refined to arrive at the current versions. They are subject to change as the SMP process continues and comments from the SWGs, stakeholders and the public are incorporated.

## Mission

- To serve our community by sustainably operating the Sonoma County Charles M. Schulz Airport, emphasizing safety, economic viability, and responsible stewardship of natural resources.

## Vision

- To provide innovative, sustainable, and resilient aviation services for future generations of Sonoma County residents and visitors.

# 3 Focus Areas

During the March 2024 Sustainability Visioning Workshop, the Project Team presented potential focus areas to reflect current STS priorities and objectives. Workshop attendees were given the opportunity to provide comments and changes to the focus area organization, and finalization of these focus areas is ongoing as the SMP process continues. The focus areas and the baseline elements that fit under each one are presented in **Figure 1**.

The following sections (4.1 – 4.5) document baseline conditions associated with these focus areas and will serve as an opportunity to identify improvements that will be documented in future chapters of the SMP. **Table 2** provides guidance on how the established focus areas for STS (left column in light blue) align with the County of Sonoma Strategic Pillars (top row in dark blue).

Table 2: Focus Area Alignment with the County of Sonoma Strategic Plan Pillars

| | | County of Sonoma Strategic Plan Pillars | | | | |
|---|---|---|---|---|---|---|
| | | Climate Action and Resiliency | Healthy and Safe Communities | Organizational Excellence | Racial Equity and Social Justice | Resilient Infrastructure |
| STS SMP Focus Areas | Energy and Emissions | ✓ | ✓ | | | ✓ |
| | Materials Management | ✓ | ✓ | ✓ | | |
| | Environmental Stewardship | ✓ | | | | |
| | Finance and Governance | | | ✓ | ✓ | ✓ |
| | Social Responsibility | | ✓ | ✓ | ✓ | ✓ |


Figure 1: STS Preliminary Focus Areas

# 4 Baseline

The Sustainability Baseline Assessment summarizes existing operational and programmatic data, including both quantitative and qualitative data, to evaluate STS's performance around several sustainability focus areas. This information is useful as a reference point against which to set goals, measure progress, and identify sustainability initiatives.

To establish and understand STS's sustainability trends, data was gathered for the years 2018 through 2022. 2021 was selected as the common baseline for comparison across categories because a full data set was received for this year. Where possible, data was normalized to facilitate comparisons within STS's operational boundaries or fence line, which will be carried forward in the SMP.

## 4.1 Energy and Emissions

The Energy and Emissions Focus Area addresses the energy consumed at the Airport and the subsequent emissions (i.e., greenhouse gases) produced[1]. This focus area is of high significance to STS as the County of Sonoma has made a commitment to achieve carbon neutrality by 2030. Carbon neutrality is achieved when an entity emits the same amount of greenhouse gas emissions (GHG) emissions as it offsets, whereas net zero emissions indicates that the entity does not emit any GHG emissions.

### 4.1.1 Energy Use

Energy use at airports comes from a variety of essential operations, including operating facilities, powering airfield lighting, and fueling fleet vehicles and backup power generators. Tracking this usage is crucial to understand energy costs and contributions to greenhouse gas emissions, and to identify conservation opportunities.

#### *4.1.1.1 Guidance and Background*

As a state with ambitious climate and energy goals, California has an Energy Commission which provides a cohesive approach to identifying and solving pressing energy issues. The most recent update to California's Building Energy Efficiency Standards Title 24, Part 6, was released in 2022. These standards contain energy efficiency requirements for newly constructed buildings and existing buildings, emphasizing a decrease in energy consumption per square foot of floor space. The 2022 standards focus on the following key areas:

- Encouraging electric heat pump technology and use
- Establishing electric-ready requirements when natural gas is installed
- Expanding solar photovoltaic (PV) system and battery storage standards

[1] Note this analysis is limited to activities under the ownership and operational control of the Airport. It does not include energy and emissions related to aircraft flights or other third-party activities.

- Strengthening ventilation standards to improve indoor air quality

As a part of its ambitious commitments to carbon neutrality, California has committed to reducing fossil fuel consumption by over 90%, which is expected to lead to a significant drop in demand for oils and all fossil fuels within the state. Like other airports, STS relies on fossil fuels for various operations such as fleet operations, ground transportation, and natural gas heating systems, so transitioning away from them will necessitate significant changes.

### *4.1.1.2 Baseline Observations*

Primary sources of energy use at STS can be categorized into electricity consumption, natural gas consumption, and fleet fuel consumption. The following sections provide an overview of the current usage and trends observed at the Airport.

#### ELECTRICITY CONSUMPTION

STS used 1,268,240 kWh of electricity in the baseline year of 2021. RS&H received electricity data for the calendar years of 2020 through 2022 for facilities owned and operated by STS. PG&E is STS's current electricity provider. STS's annual electricity consumption is relatively consistent in the years 2020 and 2021, but decreased 77% in 2022, as shown in **Figure 2.** The lower level of grid electricity consumption in 2022 is related to the Airport's solar energy generation facility coming online in February that year.

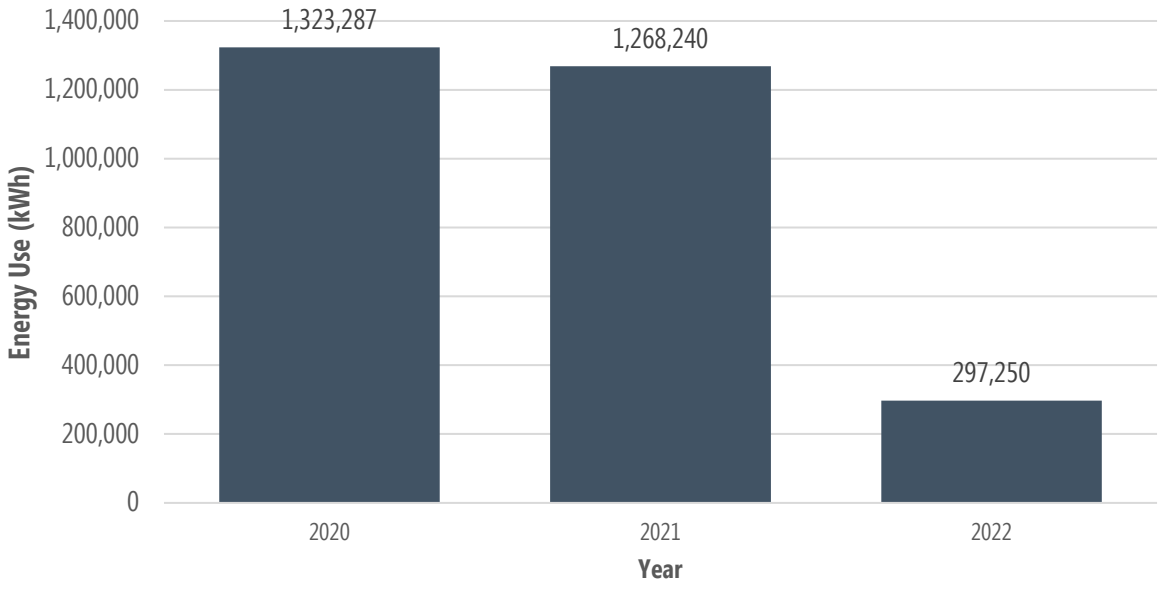



Figure 2: Total Annual Energy Use, 2020 - 2022

STS's monthly electricity consumption for the year 2021 averaged around 105,000 kWh. **Figure 3** shows February having a particularly high energy usage, being 36% higher than the monthly average.

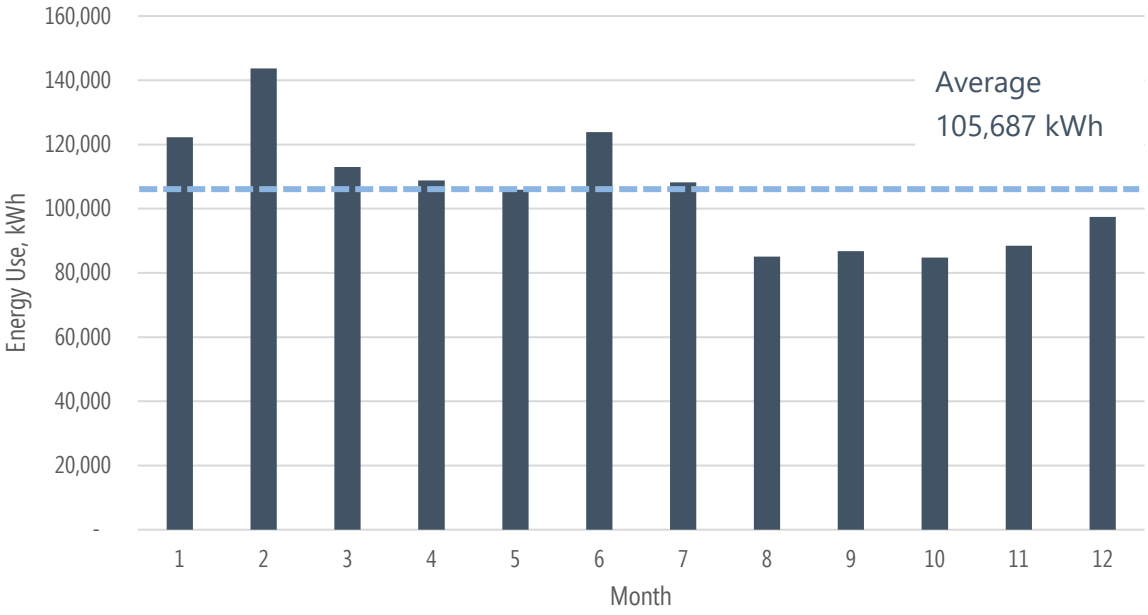



Figure 3: Total Monthly Energy Use in 2021

2200 Airport Boulevard, the terminal building, is responsible for the majority of STS's electricity use. As seen in **Figure 4,** which maps the Airport's electricity consumption in 2021**,** the terminal facility accounts for almost 75% of total electricity consumption. 3695 N Laughlin Rd, 2194 Airport Blvd, 3801 Flightline Dr, and 2282 Airport Blvd make up 9%, 8%, 4%, and 3% of total electricity consumption respectively. The nine other Airport facilities make up only 2% of the total electricity consumption.

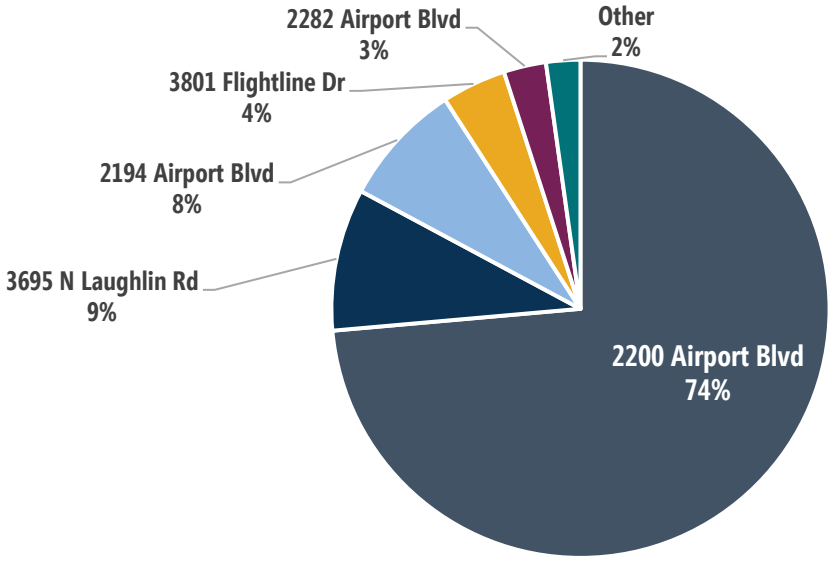



Figure 4: Airport Electricity Use by Facility (FY 2021)

### Natural Gas Consumption

Natural gas consumption for the baseline year of 2021 was 1,626 therms. STS provided natural gas consumption data for the full years of 2020 through 2022 for facilities it owns and operates. PG&E is STS's current natural gas provider. The terminal facility, the fire station, and the airport administration building comprise 100% of natural gas use at the Airport, this use is assumed to be from heating systems. RS&H was not able to obtain specific data in types of heating systems at the Airport. Although STS does not see major fluctuations in seasonal temperature due to its temperate coastal climate, natural gas consumption peaks correlated with months with low average temperatures, as seen in **Figure 5**.

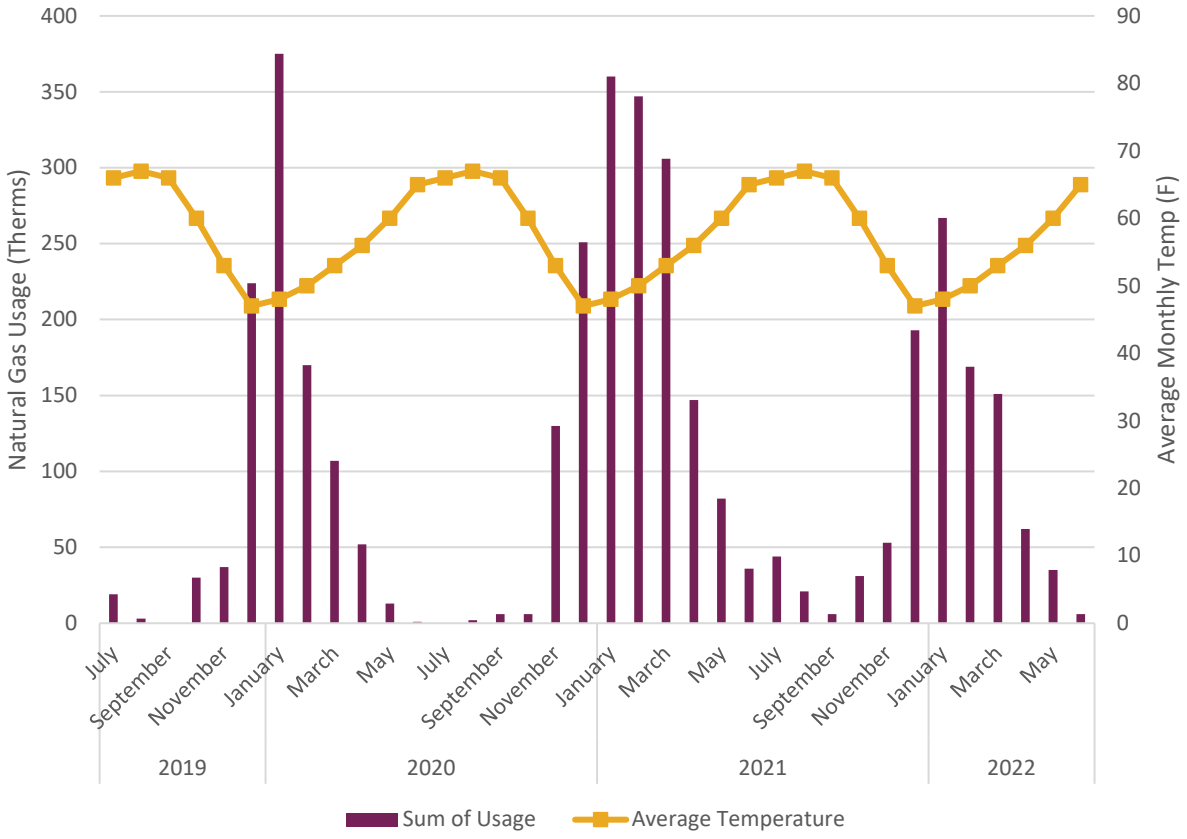



Figure 5: Monthly Natural Gas Consumption and Average Temperature

### Fleet Fuel Consumption

As a department of the County of Sonoma, the Airport fleet is controlled externally by County staff. The County is responsible for procurement and maintenance of Airport fleet vehicles. The fleet at STS consists primarily of off-road equipment, on-road highway vehicles, and on-road highway trailers, totaling 15 diesel vehicles, 13 unleaded gasoline vehicles, seven non-fuel-using trailers, and two electric vehicles. The total fleet composition by use, type, and fuel type can be seen in **Table 3**. STS currently has two hybrid vehicles in its fleet, a 2009 Ford Escape and a 2022 Ford F150. The Airport purchases its vehicles through the County, which has made a goal to

phase out County (owned or leased) gasoline powered light-duty cars, vans, and pickups to achieve a 30% zero-emission vehicle light-duty fleet by 2026. The Airport recently acquired two electric tractors.

Table 3: STS Fleet Composition

| Vehicle Use | Vehicle Type | Number | Fuel Type | Inventory Age |
|---|---|---|---|---|
| Off-Road Equipment | Generator | 4 | Diesel | 2013 – 2022 |
| | Fork Lift | 1 | Unleaded | 1997 |
| | Tractor | 6 | Diesel | 1995 – 2021 |
| | Tractor | 2 | Electric | 2023 |
| Off-Road, Flightline Use Only | PW Sweeper | 2 | Diesel | 2009 – 2020 |
| | Truck Fire Equipment | 3 | Diesel | 1991 – 2020 |
| On-Road Highway Vehicle | Escape | 1 | Unleaded | 2009 |
| | Expedition XL | 1 | Unleaded | 2020 |
| | F150 | 2 | Unleaded | 2006 – 2022 |
| | F250 | 2 | Unleaded | 2006 |
| | F350 | 2 | Unleaded | 2009 – 2011 |
| | Ranger | 4 | Unleaded | 2008 – 2010 |

STS's annual fuel use for the baseline year of 2021 was 4,371 gallons of unleaded fuel across 48, 527 miles, leading to an average fuel efficiency of 11.1 miles per gallon (mpg). For diesel fuel, STS's 2021 use totaled 269 gallons across 848 miles, with a fuel efficiency of 3.2 mpg. STS provided fleet data for the years 2018 through 2023, including annual mileage and total fuel expenditures over the six years of data provided. After discussion with the Airport, it was determined that mileage for certain vehicles had been reported only in the final year (2023) and represented the total mileage across all 6 years. In these cases, RS&H normalized the data by averaging the six-year total across all six years. RS&H did not receive data from the Airport indicating if any vehicles have been removed from the fleet between 2018 – 2023. Based on their model years, seven vehicles were added during this period. **Figure 6** shows annual fuel consumption and mileage for vehicles using unleaded fuel at STS. Fuel consumption and usage has remained relatively steady from 2018 to 2022. However, fuel efficiency of the unleaded fleet has slightly decreased over time. This may be related to aging vehicles within the fleet or changes in driving behavior leading to decreased efficiency. Older vehicles in the fleet may be suitable candidates for replacing with modern hybrid or electric equivalents.

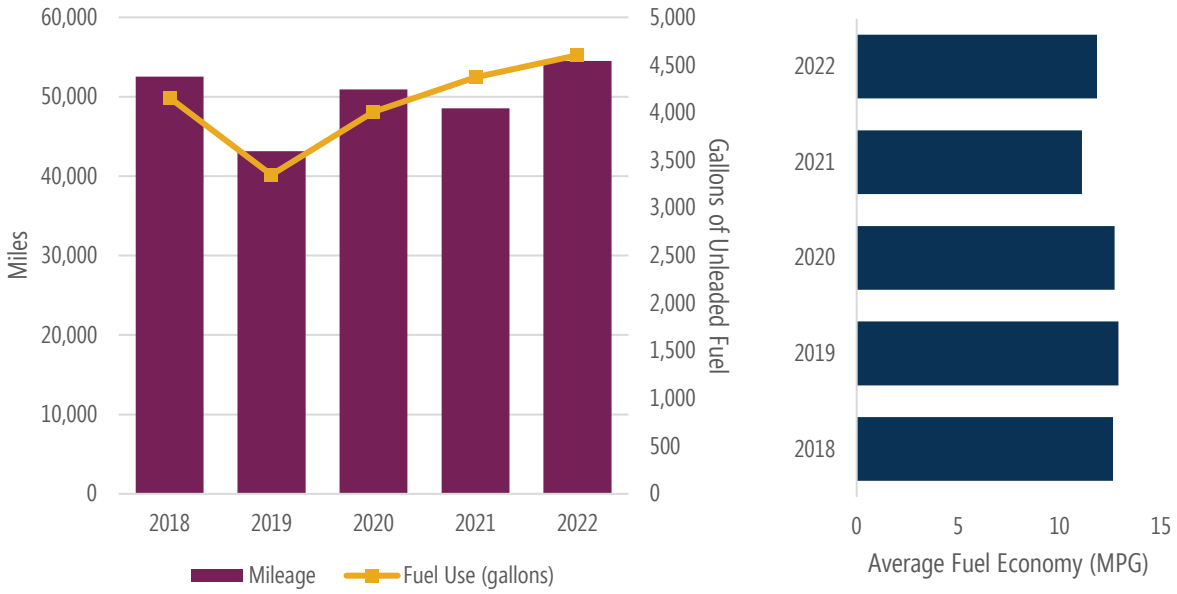



Figure 6: Annual Unleaded Fuel Consumption and Mileage (left), Average Fuel Efficiency (right) 2018 – 2022

Data obtained for diesel fleet vehicles was incomplete and did not allow for an accurate analysis of annual fuel consumption or efficiency. The diesel fleet includes four generators, six tractors, two PW sweepers, and three fire truck equipment. Overall, miles travelled by the diesel fleet have steadily decreased from 2018 to 2022. However, this trend may not be accurate due to data gaps, as many fleet vehicles have mileage data without associated diesel costs. Most diesel equipment is fueled from a common truck-mounted tank and is therefore not tracked by vehicle. RS&H did not receive specific data on vehicle maintenance and costs, aside from the fact that the County is responsible.

### 4.1.2 Renewable Energy and Alternative Fuels

Renewable energy and alternative fuels play a vital role in enhancing sustainability and reducing environmental impact. Energy sources such as solar panels, wind turbines, and geothermal systems can be integrated into airport infrastructure to generate clean electricity for operations. Renewable energy investments can also enhance resilience to energy supply disruptions and volatile fuel prices and help lower operating costs in the long run.

Alternative fuels also present a significant opportunity for the aviation industry. Electric and hybrid-electric ground support vehicles can help airports minimize emissions and noise pollution during airfield activities. Significant advancements in sustainable aviation fuels (SAFs), fuels derived from biomass, waste, or renewable energy sources, are beginning to emerge, presenting a pathway for decoupling greenhouse gas emissions from flight.

Unleaded aviation gasoline, often referred to as "unleaded avgas," also represents a significant advancement. Used to power traditional propeller and small piston-engine aircraft, traditional

avgas contains lead additives to boost octane ratings, but poses environmental and health risks due to its toxic lead emissions. Unleaded avgas addresses these concerns by eliminating lead additives while maintaining the necessary performance characteristics for aircraft engines.

SAFs and unleaded avgas can act as drop-in fuels in that they are compatible with existing aircraft engines and fueling infrastructure. However, both face limited availability and there may be constraints on the ability of aircraft to freely switch between these options and conventional fuels. Airports like STS can take a leadership role in advancing aviation sustainability by supporting the roll-out of these next-generation fuels.

#### *4.1.2.1 Guidance and Background*

California has one of the most progressive energy and alternative fuel policies in the United States. The Clean Energy and Pollution Reduction Act (Senate Bill 350) established ambitious goals for clean energy, air, and greenhouse gas emissions. California has also established a Low Carbon Fuel Standard (LCFS), which is designed to decrease GHG emissions from transportation using a market-based mechanism that caps the carbon intensity of fuels. As of 2023, California already sources 37% of its total electricity from clean sources such as wind and solar energy. Several programs exist at a state level to incentivize renewable energy, including:

- The Demand Side Grid Support Program
- The Distributed Electricity Backup Assets Program
- The Geothermal Grant and Loan Program
- The Renewable Energy for Agriculture Program (REAP) Program
- The Residential Solar Permit Reporting Program

The FAA and aviation partners recently launched the Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative. This initiative aims to facilitate the transition from leaded avgas to unleaded avgas by 2030. The FAA also recently released a notice of funding opportunity (NOFO) in supplementary discretion grants under the Airport Improvement Program which includes provisions for the reduction of lead emissions from aviation fuel. The FAA also provides funding opportunities for Fueling Aviation's Sustainable Transition (FAST), which supports airports as they make investments to accelerate production and use of SAF.

#### *4.1.2.2 Baseline Observations*

Sources of renewable energy and alternative fuels at STS currently include solar energy generation and electric vehicle charging infrastructure. The Airport also recently acquired two electric tractors through a California Air Resources Board (CARB) grant.

**RENEWABLE ENERGY GENERATION**

STS has a significant solar producing facility on site, which came online in 2022. Average annual production since the system came online is approximately 1.3 million kWh. The 963 kilowatt

(kW) solar energy portfolio includes an 884 kW solar canopy in the Airport parking lot. The solar portfolio was designed to offset 100% of the Airport's annual electricity consumption. The solar system is operated in partnership with ForeFront Power. **Figure 7** shows the annual energy production of the solar system in kWh since it came online in February of 2022. Solar energy production typically peaks in summer months and decreases in winter months when the sun's angle is lower. Despite the initial estimation that the solar system would cover over 100% of the Airport's electricity consumption, the Airport received a true-up fee of approximately $200,000 from PG&E in October of 2023 to account for electricity consumed from the grid from the previous year. The cause of this fee needs to be further investigated, but it is possible that the discrepancy is related to an increase in the size of the new terminal project after the solar system was designed, resulting in Airport electricity demand beyond the solar system's original design capacity.

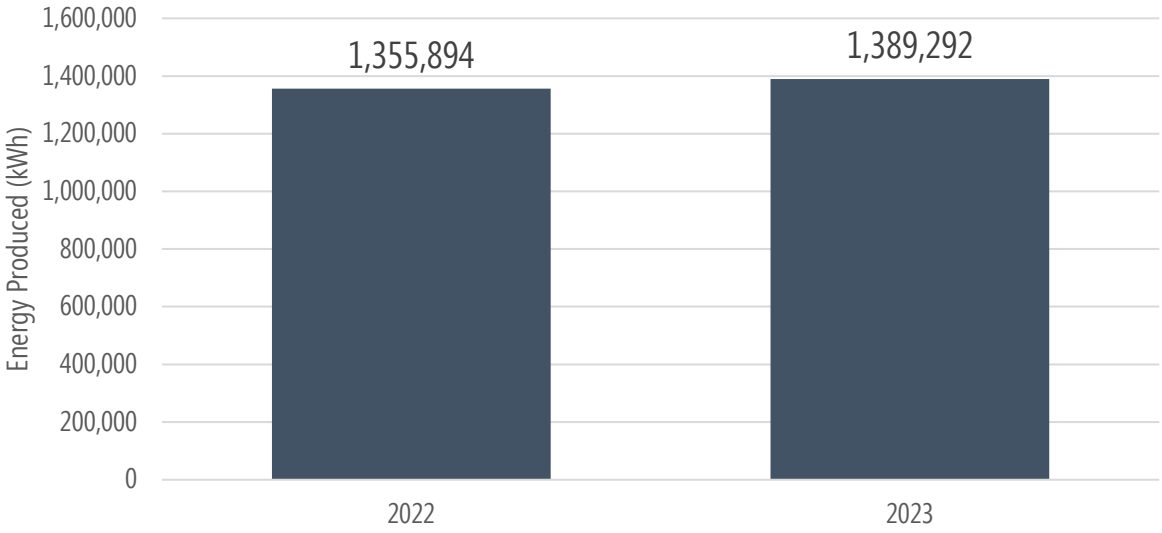



Figure 7: Annual Solar Energy Generation (kWh), 2022 - 2023

### Alternative Fuels

The Airport offers electric vehicle charging to employees and passengers. Two types of electric vehicle charging stations are offered, one through ChargePoint and one through Tesla. ChargePoint has 13 Level 2 charging stations at the Airport, which currently cost $3.30 for two hours (J1772, 3.3 kW) for passengers to charge their personal vehicles. Tesla has four supercharger (Direct Current Fast Charger, DCFC) stations at STS, which are priced at $0.26 per kWh, open year-round on a first-come first-serve basis. The ChargePoint stations were partially funded through the Bay Area Air Quality Management District (BAAQMD) Charge! Program, which provides support to public agencies to expand the existing charging infrastructure in the region. The Airport also has private electric vehicle chargers for the KR security contractor and to charge their newly attained two electric tractors.

### 4.1.3 Greenhouse Gas Emissions

Greenhouse Gas Emissions (GHGs) are gases in the atmosphere which absorb infrared radiation reflected from the earth's surface, creating a greenhouse effect which raises global temperatures. GHGs can be naturally occurring or manmade. Significant GHGs of concern include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs are categorized into three scopes depending on who is responsible for releasing them. Scope 1 includes emissions related to direct combustion of fuels in equipment owned or controlled by the Airport. Scope 2 refers to emissions associated with purchased electricity, and Scope 3 emissions are those generated by others over which the Airport has only indirect control. Examples of Scope 3 emissions include landfill emissions that occur offsite, passenger and employee travel, and tenant/airline emissions.

Globally, the aviation industry accounts for 12% of all transportation emissions and 2.1% of total emissions according to the 2023 County of Sonoma Greenhouse Gas Inventory Report[2]. Many airports have established GHG emissions reduction goals, which could be expressed as a percentage reduction relative to their baseline, or a goal to achieve carbon-neutrality by a certain date. Airport GHG reduction goals are typically calibrated to align with relevant county, state and industry goals. The Airports Council International (ACI) Airport Carbon Accreditation (ACA) program is a global carbon management program that recognizes the efforts of airports in reducing their carbon emissions. The program has seven levels of certification and supports airports of all sizes in their carbon reduction journeys. Globally, over 550 airports have been certified under the ACA program, with 46 airports accredited in the US as of June 2024. STS is not currently involved in the ACA program.

#### *4.1.3.1 Guidance and Background*

In November of 2021, the FAA published the United States Aviation Climate Action Plan, which presented a strategy for achieving net-zero emissions by 2050. The FAA Airport Sustainability Planning Program offers Airport Improvement Program (AIP) grants to airports, which can be used for developing GHG inventories and emission reduction initiatives among other things. The Voluntary Airport Low Emissions (VALE) and Zero Emissions Vehicle and Infrastructure Pilot (ZEV) programs also provide AIP grants to airports for certain eligible air quality projects.

California Governor Gavin Newson recently signed the California Climate Commitment, a billion-dollar investment in climate action. This climate legislation includes Carbon Neutrality Assembly Bill 1279, which establishes the goal for California to achieve statewide neutrality no later than 2045. Carbon neutrality means that any emissions produced must be offset or sequestered, whereas net-zero carbon means there is no production of emissions in the first place.

[2] County of Sonoma Greenhouse Gas Inventory Report (2023)

The County of Sonoma has adopted even more aggressive climate and emissions goals, stating that the County hopes to achieve carbon neutrality by 2030. The County established the Climate Action and Resiliency Division within the County Administrator's Office, and the Sonoma County Board of Supervisors declared a climate emergency in 2019.

#### *4.1.3.2 Baseline Observations*

As a County asset/operation, STS was included in the County of Sonoma Greenhouse Gas Inventory Report (2017, 2019, 2021). STS was identified as one of the top five emissions producers of County facilities in electricity and natural gas emissions. In order to fully understand the emissions sources at STS, a full accounting of Airport emissions sources at the individual facility level is needed. RS&H has requested, but not received this data from the County.

## 4.2 Materials Management

The management and disposal of waste at an airport impacts finances, operations, environmental well-being, and the airport's relationship with the community. Enhancement of airport recycling, reuse, and waste reduction is a primary focus for airport planning. The following sections summarize regulatory framework for solid waste, recycling, and composting and provide baseline data for each category. **Figure 8** shows the most preferred methods for addressing waste reduction, with source reduction and reuse being most ideal, and recycling and composting following.

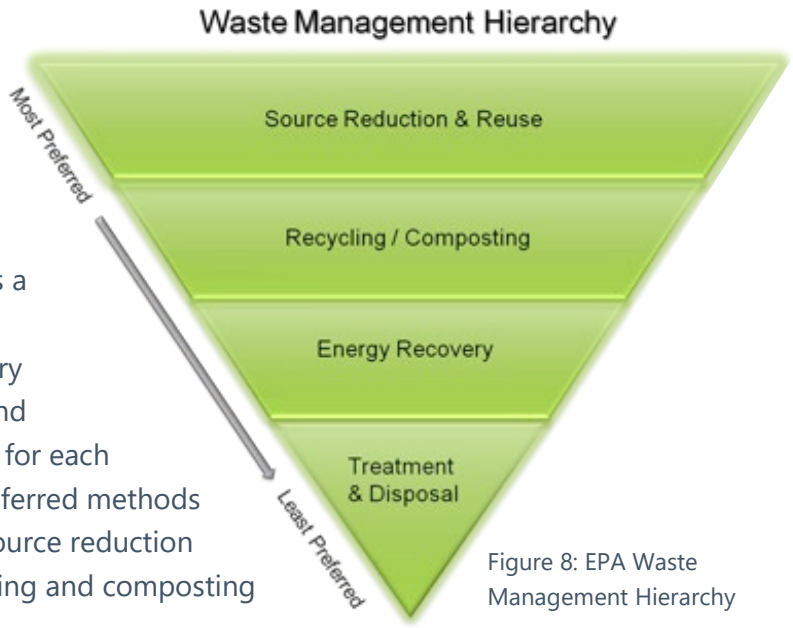



Figure 8: EPA Waste Management Hierarchy

### SOLID WASTE

Municipal solid waste (MSW) at an airport generally consists of everyday items which can be legally disposed of in a landfill or equivalent state-permitted facility. Waste is generated through most aspects of day-to-day operations, including office work, vehicle operation and maintenance, operation of facilities, construction, and services provided to customers.

### RECYCLING

Materials accepted by the recycling hauler from an airport include various types of plastics, such as PET (polyethylene terephthalate) bottles, HDPE (high-density polyethylene) containers, and LDPE (low-density polyethylene) plastic bags. Aluminum cans, steel cans, and glass bottles are

accepted for recycling as well as paper products, such as newspapers, magazines, cardboard, and office paper.

**COMPOST**

Composted or organic materials at an airport generally consist of food scraps, such as fruit and vegetable peelings, coffee grounds, tea bags, and leftover food items. Paper products, such as napkins, paper towels, and cardboard containers, may also be composted in some cases.

#### *4.2.1.1 Guidance and Background*

The significance of materials management was identified by the FAA in the FAA Modernization and Reform Act of 2012. Section 133 of the Act requires airports undertaking a master plan to also complete a recycling plan that includes and addresses the following:

- Minimization of solid waste generation
- Operational and maintenance requirements of the waste management program
- Review of waste management contracts
- A solid waste audit
- Feasibility of solid waste recycling
- Potential cost savings from changes or revenue generation

In 2013, the FAA prepared and published Recycling, Reuse and Waste Reduction at Airports: A Synthesis Document to assist airports in the development of these recycling programs. This guidance document outlines types and sources of airport waste and provides direction on establishing a comprehensive waste reduction and recycling program.

In August of 2021, the Sonoma County Board of Supervisors adopted the "Zero Waste Resolution," which has the goal of achieving zero waste in Sonoma County by 2030, in alignment with the Climate Action and Resiliency pillar of the County's Five-Year Strategic Plan. This resolution does not require specific goals to be met, but provides a framework for organizations and businesses to pursue waste reduction strategies. The County of Sonoma defines "zero waste" as reducing landfill disposal by over 90%, meaning that only 10% of total waste produced can be sent to landfill. The remaining 90% may be disposed of via alternative methods such as recovery, reuse, recycling, or composting. It should be noted that sustainable procurement is an important element of waste management since it can reduce the amount of waste materials inherent in packaging.

**RECYCLING**

Recycling regulations present significant challenges for airports and other large institutions. These regulations often vary by region and are subject to frequent updates, making compliance a complex and dynamic endeavor. Airports must contend with sorting requirements, acceptable

materials, and contamination standards, all of which can impact the efficiency and effectiveness of their recycling programs.

California Assembly Bill 341 – Mandatory Commercial Recycling Law, effective in July, 2012, requires commercial organizations who produce more than four cubic yards (CY) of solid waste per week to recycle. STS produces approximately 22.5 CY of waste per week, exceeding the four CY threshold. Businesses are required to self-haul recycling to a facility, sign up for a recycling service, or to make other arrangements for the pickup of recyclable materials.

**COMPOST**

California Senate Bill 1383 was signed into California law in 2016 and was aimed at establishing statewide greenhouse gas emission reduction goals specific to waste. The Airport is required to subscribe to an organics collection service, provide organics containers, annually provide educational information to tenants and staff regarding organics separation, and conduct periodic inspections of organics containers. As the most aggressive waste reduction law in California, enforcement is a significant concern and penalties for non-compliance may total up to $500 for major violations. The following goals related to organic waste were established:

1. By 2025, reduce the amount of organic material disposed in landfills by 75% from the 2014 level.
2. By 2025, no less than 20% of edible food currently disposed of must also be recovered for human consumption.

California Assembly Bill 1826 – Mandatory Organics Recycling Law also requires businesses and government entities who produce more than four cubic yards of solid waste per week to arrange for composting. The Airport is meeting these regulations.

#### *4.2.1.2 Baseline Observations*

STS currently has waste stations with landfill, recycling, and compost options located across the Airport, which provide passengers and staff the opportunity to decide whether their waste is meant to go to landfill, recycling, or organic (i.e., compost). STS is enrolled in a waste disposal contract with Recology, which provides waste services for the Airport for a monthly fee along with included recycling and compost services. ABM provides contracted janitorial services to STS. During the County's Waste Audit, it was noted that janitorial services were taking the organic waste from the receptacles and placing it in the landfill stream, and this observation has been anecdotally confirmed by STS staff. It was observed during the County's Waste Audit that although the Airport is currently enrolled in an organic service program with Recology, the service bins did not show signs of recent use.

The Airport is estimated to generate 11,592 cubic yards (CY) of solid landfill waste annually. Detailed waste generation data for STS based on measured haul-off weights and material types was not available. RS&H estimated waste generation at the Airport from dumpster volumes in

CY and pickup frequency. The Airport has four 4-CY trash dumpsters, four 4-CY recycling dumpsters, and one 2-CY compost dumpster. However, there is a discrepancy between the containers on site and the containers which the Airport is being invoiced for. Based on Recology invoices provided by Airport staff, two six-CY dumpsters of solid waste are collected bi-weekly, with one 96-gallon dumpster collected weekly. Dumpsters were assumed to be 75% full at the time of pickup based on observational data from Airport staff. The Airport provided invoices for the full year of 2022, and based off the monthly bills, STS pays approximately $46,100 annually for their waste disposal services.

The County of Sonoma completed a Zero Waste Audit and Characterization Study (ZWACS) in 2023 to understand the current waste levels and conditions of all County facilities. The composition of STS's waste can be seen in the **Figure 9,** which shows that 99% of waste currently produced at the Airport has the potential to be diverted (either recycled or composted).

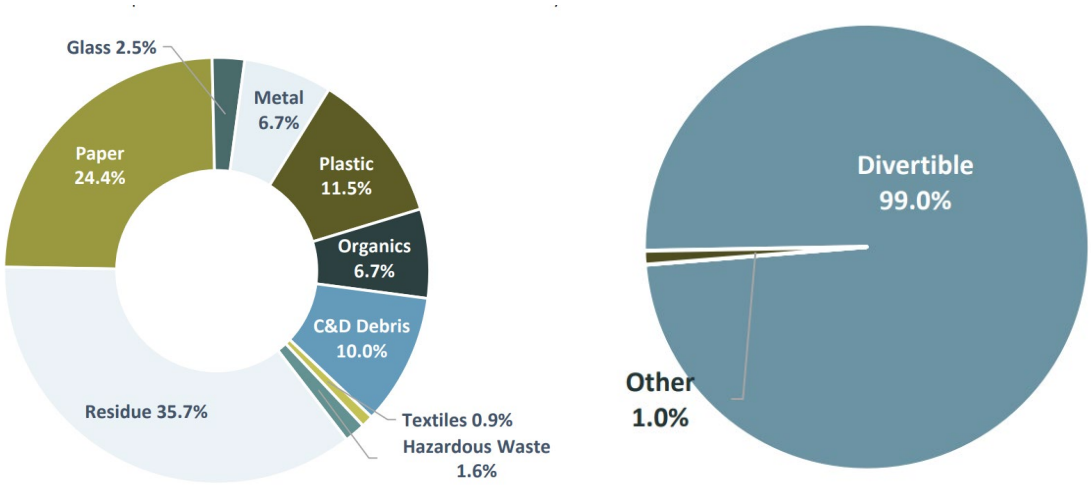



Figure 9: County of Sonoma Waste Characterization Study Results

Due to the range of stakeholders involved in Airport operations, such as airlines, concessionaires, and tenants, many STS stakeholders have differing levels of awareness and commitment to recycling protocols. This can lead to inconsistencies in recycling practices and hinder efforts to achieve high diversion rates. Although in compliance with State regulations, significant gaps in communication and implementation exist at the Airport. The Airport does not currently require a certain percent waste diversion for construction and demolition projects.

The Airport has been engaged in talks exploring the feasibility of housing a composting site on Airport property. This possibility would increase the ease at which organic waste produced at the Airport could be composted and would serve as an opportunity for reducing methane emissions and producing nutrient-rich soil for landscaping.

## 4.3 Environmental Stewardship

STS believes in taking care of the natural environment and actively manages compliance with regulations regarding air, water, and biodiversity. As the Sonoma County area continues to change and attract a wide variety of visitors, the Airport recognizes that there are new pressures on the natural environment. STS aims to support programs and initiatives that reduce the impact of development and elevate its role as a good steward of the environment.

### 4.3.1 Water

Water is an extremely important natural resource in California's North Bay region where STS is located. Sonoma County experiences significant impacts from extended periods of drought but can also be exposed to extreme rainfall at times. There are many environmental, public health and safety impacts associated with droughts, including impacts to vegetation, increased fire risk, and potential drinking water shortages. Water availability and water quality are both important considerations for STS.

#### *4.3.1.1 Guidance and Background*

Due to the risk of water shortages, California often enacts policies which restrict water use for landscaping and may result in overall increases in the cost of water. **Figure 10** below shows drought conditions within Sonoma Couty for the years 2018 to 2022. Levels of drought become increasingly severe as the number increases, with D0 representing when the region is going into or coming out of a drought, and D4 representing the most intense cases. Sonoma County experienced a significant period of drought from 2021 to 2022, as shown by the dark red color in **Figure 10**, with less severe levels of drought extending through the entirety of 2022.

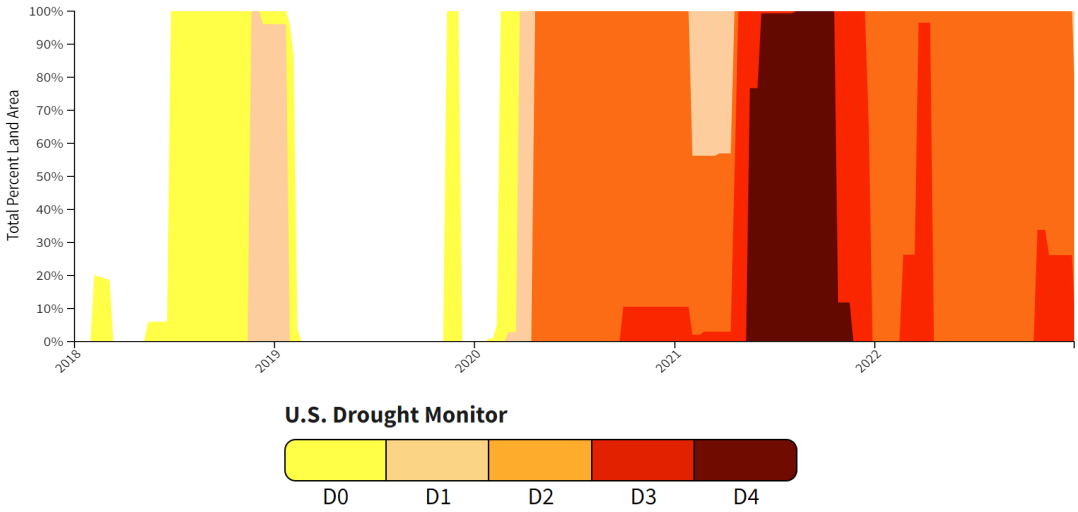



Figure 10: US Drought Monitor for Sonoma County, 2018 - 2023

Across California, the following water conservation measures are in place:

- No using potable water to wash sidewalks and driveways
- No allowing runoff when irrigating with potable water
- No using hoses with no shutoff nozzles to wash cars
- No irrigating outdoors during and within 48 hours following measurable rainfall
- No using potable water in decorative water features that do not recirculate the water

Water quality is also a concern for airports, as it is stringently regulated. The National Pollutant Discharge Elimination System (NPDES) is a permit program managed by the United States Environmental Protection Agency (EPA) that regulates point sources that discharge pollutants to Waters of the United States (WOTUS). The NPDES permit program was created in 1972 by the Clean Water Act and is largely administered at the state level. In California, this responsibility lies with the State Water Resources Control Board and the nine Regional Water Quality Boards.

In 1973, the Federal Aviation Administration (FAA) published advisory circular (AC) 150/5320-10, Environmental Enhancement at Airports - Industrial Waste Treatment, to address the subject of industrial waste management at airports. Subsequently in 1991 and 1997, AC 150/5320-15, Management of Airport Industrial Waste, was issued to provide additional guidance for waste management at airports and for the development of a Storm Water Pollution Prevention Plan (SWPPP) that focused on best management practices to eliminate, prevent, or reduce pollutants in storm water runoff. Airports generate industrial waste through daily activities such as aircraft and ground vehicle washing, deicing operations, fueling, and maintenance activities.

#### *4.3.1.2 Baseline Observations*

STS consumed 3,819,049 gallons of water in the baseline year of 2021, costing a total of $47,711.27. STS's water utility provider is the Town of Windsor, which provides the Airport with monthly bills representing its usage and charges. The town's utility rates are determined by the operating and maintenance costs of the system, capital and debt service costs, and the maintenance of reserves. Water usage rates have been steadily increasing – with Airport commercial and residential rates rising from $0.00676 to $0.00822 per gallon from 2021 to 2024, a 22% increase. On April 19, 2023 the water shortage restrictions adopted by the Windsor Town Council on July 21, 2021 were ended. In order to restrict wasteful water use, the Town had adopted a mandatory 20% reduction in water use for the extended drought period of 2021 to 2022.

**WATER CONSUMPTION AND COST (2018 – 2022)**

STS's water consumption shows slight but steady increases from 2018 to 2021, with a significant drop in water usage from 2021 to 2022, as seen in **Figure 11**. This drop in water consumption corresponds closely with the water restriction requirements implemented by the Town of Windsor, who is their utility supplier. Annual water costs saw an increase from the year 2021 to 2022 despite the decrease in consumption. This is likely related to utility rates increases as a result of extreme drought conditions in the area.

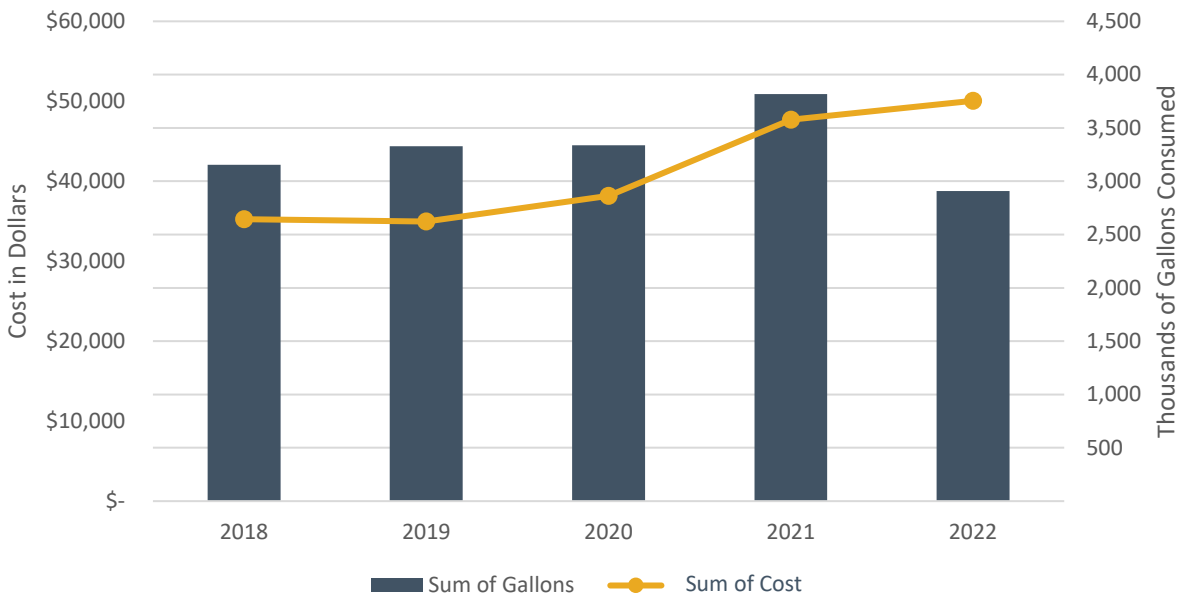



Figure 11: STS Annual Water Consumption and Cost, 2018 – 2022

Water consumption was also recorded at the facility level. **Figure 12** shows the water consumption by buildings for the year 2021. A large portion of water consumption occurred from the facility located at 2280-2292 Airport Boulevard, totaling 34% of overall Airport water consumption. This facility is utilized for office space and by airport tenants, but commonly experiences significant leaks increasing its water consumption. Less than 2% of water consumption resulted from the Helipad Irrigation, 2194 Airport Boulevard, Airport Control Tower, 2 Becker Boulevard, 152S Hangar, and 1 Becker Boulevard FIs, all of which are referred to as other in **Figure 12**.

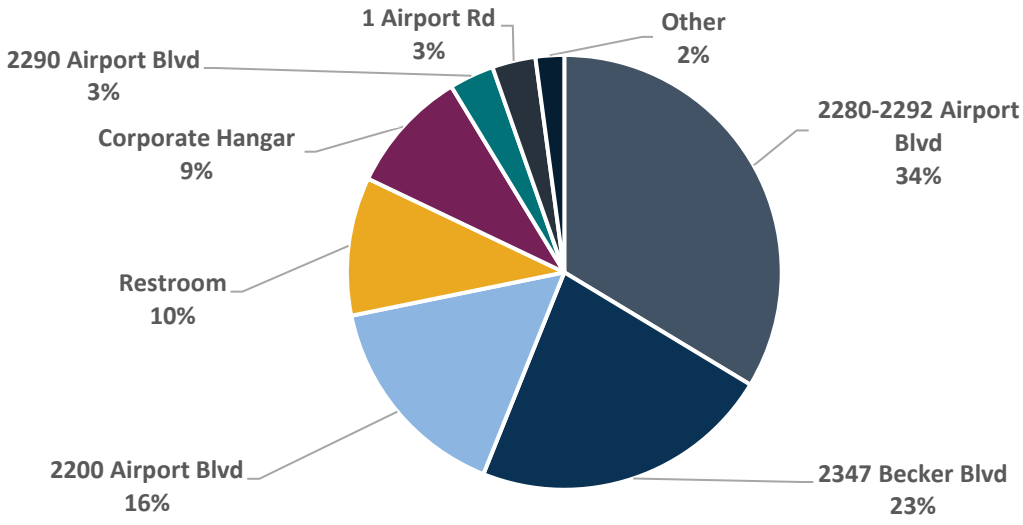



Figure 12: 2021 Water Consumption by Facility

**WATER QUALITY**

In September of 2022, STS revised its existing Stormwater Pollution Prevention Plan (SWPPP). This plan details the industrial activities taking place on site, the general drainage and stormwater flows, discharge points as water exits the Airport property, and best management practices (BMPs) for managing pollution. Potential sources of pollutants at STS include:

- Aircraft & vehicle fueling areas
- Aircraft & vehicle maintenance areas
- Aircraft service areas
- Aircraft & vehicle washing areas
- Aircraft deicing area

No significant spills occurred in the last five years at the Airport. The Airport has adopted a variety of minimum BMPs, including good housekeeping practices, preventative measures, spill and leak prevention response, material handling and waste management, and erosion and sediment controls.

## 4.3.2 Environmental Quality

Understanding existing natural resources at the Airport helps ensure future development projects and operations avoid any protected species, habitats or other resources and facilitate future National Environmental Policy Act (NEPA) activities. Environmental quality consists of aspects including air quality, natural resources, and climate. Another emerging aspect of environmental quality that airports face includes the human health and environmental concerns with the contaminant called PFAS (Per- and Polyfluoroalkyl Substances).

### *4.3.2.1 Guidance and Background*

The FAA requires airports to consider environmental factors and thoroughly evaluate airport development alternatives when developing Airport Master Plans. The FAA identifies environmental resource categories in FAA Order 1050.1F (*Environmental Impacts: Policies and Procedures*) and the 1050.1F Desk Reference. These categories include:

- Air quality
- Biological resources (including fish, wildlife, and plants)
- Climate
- Coastal resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous materials, solid waste, and pollution prevention
- Historical, architectural, archeological, and cultural resources
- Land use
- Natural resources and energy supply

- Noise and compatible land use
- Socioeconomics, environmental justice, and children's environmental health and safety risks
- Visual effects (including light emissions)
- Water resources

Not all categories will be directly addressed within this report, details on the remaining categories can be found in the *Charles M. Schulz – Sonoma County Airport (STS) Layout Plan Update: Appendix B Environmental Inventory*.

The EPA and individual states have taken action to protect the environment and hold polluters accountable for PFAS. The EPA anticipates continuing the progress on PFAS with several critical actions in 2024, such as finalizing national drinking water standards for several PFAS and taking final action to list certain PFAS as hazardous substances under CERCLA, the nation's Superfund law. The agency also expects to issue guidance on destroying and disposing of PFAS, to finalize methods to monitor for PFAS in a wide range of media, and to propose rules designating certain PFAS as hazardous constituents under RCRA (Hazardous Waste Regulations).

#### *4.3.2.2 Baseline Observations*

**AIR QUALITY**

The EPA sets National Ambient Air Quality Standards (NAAQS) which establish appropriate levels of harmful air pollutants for public health. California maintains more stringent standards than the NAAQS to which the County must adhere. Sonoma County has been designated by the Bay Area Air Quality Management District (BAAQMD) as nonattainment for the 1-hour and 8-hour standards for ozone (O3), the annual arithmetic mean and the 24-hour standards for coarse particulate matter (PM10), and the annual arithmetic mean standard for PM2.5. The County is in attainment for all other criteria pollutants.

**NATURAL RESOURCES**

According to the Sonoma County Airport (STS) Layout Plan Update - Appendix B Environmental Inventory, vegetation types identified and mapped on the Airport consist of non-native grassland/ruderal, seasonal wetland, stream, pond, freshwater marsh, willow scrub/woodland, riparian woodland, oak woodland, and oak trees. The Airport contains several biological preserves, established by Sonoma County, that support vernal pools and other seasonal wetland habitats as well as stands of riparian and oak woodlands.

The U.S. Fish and Wildlife Service (USFWS) identified eight plant species and three animal species, listed as Threatened or Endangered under the federal ESA, as having potential range (current or historic) within the Airport vicinity. The California Natural Diversity Database (CNDDB) identified 18 plant species and 11 animal species that may be present on or near the Airport.

### 4.3.3 Land Use

The development of land that is incompatible with airports and aircraft noise can affect the safe and efficient operation of aircraft, as well as the ability of surrounding communities to accommodate growth. Some common land uses, such as residential, schools, and churches fall into this incompatible category. Most commercial and industrial uses, especially those associated with the Airport, are compatible with aviation.

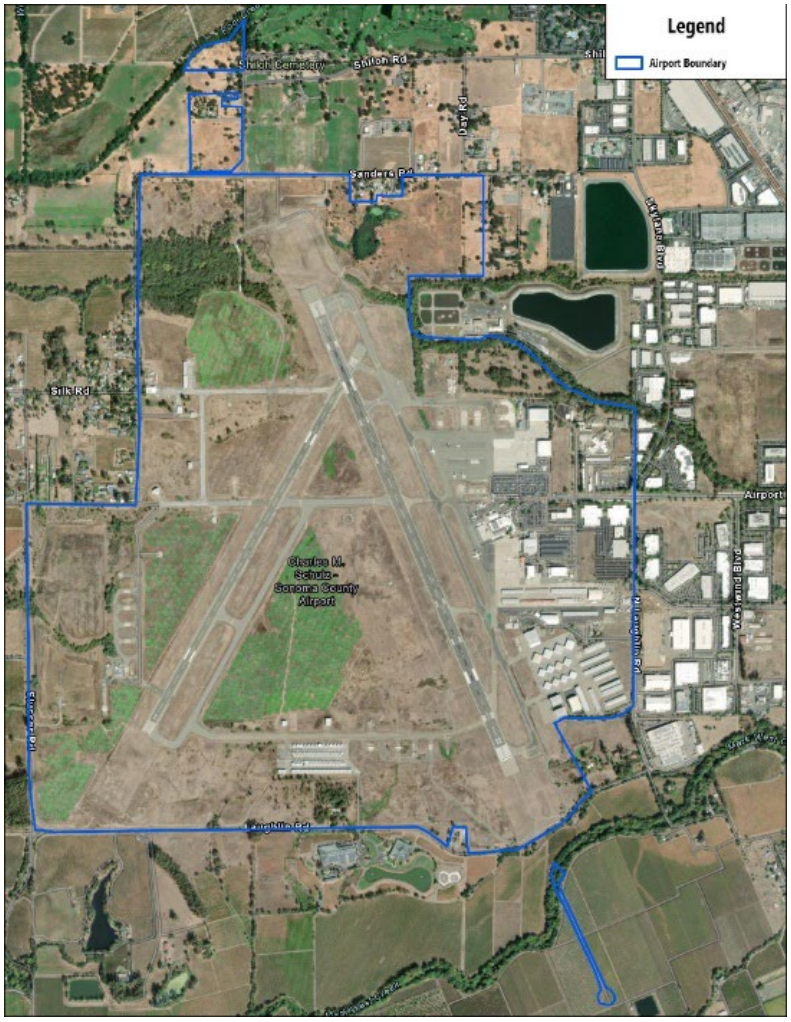



Figure 13: Airport Land Use [Sonoma County, 2019; Town of Windsor, 2019; RS&H 2021; Mead & Hunt, 2021]

#### *4.3.3.1 Guidance and Background*

According to the FAA guidance, *Land Use Compatibility and Airports, a Guide for Effective Land Use Planning*, airport master plans should be used with local comprehensive land use plans to evaluate new development in the vicinity of the airport. Additionally, local land use development should take airport plans into consideration. The following local plans are relevant to STS:

- Sonoma County General Plan 2020
- Town of Windsor's General Plan

#### *4.3.3.2 Baseline Observations*

The existing land use surrounding the Airport was surveyed to determine compatibility with Airport operations. The land use in immediate vicinity of the Airport, as shown in **Figure 13**, includes agricultural, residential, and commercial uses. The Sonoma County General Plan 2020 identifies planned land uses for the unincorporated areas immediately surrounding the Airport as follows:

- North of the Airport planned uses include Diverse Agriculture (one dwelling unit per 10 to 60 acres) and Rural Residential uses (one dwelling unit per 2.5 to five acres).
- South of the Airport planned land uses include Land Intensive Agriculture (one dwelling unit per 20 to 100 acres) and Rural Residential (one dwelling unit per four acres).

The Town of Winsor's General Plan identifies planned land uses for the incorporated areas surrounding the Airport as follows:

- Low-Medium Density Residential (three to six dwelling units per acre) and Medium Density Residential (five to eight dwelling units per acre).

## 4.4 Finance and Governance

This focus area includes funding sources, policies, procurement and resilience, which are discussed in the sections below.

### 4.4.1 Funding

STS operates as a self-supporting Enterprise Fund within the County Department of Public Infrastructure and under the jurisdiction of the Federal Aviation Administration (FAA). STS is both a general aviation facility, serving private planes and business jets, and a commercial airline facility with scheduled air service.

#### *4.4.1.1 Guidance and Background*

There are a number of federal funding opportunities currently and previously available for airports as described below (*not an exhaustive list*).

***Federal Aviation Administration (FAA) Airport Improvement Program (AIP) Grants***

AIP funding is available for infrastructure development, planning, environmental activities, and other eligible purposes described in the AIP Handbook. There are also specific grant opportunities available through AIP that relate to sustainability projects. These include but are not limited to the Voluntary Airport Low Emissions (VALE) Program and Zero Emissions Vehicle and Infrastructure (ZEV) Program, both of which are funded through the Noise & Air Quality Set-Aside and thus do not compete with typical AIP projects. The former can be used for low-emissions equipment and infrastructure such as pre-conditioned air (PCA), ground power units (GPUs), and electric ground support equipment (eGSE) charging stations (if paired with the promised procurement of eGSE by an airport's airline partners[3]). The ZEV Program can be used for the procurement and installation of vehicle and charging/fueling infrastructure if zero-emissions, which is most often electric vehicles or shuttles. All AIP grants are subject to Buy

[3] An airport sponsor could also pursue funds for the eGSE but most sponsors do not own and operate a significant number of GSE.

America/Build America, Buy America requirements, which can be challenging to meet for certain vehicles.

While not part of the Set-Aside, the FAA has also established several other programs that can be pursued by an airport to advance its sustainability goals such as the Energy Efficiency of Airport Power Sources Program (often referred to as the "Section 512" Program) and the Energy Supply, Redundancy, and Microgrids Program. While these programs would typically compete with other AIP-eligible projects that may be of higher priority, there have been two rounds of supplemental discretionary funding for Fiscal Year 2022 and 2023 that focused on these sustainability programs and their underlying objectives. See table below regarding existing FAA programs that were eligible for dedicated funding as part of the FAA's FY2022 Supplemental Discretionary Grants, titled the Airports Climate Challenge:[4]

The 2024 FAA Reauthorization includes notable changes to AIP funding. For example, it authorizes $200 million annually between FY 2025 and 2028 for a new Airport Safety and Resilient Infrastructure Discretionary Program. This program is likely to replace the recent supplemental discretionary grants previously discussed and will focus on: 1) reducing runway incursions or increasing runway or taxiway safety; and 2) increasing resilience of infrastructure against changing weather conditions, flooding, and other hazards. The Reauthorization also removes certain conditions of VALE grants including the requirements that airports be located in non-attainment or maintenance areas for the National Ambient Air Quality Standards (NAAQS) to be eligible and that they obtain Airport Emission Reduction Credits (AERCs) for their projects, providing more flexibility for interested sponsors. The additional funding components of the Reauthorization are subject to the Appropriations process, which as of September 2024 is still pending.

***Bipartisan Infrastructure Law (BIL) Airport-Related Funding***

The Infrastructure Investment and Jobs Act (IIJA) or Bipartisan Infrastructure Law (BIL) passed in 2021 included many provisions that airports may be able to leverage, but the most relevant are the Airports Terminal Program (ATP) discretionary grants for terminal development and associated projects, and the BIL Airport Infrastructure Grant (AIG) entitlement funds. The ATP includes $1 billion dollars in available funds annually for five years. As of September 2024, there is one remaining round of funding available.[5] Solicitations will likely open in the summer or early fall of 2025 based on the most recent rounds. There is no solicitation process for the AIG grants since these are distributed formulaically.

[4] Table of Relevant FAA Funding Programs | Federal Aviation Administration

[5] Bipartisan Infrastructure Law - Airport Terminals Program | Federal Aviation Administration (faa.gov)

***COVID-19 Response Funds***

Several grants were developed in response to the COVID-19 pandemic allowing airports to receive relief funding aimed at aiding operating expenses and enhancing facilities to mitigate the spread of the virus. While both programs are currently inactive, these included:

- Coronavirus Aid, Relief, and Economic Security (CARES) Act
- Coronavirus Response and Relief Supplemental Appropriations (CRRSA) Act

***Inflation Reduction Act***

The Inflation Reduction Act (IRA) passed in 2022 consists of a wide range of provisions that may benefit airports. Those most likely to be pursued include:

- The Fueling Aviation's Sustainable Transition (FAST) discretionary grant program that is supporting the deployment and expansion of Sustainable Aviation Fuels (SAF) and the development of low-emission aviation technologies. Awards were announced in August of 2024.[6]
- Extensions, changes, and expansions to the Investment Tax Credits (ITC) and Production Tax Credits (PTC) for renewable energy, energy storage, and other related solutions. The IRA created a direct pay provision that allows non-taxable entities like airport sponsors to leverage the ITC and PTC, whereas they historically had to rely on other arrangements like Power Purchase Agreements (PPAs) to indirectly benefit from these credits.

Collectively, the funding avenues discussed above play a vital role in supporting the growth, maintenance, safety, sustainability, and resilience of airports throughout the United States.

#### *4.4.1.2 Baseline Observations*

STS has a diversified revenue stream. It collects revenue from tenants, through ground leases, t-hangar lease revenue, commercial air travel, and corporate air travel. Revenue growth and diversification, particularly aeronautical revenue growth, is a focus area for STS. Continuing to support the general aviation and corporate services sectors operations at STS will allow the Airport to maintain its resilience to economic downturns. During the COVID-19 pandemic when commercial air travel activities saw severe decreases and closure, the revenue generated from STS's alternative services allowed the Airport to remain operational and financially sound. The Airport does not currently have a specific category for sustainability funding within its budget, rather sustainability initiatives are funded by general funds or grants.

STS has taken advantage of many federal funding opportunities, with all funding received from 2018 – 2022 summarized in **Table 4**. While several of these grants were for COVID-19 relief, some were used for Airport improvements, such as the terminal improvement and modernization project. There are also several Federal Grants pending award decisions which may affect future projects.

[6] Fueling Aviation's Sustainable Transition (FAST) Grants | Federal Aviation Administration (faa.gov)

Table 4: Federal Funding Received 2018 – 2022, *Data taken from FAA website

| Year | Total Yearly Funding* | Description of Funding | Federal Funding Received (millions)* |
|---|---|---|---|
| **2018** | $1,800,000 | Apron Reconstruction | $1.2 |
| | | Update Airport Master Plan Study | $0.6 |
| **2019** | $1,200,000 | Apron Reconstruction | $1.2 |
| **2020** | $42,200,000 | Terminal Improvement | $22.5 |
| | | Coronavirus Aid, Relief, and Economic Security Act (CARES) | $19.7 |
| **2021** | $5,100,000 | Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA) | $2.2 |
| | | Construct/Extend/Improve Safety Area | $1.4 |
| | | Acquire Aircraft Rescue & Fire Fighting Equipment | $1.2 |
| | | VALE Infrastructure | $0.2 |
| | | Conduct or Update Miscellaneous Study | $0.1 |
| **2022** | $7,200,000 | Reconstruct Taxiway | $3.8 |
| | | American Rescue Plan Act (ARP) | $3.2 |
| | | Small and Large Concessions | $0.25 |

## 4.4.2 Procurement

In an era defined by heightened environmental awareness and social responsibility, procurement has emerged as a pivotal strategy for aligning purchasing practices with sustainability goals. Sustainable procurement prioritizes not only cost-effectiveness and quality but also the environmental and social impacts of goods and services throughout their lifecycle. By integrating principles of sustainability into procurement processes, organizations can mitigate environmental degradation, promote social equity, and foster economic resilience.

### *4.4.2.1 Guidance and Background*

The County of Sonoma offers a Green Business Program, as a subset of the statewide California Green Business Network. The mission of this program is to help businesses operate sustainably and profitably, and it provides registered businesses with free technical assistance, access to rebates, public promotional opportunities, and are seen as leaders within the community. This program could be a potential avenue to engage Airport tenants in sustainability by encouraging their participation.

The County of Sonoma also has a Green Purchasing Policy, which was adopted by the Board in September of 2006 and was created by the Sonoma County Waste Management Agency. This policy asks that County departments include environmental considerations along with the typical concerns of price, performance, and availability when making purchasing decisions. The County recognizes certain accredited organizations as environmentally preferable, including Green Seal, Energy Star, Electronic Product Environmental Assessment Tool (EPEAT), Power

Smart, International Organization for Standardization (ISO) 14000, and the Association of Bay Area Governments (ABAG), a listing of green businesses. The policy lists the following environmental attributes as items for consideration:

- BioBased
- Biodegradable
- Carcinogen-free
- Chlorofluorocarbon (CC)-free
- Compostable
- Durable
- Energy efficient
- Heavy metal free (e.g., no lead, mercury, cadmium
- Less hazardous
- Low volatile organic compound (VOC) content
- Low-toxicity
- Made from rapidly renewable materials
- Persistent, bio accumulative toxic (PBT)-free
- Recyclable
- Recycled content
- Reduced greenhouse gas emissions
- Reduced packaging
- Refurbished
- Resource efficiency
- Reusable
- Upgradable
- Water efficient

#### *4.4.2.2 Baseline Observations*

STS is currently registered as a Sonoma County Green Business under the existing County program. They also have an existing Airport Environmental Policy, which states the following procurement policies in alignment with The County of Sonoma's Green Purchasing Policy:

- Remanufactured and refilled toner cartridges
- Office paper with 100% recycled content or 30% + FSC certified
- Bathroom and kitchen paper with 30% post-consumer recycled content
- Products with the least packaging
- Recycled-content-containing office furniture and supplies
- Refillable bottles, canvas bags, and reuseable to-go containers
- LED lighting and Energy Star appliances and electronic
- Water efficient toilets, showerheads, and faucet aerators

Although STS is registered as a Green Business, it does not have any existing sustainable procurement policies or requirements for its tenants. The Airport may be in the position to leverage its existing partnerships and require the businesses who provide goods and services to the Airport to become registered green businesses as well.

### 4.4.3 Resilience

The efficient operation of airports is not only essential for global connectivity but also critical for economic vitality and regional development. Airports face multifaceted challenges, ranging from volatile market conditions to environmental uncertainties and regulatory pressures. Planning and resilience strategies that integrate finance and governance considerations are paramount for ensuring the long-term sustainability and adaptability of airport infrastructure. Nationally, many airports are pursuing Envision verification for infrastructure development projects, which places high value on incorporating resilience throughout design. Envision is a framework developed by the Institute for Sustainable Infrastructure that encourages systemic changes in

the planning, design, and delivery of sustainable, resilient, and equitable civil infrastructure. However, STS Airport is currently not pursuing any Envision projects.

As a state impacted by a variety of significant climate threats, California is at the forefront of forward-looking resilience planning. In the coming years, California will experience changes in regional temperature, extreme heat, the number of cooling and heating days, precipitation, and drought.

#### *4.4.3.1 Guidance and Background*

The FAA and the Department of Transportation (DOT) Volpe Center are involved in an ongoing project to identify opportunities and best practices related to climate resilience. The initiative aims to develop a tool called the Airport Resiliency Analysis Framework (ARAF), which will help airports incorporate resilience analyses into their airport planning and funding. It is becoming more essential to strategically allocate funds toward investments that will improve resilience at the airport.

Current Airport facilities are subject to CALGreen building requirements, some of which incorporate resilience. Items such as weather protection, moisture control, and flood protection enable the Airport to continue operations during severe storm events and as climate changes cause increased humidity.

#### *4.4.3.2 Baseline Observations*

STS updated its Airport Layout Plan (ALP) in 2023, which incorporates forecasts of future demand at the Airport and uses that data to establish a purpose and need for proposed projects at STS. The COVID-19 pandemic caused significant decreases in the number of passenger enplanements at STS, but due to its diversified revenue stream the Airport was able to maintain operations and cash flows. General aviation services remained in demand and helped offset revenues losses related to reduced passenger traffic.

In 2015, the North Bay Climate Adaptation Initiative (NBCAI) for the Sonoma County Regional Climate Protection Authority (RCPA) published a report titled Climate Ready Sonoma County: Climate Hazards and Vulnerabilities. This report provides an overview of natural hazards occurring in Sonoma County, as well as potential risks due to future climate change. The primary threats that emerged were hotter, drier weather with longer summers, more variable rain, and sea level rise. As the Airport continues to grow and expand (predicting three phases of growth, with annual enplanements predicted to double from 2018 to 2038), it is important to consider resilience when designing future infrastructure and facilities.

As the FAA continues its resilience study and the State of California develops resilience plans, the Airport may become subject to increased regulations related to resilience planning. The Airport has engaged in work to increase the resilience of its property to wildfires through the

management and removal of vegetation on its property, but has not yet engaged in formal resilience planning such as a Vulnerability Assessment or Adaptation Plan.

## 4.5 Social Responsibility

Not only do airports connect people with the rest of the world, but they also play a vital role in local communities. Many passengers and people in the Sonoma County community are directly or indirectly impacted by Airport activities, which reflect the Airport's reputation as a good steward and leader. As a result, STS must remain conscious of its cultural, environmental, and economic role in the local community. The Airport also has a responsibility to ensure that groups who have been historically underrepresented or subject to discrimination are treated fairly and encouraged to participate in decision making.

### 4.5.1 Employee Development

Social responsibility includes developing a positive internal environment that contributes to long-term organizational success. Internal social responsibility at STS focuses on aspects of employee retention, workforce development, and hiring practices. Fostering a culture which facilitates continuous growth and learning ensures that STS's workforce remains adaptable to evolving demands and feels satisfied in their roles. By prioritizing the well-being, growth, and engagement of employees, organizations can drive prosperity and contribute positively to society at large.

#### *4.5.1.1 Guidance and Background*

All workers in California are protected by labor laws including but not limited to rest and meal breaks, safe and healthy jobs, acting without retaliation, minimum wage and overtime pay, and benefits for injuries or unemployment. Sonoma County has an even higher minimum wage than is required by the state, at $18.10 per hour and will require all employers to meet this new wage standard by July 1, 2024.

The County of Sonoma aims to support employee work-life balance and a positive work environment through a variety of initiatives. A Sonoma County Telework policy was adopted in May of 2022, which allowed approximately 50% of permanent employees to participate in remote work, expanding their flexibility and work satisfaction. Human Resources also implemented a training program in 2023 designed to offer County employees a diverse selection of training and professional development opportunities. The four-tier training system includes tools and information for Tier 1: New Employee, Tier 2: Foundational, Tier 3: Emerging Leader, and Tier 4: Executive employees. The County of Sonoma has also established a goal to implement countywide strategies to recruit, hire, develop, promote, and retain County employees of color, produce an annual report card assessing progress, and update strategies as needed.

#### *4.5.1.2 Baseline Observations*

As a division of the Sonoma County Department of Public Infrastructure, STS is subject to County initiatives related to employee retention, workforce development, and hiring practices. The Airport currently has a staff of 22 full-time employees, with certain aspects of Airport operations, such as fleet, purchasing, accounting and finance, served by external roles within other County departments. Current Airport employees are provided with opportunities for flexible work arrangements and a comprehensive benefits package.

The Airport frequently employs temporary, extra-help workers, who are limited to an employment length of only one calendar year. Employees in this position must be off work for a period of three months before returning to work on an extra help basis. This structure of employment can present significant challenges to the Airport, as it takes time and effort to train new employees, and efficiencies are typically increased when an employee has time to become familiar with an organization over a longer period. The Airport has also cited issues with employee turnover at the Airport due to lack of growth opportunities and general staffing issues.

The Airport did not provide information on employee training, workforce development programs or employee retention data. Although the County provides training and development resources for all County employees, the number of Airport employees who have used this resource was not readily available. In the future, STS should remain cognizant of tracking any employee participation and maintaining ongoing retention data.

### 4.5.2 Community

Airports serve as vital hubs of connectivity, facilitating the movement of people and goods across the globe. Beyond their fundamental role in air travel, airports play a pivotal role in enhancing regional connectivity. As an organization that operates within the context of its surrounding community, airports must proactively engage stakeholders to address challenges and promote positive change. External social responsibility encompasses a broad spectrum of initiatives including noise mitigation, community engagement, stakeholder communication, and connectivity. STS is committed to being a positive contributor towards its surrounding community by driving meaningful impact beyond their immediate sphere of operation.

#### *4.5.2.1 Guidance and Background*

Aircraft noise is one of the primary community concerns related to the Airport, and noise impacts are highly regulated by the FAA. In 1981 the FAA adopted the Day Night Average Sound Level (DNL) as the primary method of determining community exposure to airport noise levels. The DNL is the 24-hour average sound level, with additional weight placed on operations occurring from 10:00 pm to 7:00 am. In California, the FAA accepts the Community Noise Equivalent Level (CNEL) which has additional weight for operations occurring between 7:00 pm

to 10:00 pm. STS uses CNEL to identify noise impacts to the surrounding community. Due to the Airport Noise and Capacity Act (ANCA), the Airport is not capable of regulating aircraft numbers, directly controlling flight tracks, or dictating time of day or type of aircraft operating. The FAA used the 65 CNEL noise contour to create a model of noise conditions that aims to prevent significant noise impacts on non-compatible land uses.

#### *4.5.2.2 Baseline Observations*

The Airport established a Noise Abatement Program in 1988 and makes every effort to promote procedures which minimize aircraft noise while maintaining safety. STS is in frequent discussions with its airlines and general aviation operators to provide guidance on noise sensitive areas surrounding the Airport. Through its "Good Neighbor" program, STS allows local community members to submit noise complaints and is currently undergoing an Approach Feasibility Study (AFS). STS hosted two community outreach workshops to provide a comprehensive overview of the AFS, authored by consulting firm Cignus, a transportation management and engineering company. The AFS is being completed to understand the current airspace and procedures serving STS, so that they can further study the viability and practicality of developing new procedure(s) or modifying existing ones. The study aims to ensure that the proposed new procedures (if any) meet safety, regulatory, operational, and technical requirements.

STS has been heavily involved in numerous initiatives that benefit the local community, ranging from sponsoring community events to organizing charitable campaigns. These efforts include:

- Being the title sponsor of the Charles M. Schulz-Sonoma County Airport Napa to Sonoma Wine Country Half Marathon & Rose 5k (starting in 2022, recurring annually)
- Hosting annual job fairs for the local community and providing onsite resume help
- Providing opportunities for community engagement through events such as chili cookoffs, girls in aviation days, and "yard sales"

Additionally, STS has public art at the Airport and continues to support artists around the world. In 2012, STS partnered with the Arts Council of Sonoma County and the Voight Family Sculpture Foundation to beautify the Airport and allow visitors to appreciate the unique cultural arts community of Sonoma County. The centerpiece, a 12-foot bronze sculpture, is pictured below.

STS is also home to many local concessionaires, including restaurants and shops such as Apple Space, Crush Wine Bar, Costeaux French Bakery, and Tap & Pour. Additional tenants at the airport include aviation and transportation related companies such as Groome Transportation, Helico Sonoma, Kaiser air - Santa Rosa Jet Center, North Coast Air, Propjet Aviation, Ram Aviation, Reach Air Medical Services, SP+ Airport Services, Sonoma Jet Center, and Vine Jet. Several non-profit and government services operate as partners to STS, including Café Foundation, Cal Fire Air Attack Base, Civil Air Patrol, Experimental Aircraft Association, FAA, Pacific Coast Air Museum, The Santa Rosa Ninety-Nines, and Trinity Technology Group.

The Airport has made progress in increasing accessibility and opportunities for public transportation. The Sonoma-Marin Area Rail Transit District (SMART) is a passenger rail service that connects towns and cities throughout the North Bay on its 45-mile route. In May of 2023, SMART launched a micro transit shuttle to provide first and last-mile connection between the closest rail stop and STS. This addition will allow users from across the North Bay to have easy and consistent access to the Airport, removing the hassle of Airport parking and decreasing transportation emissions through the use of public transit.

STS does not have a comprehensive communications and public outreach strategy, although they have engaged the public for projects such as the Approach Feasibility Study. Further details on tenants and customer service activities would be beneficial to gain a greater understanding of the Airport's external engagement. STS is not currently tracking ridership data of the SMART connect shuttle, but future tracking may provide an opportunity to quantify the benefits of increased public transit to the Airport.

### 4.5.3 Equity

Equity refers to an outcome in which the differences in health, well-being, and wealth are not attributable to race or ethnicity. It involves pointedly valuing the voices of people of color, low income, and underrepresented communities in order to hear their concerns and work with them to achieve specific outcomes. In many cases, communities who fall into these categories are not given the same opportunity to have their voices heard, which may lead to undesirable outcomes which perpetuate existing inequities. As a part of its five-year Strategic Plan, the County of Sonoma includes Racial Equity and Social Justice as one of its five key pillars. Underneath this pillar, the County establishes the following four goals:

1. Foster a County organizational culture that supports the commitment to achieving racial equity.
2. Implement strategies to make the County workforce reflect County demographic across all levels.
3. Ensure racial equity throughout all County policy decisions and service delivery.
4. Engage community members and stakeholder groups to develop priorities and to advance racial equity.

#### *4.5.3.1 Guidance and Background*

The County of Sonoma Department of Public Infrastructure has committed to providing opportunities for social and economically disadvantaged small businesses in their contracting opportunities. As a recipient of U.S. Department of Transportation (DOT) Federal Assistance funds (through the FAA), the Airport must develop a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the U.S. DOT, Title 49, Code of Federal Regulations (CFR), Part 26. A DBE program is meant to ensure that minority-owned, women-owned and other small businesses have the opportunity to fairly compete for contracts at the Airport. The FAA also mandates that airports have Airport Concessions Disadvantaged Business Enterprise (ACDBE) goals. As a Federally funded agency, the Airport must adhere to Title VI guidelines, which prohibit discrimination based on race, color, or national origin.

#### *4.5.3.2 Baseline Observations*

By prioritizing collaboration and engagement with disadvantaged businesses and communities, airports can leverage their position as economic engines to drive equitable growth and opportunity for all stakeholders. To meet Federal regulations and positively impact the community, STS has set their overall triennial DBE participation goal for 2022-2024 at 5.6%. In accordance with 49 CFR Part 23, STS has also announced ACDBE goals for the years 2022 - 2024. STS ACDBE goal for non-car rental concessions is 1.7%, and for car rental concessions it is 1.2%.

As an entity owned and operated by the County, it is extremely important for STS to remain aligned with its Strategic Plan. Future policies and commitments regarding equity and inclusion will allow STS to support the County's mission and will encourage organizational changes to address inequities at the Airport.

# 5 Benchmarking

The RS&H Team benchmarked STS's baseline performance against peer aviation organizations to provide a meaningful comparison based on characteristics identified in collaboration with STS staff. Airports identified for benchmarking were determined based on characteristics such as similar operating features, recognized leadership in sustainability, and similar regulatory environments. The RS&H Team analyzed benchmarking results to develop recommendations for sustainability goals, projects, and policies.

## 5.1 Airports and Stakeholders Identified for Benchmarking

Peer airports were selected with regard to availability of data, size, operational characteristics, sustainability leadership, and similarity to the Sonoma County Region (community values and regulatory environment). Airport selection was also discussed with the Airport to receive input on selections prior to benchmarking efforts. Eight U.S airports were chosen for benchmarking: San Francisco International Airport (SFO), Fresno Yosemite International Airport (FAT), San Lus Obispo County Regional Airport (SLO), Santa Barbara Airport (SBA), Bert Mooney Airport (BTM), Jackson Hole Airport (JAC), Tampa International Airport (TPA), and San Diego International Airport (SAN), shown on a map in **Figure 14. Table 5** demonstrates the relevance of each Airport in the benchmarking effort.

Table 5: Benchmarked Airport Characteristics

| Airport | Similar Size | Leader in Sustainability | Community Similarities | Regulatory Environment |
|---|---|---|---|---|
| San Francisco International Airport (SFO) | | ✓ | | ✓ |
| Fresno Yosemite International Airport (FAT) | | ✓ | ✓ | ✓ |
| San Lus Obispo County Regional Airport (SLO) | ✓ | | | ✓ |
| Santa Barbara Airport (SBA) | ✓ | | | ✓ |
| Bert Mooney Airport (BTM) | ✓ | | ✓ | |
| Jackson Hole Airport (JAC) | ✓ | ✓ | ✓ | |
| Tampa International Airport (TPA) | | ✓ | | |
| San Diego International Airport (SAN) | | ✓ | | ✓ |

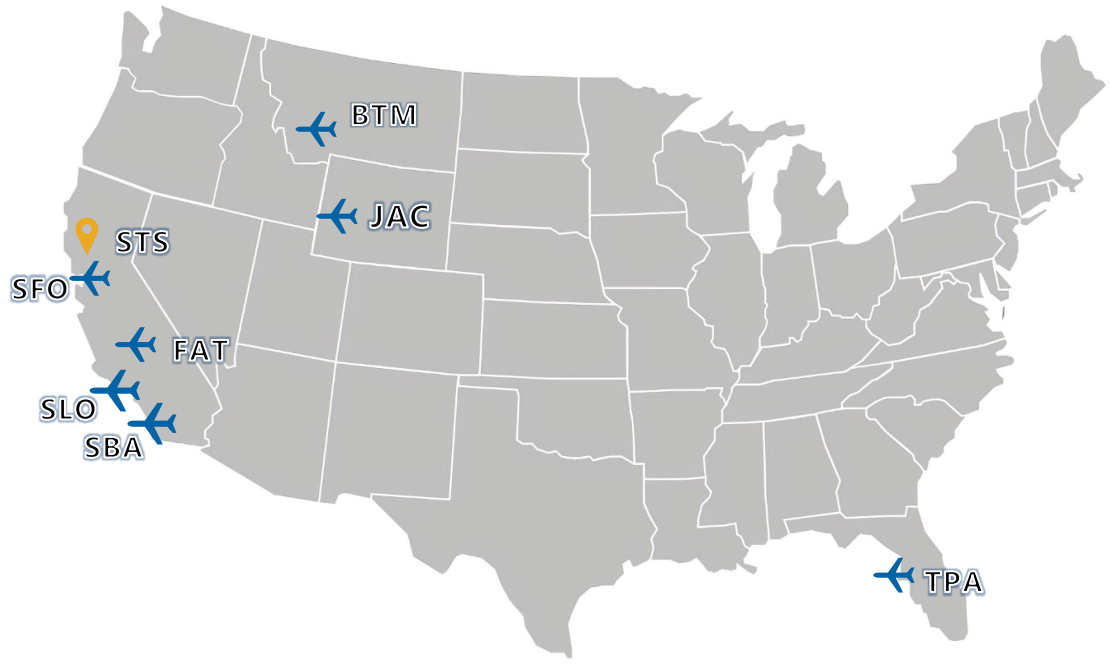



Figure 14: Selected Airports for Benchmarking

RS&H reviewed the Sustainable Recovery Best Practices document (2021) developed by the Airports Council International, which provides high level recommendations for sustainability best practices at Airports. **Table 6** provides a general assessment of benchmarked airports' progress toward establishing goals and initiatives for each of the focus areas identified in the STS baseline report. Green represents leadership or strength within the category, yellow represents initial goals or progress, and red represents areas which the airport is lacking.

Table 6: Focus Area Progress by Benchmarked Airports

| | Energy & Emissions | Materials Management | Environmental Stewardship | Finance and Governance | Social Responsibility |
|---|---|---|---|---|---|
| **Sonoma County Airport (STS)** | | | | | |
| San Francisco International | | | | | |
| Fresno Yosemite International | | | | | |
| San Luis Obispo County Regional | | | | | |
| Santa Barbara | | | | | |
| Bert Mooney | | | | | |
| Jackson Hole | | | | | |
| Tampa International | | | | | |
| San Diego International | | | | | |

## 5.2 Mission and Vision

The Project Team researched airport sustainability mission and vision statements and presented examples to STS stakeholders and staff at the Visioning Workshop. Mission and vision statements preferred by the group had clear ties to the organization's values. Participants did not perceive statements which were general, non-specific, formulaic, overly lengthy, or not tied to values as strong examples. **Table 7** shows statements which were seen as good examples for developing mission and vision statements for STS's sustainability program.

Table 7: Mission and Vision Benchmarking

| Airport | Mission | Vision |
|---|---|---|
| Fresno Yosemite International Airport (FAT) | Plan, develop, manage, and operate safe, sustainable, cost-effective, and attractive aviation facilities; provide exceptional services; and promote the economic interests of the San Joaquin Valley. | Be the aviation industry leader in all that we do and be the premier choice for air travel. |
| Bert Mooney Airport (BTM) | Our mission is to operate the Bert Mooney Airport as a safe, efficient, and profitable business in a manner that promotes the region's prosperity and protects its quality of life. | Our vision for the Bert Mooney Airport is to become the hub of Southwest Montana, and a front-runner in sustainability in the Butte-Silver Bow region. |
| Jackson Hole Airport (JAC) | The Jackson Hole Airport Board is dedicated to becoming an industry leader in environmental stewardship, climate change mitigation, resilient solutions, and overall sustainability. | To be a globally recognized leader delivering a unique guest experience derived from our rich western history, an unwavering commitment to environmental stewardship, and a culture based on people helping people. |

## 5.3 Energy and Emissions

Airports are actively working to reduce their carbon footprint through innovative energy management and emission reduction strategies. Electrification of airport infrastructure and operations has been accelerating rapidly as airports attempt to mitigate their scope 2 emissions, with rising concerns regarding electric grid capacity and microgrid feasibility studies on the rise. Improvements and novel technologies to improve operational efficiency will further decrease energy consumption, reduce emissions, and save costs. Many airports participate in the ACI Airport Carbon Accreditation program, including SAN, SLO, SFO, and TPA. Many airports have also engaged in projects to increase sustainable technologies and renewable energy on site. Several of the benchmarked airports have made significant progress in the energy and emissions focus area. A summary of relevant initiatives and goals can be seen in **Table 8** below.

Table 8: Energy and Emissions Initiatives and Goals Summary

| Airport | Initiatives and Goals |
|---|---|
| SFO | • Feasibility study to determine the potential of an all-electric, zero-emissions central utility plant (CUP)<br>• Implementation of a Zero Emission Vehicle (ZEV) Readiness Roadmap<br>• Use of low-global warming potential (GWP) refrigerants<br>• Increased solar on site, enough to generate 17% of campus energy use<br>• Leading the world's largest initiative to develop and deploy SAF<br>• Focus on net-zero facilities and use of rating systems (LEED, WELL, Fitwell, Envision) |

| Airport | Initiatives and Goals |
|---|---|
| JAC | • Energy audit with Lower Valley Energy, leading to a 117,900 kWh decrease in electricity consumption per year<br>• No idling policy implemented<br>• GreenFleet designation through the ongoing electrification of airport fleet |
| SLO | • In the process of developing a climate action and adaptation plan to address GHG emissions<br>• Preemptive tracking of developments surrounding electric aircraft and Advanced Air Mobility (AAM) |

## 5.4 Materials Management

Waste management policies are geographically tied and can limit achievements based on airport location. Recycling markets are highly variable, creating challenges to achieve cost savings or revenue from recycling in many U.S. markets. The concept of circularity within the materials management space has emerged as a priority. Reusing raw materials and integrating circularity into project designs can help reduce end of life waste products at airports. Advanced software tools provide opportunities to effectively manage waste, while many airports are considering the feasibility of a composting plant on site. Maximizing the use of local products and ensuring purchasing contracts include constraints on contractors regarding waste are also common strategies for decreasing the amount of waste going to landfill.

**Table 9** below provides a summary of waste goals developed by benchmarked airports regarding waste and materials management. Sonoma County's zero waste by 2030 goal is shared by SFO and SAN.

Table 9: Waste Goals

| Airport | Waste Goal |
|---|---|
| San Francisco International Airport (SFO) | Zero Waste by 2030 |
| Jackson Hole Airport (JAC) | 60% waste diversion by 2030 |
| San Diego International Airport (SAN) | Zero Waste by 2035 |
| Tampa International Airport (TPA) | Divert 30% of solid waste on a per passenger basis |

Airports have pursued a number of initiatives to reduce waste, including:

- Participation in regional working groups to coordinate and understand best practices in sustainable materials management.
- Eliminate single use plastic within office spaces.
- Enhance training and education to increase participation of staff, concessionaires, and tenants in waste diversion efforts.
- Increase use of sustainable procurement to improve waste management efforts within the airport.
- Increase construction and demolition (C&D) waste diversion by including targets in specifications and requiring contractors to report diversion rates.
- Sponsor a comprehensive waste audit.
- Require all food services outlets to eliminate single-use plastics, opting instead for materials that are reusable, recyclable, or certified compostable.

## 5.5 Environmental Stewardship

Airports play a critical role in global connectivity and economic development, serving as gateways for millions of travelers and significant amounts of cargo each year. They are uniquely positioned to lead by example in environmental stewardship. Emphasis on sustainable tourism and protection of local biodiversity is a major impact area for airports. Educational and promotional campaigns throughout terminals can aid tourists in understanding local wildlife and natural resources. Airports can also help combat wildlife trafficking through becoming a signatory to the United for Wildlife Transport Taskforce and by monitoring technological developments such as automated detection. Encouraging smart transport to and from the airport can aid in increasing air quality surrounding the airport. Water use reduction initiatives are becoming increasingly innovative, especially in California, due to drought pressure and necessity.

A summary of initiatives regarding environmental stewardship at airports is below:

- Deployment of clean electric buses to increase clean transport to and from the airport.
- Implementation of energy and water efficiency controls.
- Minimize freshwater consumption by adopting treated wastewater for non-potable water demands.
- Installation of an airport-wide stormwater filtration system, which will allow all stormwater to be filtered prior to leaving the property.
- Rainwater harvesting for cooling tower make-up water.
- Reduction in the amount of non-native/non-drought-tolerant plant species used in landscaped areas.

## 5.6 Finance and Governance

Federal funding is crucial for airports because it supports necessary maintenance, upgrades, and capacity expansion, ensuring that facilities can handle future growth and adopt new technologies. This funding enhances safety and security, key components in managing evolving threats and regulatory requirements. Additionally, such funding promotes environmental sustainability and equitable access, especially for smaller regional airports, ensuring they can maintain service levels and stay connected in broader air travel networks. In order for business resilience and sustained operations, airports must consider innovative business models and partnerships to build flexibility into their operations.

As airports plan for the future and design new infrastructure, it is becoming increasingly important to consider aspects of resilience within design. Many airports across the US have begun to pursue Envision certification for infrastructure projects. **Table 10** shows which of the benchmarked airports have successfully completed a project under Envision.

Table 10: Envision Verification Awards

| Airport | Project | Verification Level |
|---|---|---|
| San Diego International Airport (SAN) | Green Build | Platinum |
| Tampa International Airport (TPA) | Airport Master Plan Phase 1 | Verified |

SLO has received significant federal funding through the Federal Aviation Administration's Airport Improvement Program (AIP), including a $13.5 million grant was approved to support a comprehensive runway rehabilitation project at the airport. The funding is being used to upgrade the main runway and its taxiway connectors, including the entire runway lighting system, to meet the latest federal safety standards and improve energy efficiency.

In 2020, JAC received $28.5 million in federal funding for a runway reconstruction program. This funding allowed JAC to pursue struct environmental goals throughout the construction of the runway, including 90% recycling of the existing pavement, preservation of native soils, and improvement of the stormwater infrastructure on site.

## 5.7 Social Responsibility

Through an analysis of peer airports and those leading in the sustainability space, several key movements within the social responsibility focus area have emerged. Maintaining passenger safety and enhancing customer experience is essential. Engaging employees internally also emerged as a major factor, as organizations with higher employee commitment and satisfaction are typically more resilient. The continuous development of community relationships and partnerships is vital to both airports and stakeholders. It is important for airports to communicate the benefits they provide the communities they serve. A summary of initiatives and goals related to social responsibility is provided below.

- Offering virtual and joint departmental internships.
- Sustainability and Social Equity Planning - frequent and transparent dialogues to develop and sustain communities, support community initiatives, and encourage employees to engage in volunteering efforts.
- Engage local communities through a formal outreach strategy ensuring that residents and stakeholders are kept informed and involved in airport developments.
- Partnerships with local educational institutions to foster research and development in aviation and sustainability.
- Travel Well Ambassadors – staff which engage with airport guests to provide education and compliance with regulations.

# 6 Staff and Stakeholder Analysis

To gain a greater understanding of STS staff and stakeholder perspectives, the Project Team engaged in bi-weekly meetings with Airport staff and developed a survey to be distributed. The bi-weekly meetings involved the Airport Manager, Assistant Airport Manager, and a variety of administrative staff. Through these meetings the project team interviewed STS staff to gain valuable information regarding Airport operational procedures, existing sustainability initiatives, and potential areas for improvement at the Airport.

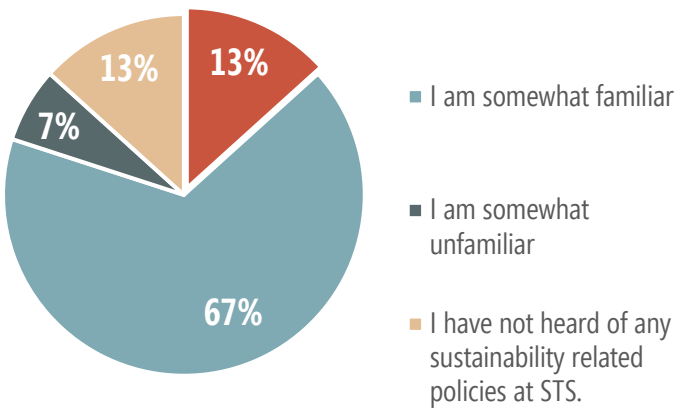
The STS Sustainability Management Survey was distributed to understand staff and select stakeholder's awareness of the existing sustainability program and to identify actions for improving STS's sustainability. The 10-question survey was distributed to a list of employees identified by the Airport in departments across the organization, with a total of 15 respondents. Eight questions gauged the respondent's opinions on the effectiveness of the existing sustainability program, the importance of the Airport to sustainability leadership in the region and the industry, and the level of interest in incorporating sustainability into their role at the Airport. Two questions related to role and tenure of the respondent and were included for future cross tabulation. The detailed results of the survey are presented in the proceeding sections.

## 6.1 Survey Results

The results of the survey were anonymous. Overall, the respondents were somewhat familiar with STS's existing sustainability policies. Furthermore, most agree that it is important for the Airport to be recognized as a leader in sustainability, both regionally and in the aviation industry. Many also represented interest in incorporating sustainability into their daily job functions, a positive result given that implementation of the plan will rest in the hands of employees.

### 6.1.1 Existing Sustainability Initiatives

Overall, 80% of the respondents are at least familiar with sustainability initiatives at STS, with over 13% of the respondents being very familiar. This level of familiarity at STS demonstrates that these programs are being represented well internally to the organization, but effective communication about current policies could be increased.



### 6.1.2 Reputation

Respondents were asked to evaluate the importance of the Airport's reputation as a regional and industry leader in sustainability. The results of these questions are shown in **Figure 15** below. Generally, the respondents agreed on the importance of STS being recognized as a regional and aviation industry leader. These results indicate that the employees surveyed take pride in their organizational recognition and will support the efforts needed to do so.

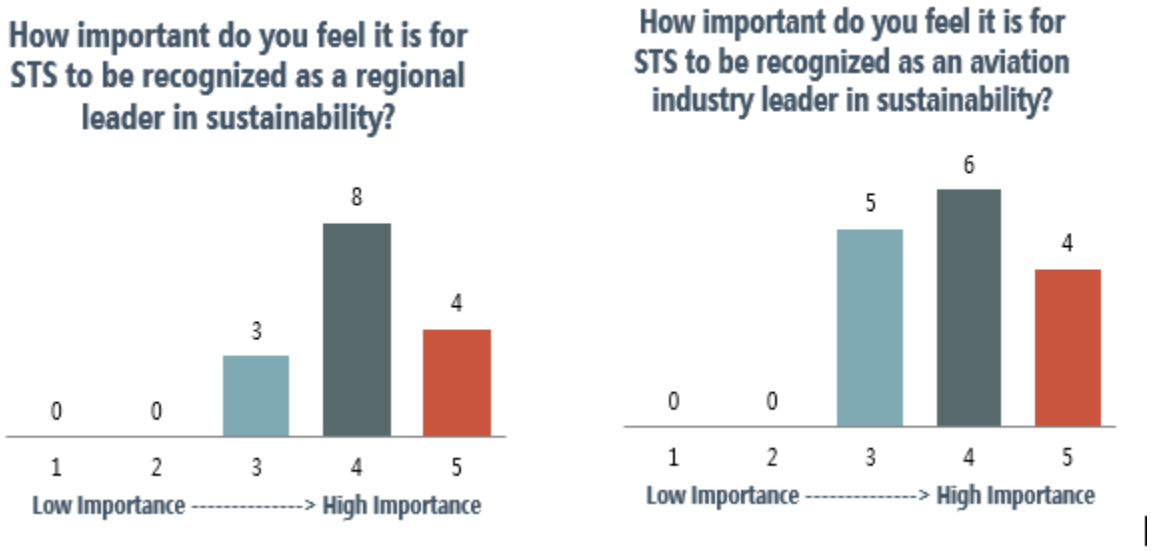



Figure 15: Regional and Aviation Industry Leadership Importance

### 6.1.3 Employee Input

Respondents were asked to gauge the level of effort required to integrate sustainability into their jobs and to indicate their interest in integrating sustainability into their jobs. The results of these questions are shown in **Figure 16** below.

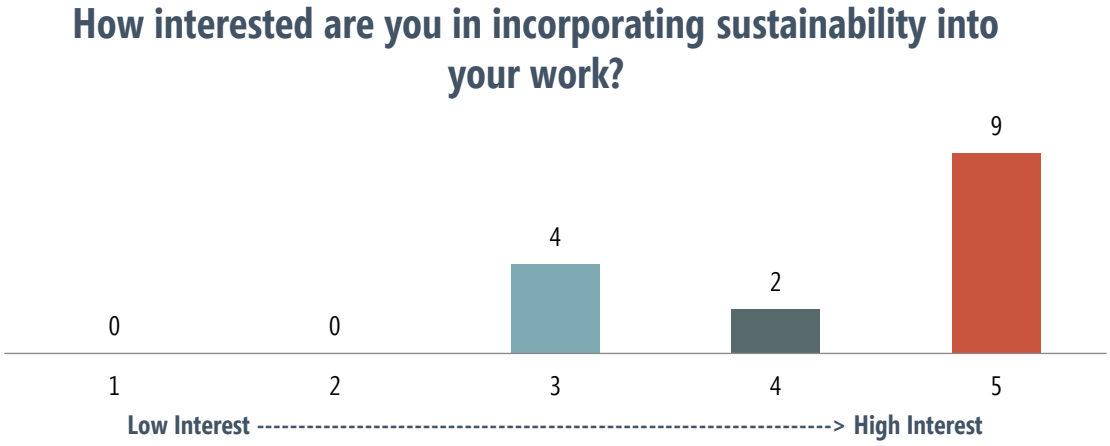



Figure 16: Employee Interest in Sustainability at STS

Employees were also asked to identify opportunities and challenges associated with sustainability planning at STS, as seen in **Table 11**. The input of employees on initiatives will help direct the SMP moving forward and centers the planning process around their input.

Table 11: Opportunities and Challenges to Sustainability at STS

| Opportunities | Challenges |
|---|---|
| Replacement of aging field vehicles (EV/hybrid) | Engagement |
| Increased solar | Stakeholder Buy-In |
| Sustainable messaging | Balance between performance and sustainability |
| Public engagement | Public perception |
| Standardized sustainable operational policies | Commercial air travel is inherently hard on the environment |
| Waste handling | Transition to sustainable jet fuel and no-lead avgas |
| PFAS alternatives | Lack of time and manpower |
| Clear vision | Funding |

# 7 Preliminary Goals

STS's sustainability program is structured around five focus areas: energy and emissions, materials management, environmental stewardship, finance and governance, and social responsibility. The final SMP will advance goals and strategies in each focus area to accelerate STS's sustainability performance.

The following table proposes preliminary goals guiding sustainability management at STS. These proposed goals are designed to align with Sonoma County Climate Resilience - Comprehensive Action Plan (CR-CAP) DRAFT Measures and to calibrate with the Airport's baseline performance. They represent a first step in the process of setting specific, measurable, achievable, relevant, and time-bound (SMART) goals for STS's sustainability program.

The preliminary goals should be regarded as a first step in the goal-setting process, not the final versions. They will be reviewed and refined in collaboration with the Airport and stakeholders during the Internal and External Baseline Review Meetings and are subject to change.

As the SMP process continues, the established Sustainability Working Groups will develop initiatives to accompany the finalized goals. Each goal will be paired with a set of implementation strategies designed to achieve the goal within the SMP's ten-year planning horizon. Wherever feasible, strategies will include details on Key Performance Indicators, Implementation, and Impacts. Additional available data will supplement strategies with a Cost / Benefit Summary, including analysis of economic performance, contribution to goals, and greenhouse gas reduction potential.

Table 12: Proposed Sustainability Goals for STS

| Focus Area | Sub-Focus Area | Proposed STS Goal | Alignment with County Measures |
|---|---|---|---|
| Energy and Emissions | Resource Efficient Buildings | Reduce energy use and increase resilience at existing airport facilities by achieving a 15% reduction in electricity use by 2030 from the 2021 baseline. | E-CO-2: Reduce energy use and increase resilience at existing county facilities in the mid term |
| | Emissions | Support county net zero goal by reducing Scope 1 and 2 airport GHG emissions **75%** by 2030, compared to a 2021 Baseline, and offsetting any remaining emissions. | E-CO-4: Reduce greenhouse gas emissions due to electricity use for County operations by purchasing Evergreen power from Sonoma Clean Power for all electricity use |
| | Fleet Efficiency | Install EVSE at the Airport to support airport fleet electrification by 2030. | E-CO-2: Reduce energy use and increase resilience at existing county facilities in the mid-term; T-EA-2: Expand the County's Electric Vehicle (EV) Charging Infrastructure with County Fleet only use charging, County employee workplace charging, and public use charging. |
| | Fleet Efficiency | Replace 50% of Airport light duty trucks, off-road vehicles, and equipment with electric, hybrid, zero emission or CARB compliant equivalents by 2030. | T-CO-1: Decarbonize the County fleet of light duty vehicles (less than 8,500 lbs. gross vehicular weight) by 2040; T-CO-6: Decarbonize non-road heavy duty equipment by 2042; T-CO-6: Decarbonize small offroad engines beginning in 2024 by requiring replacements and new purchases be zero-emission equipment. |
| Materials Management | Recycling and Composting | Track, document, and achieve waste diversion rates in line with applicable county and state targets by 2030. | ZW-CO-2: Establish and update facility-specific near-term measures and actions to increase waste diversion based on results of the 2023 Zero Waste Audit and Characterization Study for each facility type, and the monthly waste diversion spot checks |
| | Recycling and Composting | Develop and implement a communications campaign to motivate travelers to divert recyclable and organic wastes, and work with Airport tenants to increase recycling and compost diversion by 2030. | ZW-CO-2: Establish and update facility-specific near-term measures and actions to increase waste diversion based on results of the 2023 Zero Waste Audit and Characterization Study for each facility type, and the monthly waste diversion spot checks |
| | Construction and demolition waste | Require construction contractors to achieve a 75% construction and demolition waste diversion rate (or the rate set by Sonoma County if higher), for all major Airport construction and renovation projects by 2030. | ZW-CP-1: Using the Zero Waste Sonoma model ordinance, develop an ordinance mandating diversion of construction, deconstruction, and demolition wastes |

| Focus Area | Sub-Focus Area | Proposed STS Goal | Alignment with County Measures |
|---|---|---|---|
| Environmental Stewardship | Water | Evaluate, prioritize, and implement water saving features into new and existing facilities and operations at the Airport by 2030. | W-CO-6: Evaluate opportunities and barriers to utilizing non-potable water (grey water or recycled) at County facilities and County-owned lands with high water needs and W-CO-1: Develop rainwater harvesting systems on County-owned lands and Sonoma Water Lands thru 2030 |
| | Wildfire Resilience | Identify and implement methods to increase defensible space and harden Airport buildings against wildfire in line with the county Wildfire Resilience Project by 2030. | WF-CO-1: Implement the Wildfire Resilience Project to formalize near-term wildfire resilience planning and implementation coordination between departments, agencies, and partners, and prepare and present recommendations for a sustainable, integrated, long-term wildfire resilience program and funding |
| | Land Use | Identify opportunities to improve carbon sequestration on airport property and begin implementing beneficial practices described in the Carbon Stock Inventory and Potential Sequestration Study by 2030. | NWL-CO-5: Increase carbon sequestration on County-owned lands by implementing beneficial practices described in the Carbon Stock Inventory and Potential Sequestration Study thru 2030; NWL-CP-4: Increase carbon sequestration on croplands and working lands through soil carbon amendments, hedgerow planting, grassland restoration, and implementation of other climate-smart practices. |
| | Land Use | Increase biodiversity on the Airport property by developing a plan for promoting native and pollinator friendly species and removing invasive species and integrate best practices into land management activities by 2030. | NWL-CP-4: Increase carbon sequestration on croplands and working lands through soil carbon amendments, hedgerow planting, grassland restoration, and implementation of other climate-smart practices. |
| Finance and Governance | Funding | Secure grant funding and develop a climate resilience assessment and adaptation plan for the Airport by 2030. | Multiple: E-CO-1, E-CO-2, W-EA-2, W-EA-3, W-CO-7, W-CP-3, W-CP-4, WF-CO-1, WF-CP-4 |
| | Procurement | Develop and implement a sustainable procurement policy for the Airport and achieve 50% of qualifying purchases meet sustainable criteria by 2030. | ZW-CO-9: Prioritize five types of procurement contracts with upstream suppliers, review, and develop waste reduction benchmarks for future contracts |

| Focus Area | Sub-Focus Area | Proposed STS Goal | Alignment with County Measures |
|---|---|---|---|
| Finance and Governance | Planning | Develop Sustainability Design Criteria or pursue sustainability in new construction through third party certifications by 2030 (i.e., LEED, Envision, etc.). | E-CO-5: Minimize energy use and maximize resilience in new County facilities by developing energy policies: |
| | Planning | Support and prepare for aviation sector transition to clean fuels and electrification by 2030. | |
| Social Responsibility | Internal | Provide sustainability, DEI, and workforce development training for airport staff and require it for new hires and current employees by 2030. | E-CO-9: Support decarbonization transition by planning for maintenance needs, staff training, and potential changes to job descriptions as appropriate related to operation and maintenance of new technologies |
| | Communications | Increase community awareness of STS's sustainability program and accomplishments by developing and implementing a targeted sustainability communications program by 2030. | E-CP-9: Increase awareness and support in communities for energy efficiency, electrification, renewable energy, and energy storage upgrades |
| | External Outreach | Develop outreach campaign for Airport tenants and stakeholders aligned with county campaigns on energy efficiency, electrification, renewable energy, and energy storage; and encourage tenants/stakeholders to adopt green business certification program, by 2030. | E-CP-10: Develop focused "call-to-action" campaigns to motivate community action on energy efficiency, electrification, renewable energy, and energy storage |