



## 2020-2021 Biennial Report

# Executive Summary



This Biennial Report is submitted to the National Park Service (NPS) under Subsection 13(h) of the 1983 Agreement between the United States Department of the Interior and the Jackson Hole Airport Board. It describes the Airport Board's activities and operations for the 2020 and 2021 biennium, and our effort to provide leadership in sustainability and reduce environmental impacts of airport operations on Grand Teton National Park and surrounding areas.



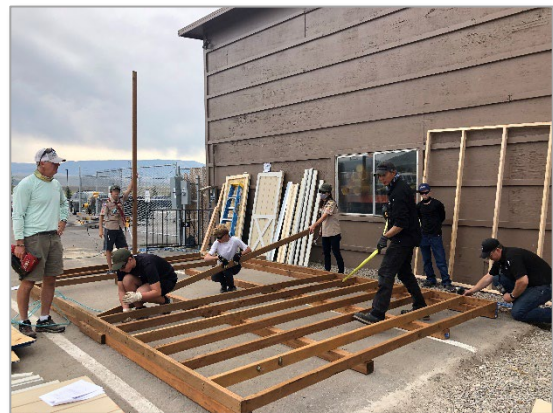
These last two years have seen significant changes, with the onset and continued management around the COVID-19 global pandemic. In the start of 2020, the Airport Board increased its focus on sustainability and resiliency, as well as addressing evolving issues around per-and polyfluorinated substances (PFAS). The start of the pandemic required the Airport to focus on not only those priorities, but also broadscale human health and safety challenges. Providing safe access to the traveling public and visitors, from a public health and testing perspective, became important issues. Late in 2020 and throughout 2021, the Airport also addressed community concerns regarding noise and developed processes to address them. Listed on the following three pages is a summary of the accomplishments for 2020-2021. This is followed by the full Biennial Report.



## Highlights of Accomplishments



- Received the Jay Hollingsworth Speas Airport Award for environmental excellence
- Recognized by Yellowstone/Grand Teton Clean Cities (YTCC) with Green Fleet Award for reduction of greenhouse gas emissions
- PFAS Progress
  - Awarded a \$40,000 grant from Teton Conservation District for PFAS associated water sampling
  - Implemented three phases of groundwater sampling relative to PFAS
  - Tested over 100 residential well samples and installed 48 water filtration devices
  - Produced working document PFAS Management, Mitigation and Remediation Plan – providing information to the public and affected governmental agencies regarding PFAS.
- Culverted the Enterprise seasonal irrigation ditch to further protect water quality
- Participated in online bid sales to find a sustainable use for older equipment
- Working member – Jackson Hole Climate Action Collective – Climate Action Plan (CAP) Development
- Successfully renewed the Business Emerald Sustainability Tier (BEST) Certification – three-year evaluation to receive certification
- Waste Diversion
  - Increased waste diversion from 18% to 38%
  - Composted over 10,000 pounds of food waste in 2020
  - Composted over 18,000 pounds of food waste 2021
  - Installed a new recycling and waste center to increase capture rates
  - Utilized two outdoor bearproof recycling bins in partnership with NPS
  - Initiated bear spray rental program





- **Greenhouse Gas Emissions Reduction**
  - Continued the JHA travel policy to offset carbon emissions for employee travel
  - Offset over 1,378.4 tons of carbon to date (Good Traveler Program)
  - VW grant money supported purchases of new equipment for emissions reductions: Tier 4 loader and snowblower
  - Implemented pilot e-bike project
- **Operational Enhancements**
  - Collaborated with FAA on an arrival procedure from the north to reduce noise and emissions and began to collaborate on a potential procedure to the south.
  - Implemented additional noise metrics in Fly Quiet Program for noise sensitive areas



- Participated in BEST Emerald Visionaries, an Advisory Council with Riverwind Foundation
- Renewed EPA Green Power Partnership
- Continued membership with the Greater Sage Grouse working group
- Sponsored the Sustainability Series on climate change (Partnership with Yellowstone Teton Clean Cities and Energy Conservation Works)
- Presented on resilience topics at aviation industry events
- Hired a Communications Assistant to enhance community connection
- Supported JH Rotary Club Scholarships, Riverwind Foundation and Womomentum through Old Bill's
- Conducted Airport presentations for HOA's and local organizations that have interest in the Airport
- Partnership with Boy Scouts of America to work on community projects





- Received \$41.3 million in FAA Airport Improvement Program (AIP) grant funding for runway replacement (100% federally funded)
- Conducted Clean Annual Security Audit
- Completed the application process for the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA), including preparing the full year end financial report for review by the auditors and a detailed summary of all activities to include with the comprehensive report submitted to GFOA
- Established new on and off-airport rental car agreements
- Updated procurement policy and created new signature and contracts policy
- Installed and trained staff on new CT-x-ray
- Installed and trained staff on Credentialing Authentication Technology to perform travel document checks at Security Screening Checkpoint
- Installed new Exit Lane Technology
- Selected and implemented digital filing software across multiple departments



- Established and met pandemic-adjusted budget goals
- Navigated the challenges around a global pandemic and adapted existing procedures
- Received Global Biorisk Advisory Council Certification which validates our cleaning, disinfecting, and infection prevention program
- Remained in contact with St John's and Teton County Health Department to coordinate and share information on best practices
- The Airport's Public Information Officer (PIO) attended meetings with the community PIO group to stay engaged with community messaging and concerns
- Free Vault (COVID-19) tests were made available for airport users
- When the County entered "Red", all public programs held in the Terminal were paused, non-essential staff were encouraged to work from home when possible, and remote attendance was encouraged for Board meetings
- Hired two full-time seasonal staff members to help ensure compliance with the Federal Mask Mandate
- Staff participated in Teton County Emergency Operations COVID-19 Task Force
- Updated safety and cleanliness standards at every stage of the pandemic based on best practices, including sanitation of airport nightly, installation of a bipolar ionization system on the HVAC, sneeze guards, sanitation stations, publicly available masks, spacing messaging (i.e., floor stickers), among many others.
- Installed air purifiers in the TSA Breakroom, Admin, and other locations where staff tend to congregate, and purchased additional outdoor furniture



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# Introduction

Federal statutes authorize the Secretary of the Interior to enter into agreements with public agencies, such as the Jackson Hole Airport Board (the "Board"), for the operation of airports in or near national parks. Pursuant to that authority, the Department of the Interior (the "Department") and the Board entered into an Agreement dated April 27, 1983 (the "1983 Agreement"), for the operation of the Jackson Hole Airport (the "Airport") in Grand Teton National Park (the "Park"). In 2011 the Department and the Board entered into a Third Amendment to the 1983 Agreement (the "Third Amendment") which added two additional 10-year options to renew. It also expanded the Board's obligations to work in good faith and in coordination and cooperation with the National Park Service (NPS) to develop and implement reasonable and cost-effective mitigation measures as may be available to reduce environmental effects on the Park.

The Board has taken this obligation further with an increased focus on sustainability. Representatives of the Park, Airport management, and the Airport Board periodically meet to track progress on initiatives and continue collaboration.



Through all its actions the Airport aims to meet its 2028 Vision statement:

*“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.”*

The Third Amendment also requires the Board to submit to NPS a report describing the Board’s activities and operations during the previous two calendar years. This report is focused on reducing negative environmental impacts, and specifically, efforts to reduce noise impacts on the Park.

This is the sixth Biennial Report submitted under this requirement, and covers the Board’s activities and operations during calendar years 2020 and 2021. It highlights those elements which enhance the sustainability and resiliency (the ability to plan for and adapt to change) of the Airport and its operations.





# Environmental



The Jackson Hole Airport Board is dedicated to becoming an industry leader in environmental stewardship, climate change mitigation, resilient solutions, and overall sustainability. In an effort to preserve the power of place for future generations, it has and will continue to implement environmentally sustainable initiatives at the Jackson Hole Airport. The Board's commitment is to protect our natural environment, the National Park in which the Airport exists, our neighbors and the local community, and operate as a resource to the unique area the Airport serves. Expanded areas of focus for this biennial report include noise and water quality.



## Existing and Ongoing Noise Mitigation Measures

**Background.** The Jackson Hole Airport is the only airport in the United States with regular commercial service located entirely within a national park. The Airport operates under the 1983 Use Agreement, which restricts certain activities and facilities, and imposes stringent noise and other environmental standards. In compliance with the 1983 Agreement, and in many cases going beyond its requirements, the Board has implemented a range of mitigation measures which are described below.

The primary objective of the Airport's Noise Abatement Plan, as stated in the 1983 Agreement, is "to ensure that future airport operations are controlled in such a manner that aircraft noise exposure over the Park will remain compatible with the purposes of Grand Teton National Park and will result in no significant increase in cumulative or single event noise impacts on noise sensitive areas of the Park." While there are more operations by jet aircraft at the Airport than there were in 1983, the noise caused by each operation has gotten quieter with the transition to newer aircraft.

The 1983 Agreement required that the Airport develop a noise control plan which "... utilizes the latest in noise mitigation technology and procedures. The revised plan will be developed in a comprehensive study to consider all of the relevant environmental, economic, and operational considerations." The 1983 Agreement and Noise Abatement Plan contains the following noise abatement measures:

- **Airport operations must not generate a 55 DNL annual noise contour, which extends into the defined noise sensitive areas of the Park, which includes Moose.**
- **Airport operations must not generate a noise contour that exceed 45 DNL west of a defined line.**



- Restricts aircraft from operating at the airport that have a single event noise certification level on approach of 92 dBA or higher (as defined by the approach dBA level from Advisory Circular 36-3H). There are no aircraft currently operating at JAC that are certified above this level.
- To meet the above requirements of the 1983 Agreement, the Airport Board developed an Airline Access Plan. The Airline Access Plan is grandfathered by the Airport Noise and Capacity Act of 1990. This Access Plan places a limit on the number of operations of commercial jet aircraft which may occur at the Airport. (The limit on operations was determined to be the noise equivalent of 6.5 Average Daily Departures of the 737-200/D17 aircraft.) Increases in operations may only be accomplished by substituting these aircraft with quieter, new generation aircraft.. The commercial fleet now operating at the airport uses quieter aircraft, and this has offset the increase in operations. The newer generation aircraft (MAX / neo) are expected to enter service at JAC over the next few years. These aircraft use even quieter technology and are expected to continue to offset the current forecasted growth in operations. ADDs are calculated periodically to ensure that established level is not exceeded.
- The Noise Abatement Plan also provides that commercial jet aircraft will publish scheduled arrivals and departures between 0700 and 2130.
- Major sections of the Noise Abatement Plan include maximum noise level limit, cumulative noise standard, aircraft operating procedures, operations specifications amendment for scheduled passenger service airlines, requirements for aeronautical contractors, noise complaint/inquiry report system, and educational efforts. The Board requires compliance with the contents of the Noise Abatement Plan in all operating agreements with air carriers and commercial general aviation operators. The noise monitoring system and annual reporting are designed to document compliance and are further detailed in the following sections.
- Additionally, because of an Act of Congress obtained specifically for the Jackson Hole Airport, since 2004 only the quieter Stage III or higher aircraft, including corporate jets have been the only aircraft permitted to operate at the Airport. FAA approval would be required for any additional noise or capacity restrictions at the Airport.

These noise abatement measures and improvements to these measures are tracked annually, as listed below. See sections below for greater detail.

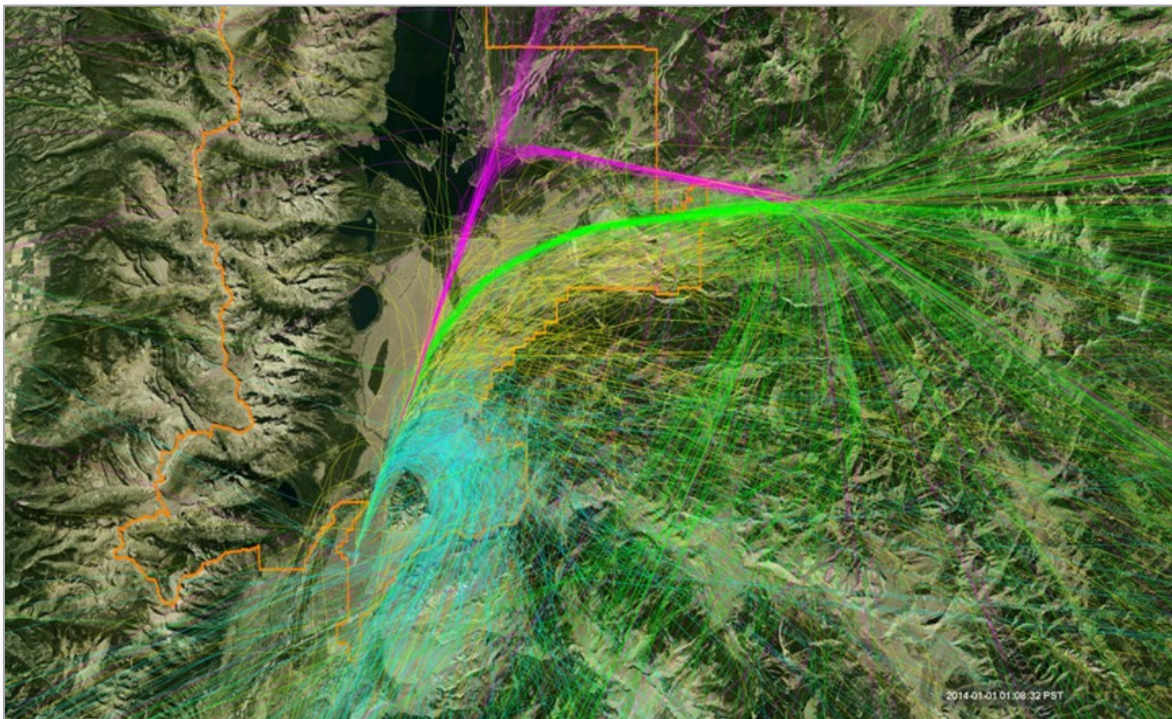
- **Summary of 2020 and 2021 Noise Measurements and Modeling**
  - Noise Monitoring System Updates
  - Day Night Level
  - Annual Average Daily Departure (ADDs per Airline Access Plan)
  - Single Event Levels and number of noise events
  - Preferential Runway Use
  - Voluntary Curfew
  - Summary of Noise Monitoring Results and Trends

- Development of Measures
  - NextGen
  - Fly Quiet

**Summary of 2020/2021 Noise Measurements and Modeling.** The 1983 Agreement noise abatement measures are tracked using noise measurements and modeling that is completed annually and has evolved to be more sensitive and comprehensive over time. Enhancements to the monitoring system include integrating radar and flight information (to correlate aircraft with noise events), low noise microphones, weather sensors, the ability to measure the 1/3 octave spectra, and the measurement of detectability. The “detectability” measurement is used to show the audible contribution of aircraft and other noise sources to the Park’s natural background environment.

This allows the system to better quantify aircraft audibility levels at these locations. Based in part on these noise measurements, the Board’s noise consultant, BridgeNet International, produces a noise report each year. The results are presented on a first of its kind, three-dimensional display of aircraft noise and aircraft flight paths that is available on the Airport’s website and is also summarized below.

#### JAC Noise Model Flight Paths



*Data from both the conventional radar and ADS-B surveillance can be used to record flight paths, identify approach types, and provide nearly real time flight tracking with noise contour modeling of individual aircraft.*



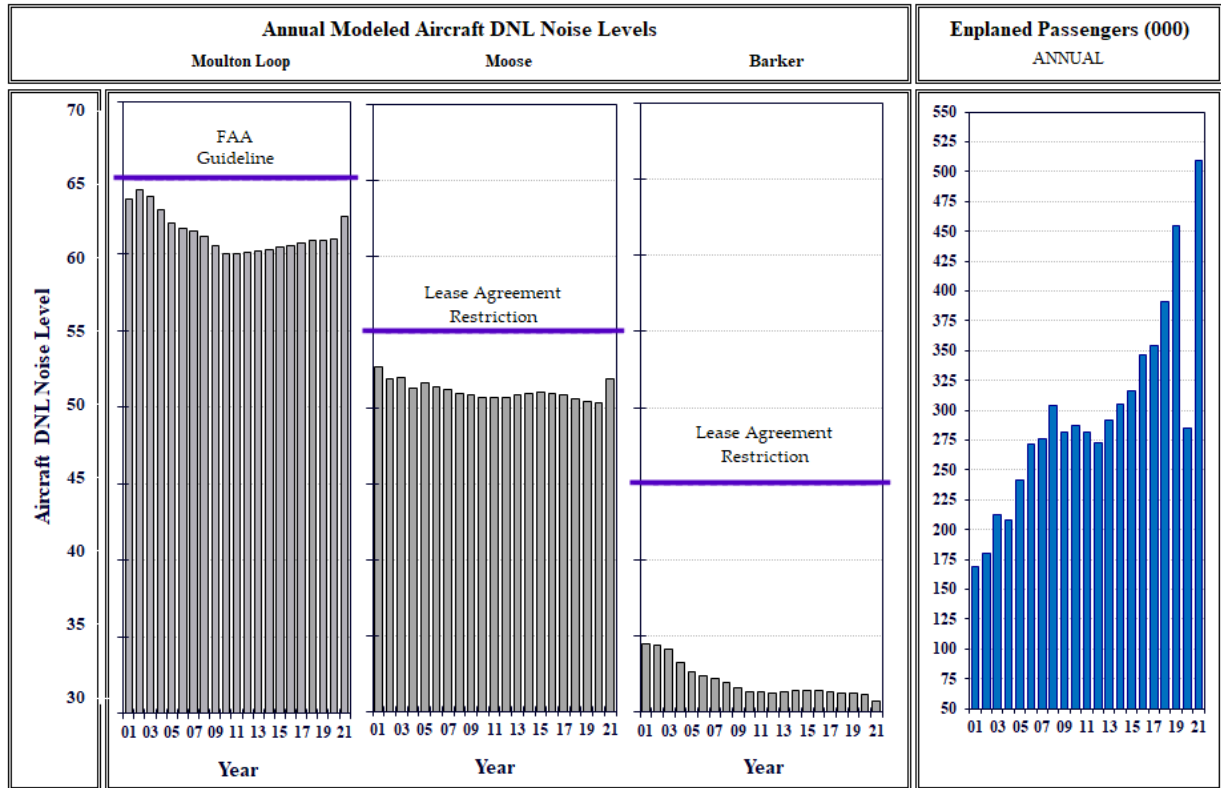
**Noise Monitoring System Updates 2020:** An ADS-B extender was installed at the Airport to provide improved low altitude radar coverage for use in the noise monitoring system. ADS-B is the FAA's NextGen radar surveillance that was fully implemented by January 1, 2020. The extender provides improved coverage over the FAA's ADS-B surveillance by providing a receiver closer to the airport. The extender allows the Airport to have more accurate coverage of aircraft operations (landings and take offs) down to the airport surface elevation (including aircraft taxiing on the airfield) than was available for use in noise monitoring in prior years. This ADS-B surveillance provides improved tracking of aircraft flying over or near the Park and provides identification to most operators which was not available in the past. To track an aircraft, there must be line of sight between the aircraft and the extender ground station at the airport, and the aircraft must have its transponder on. So, some low-level operations near terrain will not have complete coverage. As of January 1<sup>st</sup> 2020, all aircraft were required to be equipped with an ADS-B transponder to operate in busy airspaces. While Jackson airspace does not require such equipment, most operators are now equipped because they will often fly to busy airspaces which require the transponders.

#### **2020-2021 Noise Monitoring Results: DNL Levels**

- **The 65 DNL (average day/night noise) contours did not extend beyond the Airport boundary, and therefore no residential or other non-compatible land uses (as defined by FAA) were exposed to 65 DNL.**
- **With COVID-19, passenger enplanements have decreased in 2020 but returned to more normal activity in 2021. During the same period, operations initially dipped but recovered in 2021. Noise levels have remained relatively steady for 2020 with an increase in 2021. Commercial operations decreased in 2020 but returned to higher numbers in 2021. Corporate jet operations increased in both periods. The changes in aircraft operations represent an increase in overall noise, however the combination of quieter, more efficient jet aircraft has offset most of the change in jet operations. Additionally, the success of procedural changes and Fly Quiet measures also contribute to provide noise reductions over the sensitive areas of the Park.**
- **The graphs shown below indicate the Airport is well within compliance of the standards specified by the FAA and contained within the 1983 Use Agreement. The purple horizontal lines indicate these limits.**



## Measured DNL and Number of Passengers (2021)



### 2020/2021 Noise Monitoring and Access Results: Annual Average Daily Departure

- Based on advances in aircraft noise technology since 1984, the 45 dBA (A-weighted decibels) and 55 dBA DNL contours have never been exceeded, and the number of average daily departures (ADDs per access plan) has remained below the specified limit of 6.5 "Base Class" aircraft equivalents.
- Annual Average Daily Departures (ADDs) for 2018 were 3.29 and for 2019 were 4.14, which are below the 1983 Agreement stated operational limit of 6.5 ADDs averaged annually (quarterly annual average daily departures). In 2020 the ADDs decreased to 3.41 due to the pandemic and the quieter fleet. In 2021 the ADDs were 3.77 as commercial service returned.

### 2020/2021 Noise Monitoring

- As seen in the graphic above, the Aircraft cumulative DNL noise levels within the Park were below the noise levels specified in the 1983 Use Agreement. The purple line depicts the Use Agreement restriction level with the actual levels included in grey. These results are also documented in the annual noise report that is submitted to the Park Service. The noise level at the Moose site showed an increase in 2021 returning to a level similar to calendar year 2000, while the Barker site showed a decrease.





**Preferential Runway Use.** The 1983 Agreement requires the Board to take reasonable measures to encourage aircraft to utilize approaches from and takeoffs toward the south on the Airport's single runway. The Use Agreement indicates that Runway 01 (from the south) is the preferred arrival runway and Runway 19 (to the south) is the preferred departure runway, when safety permits its use.

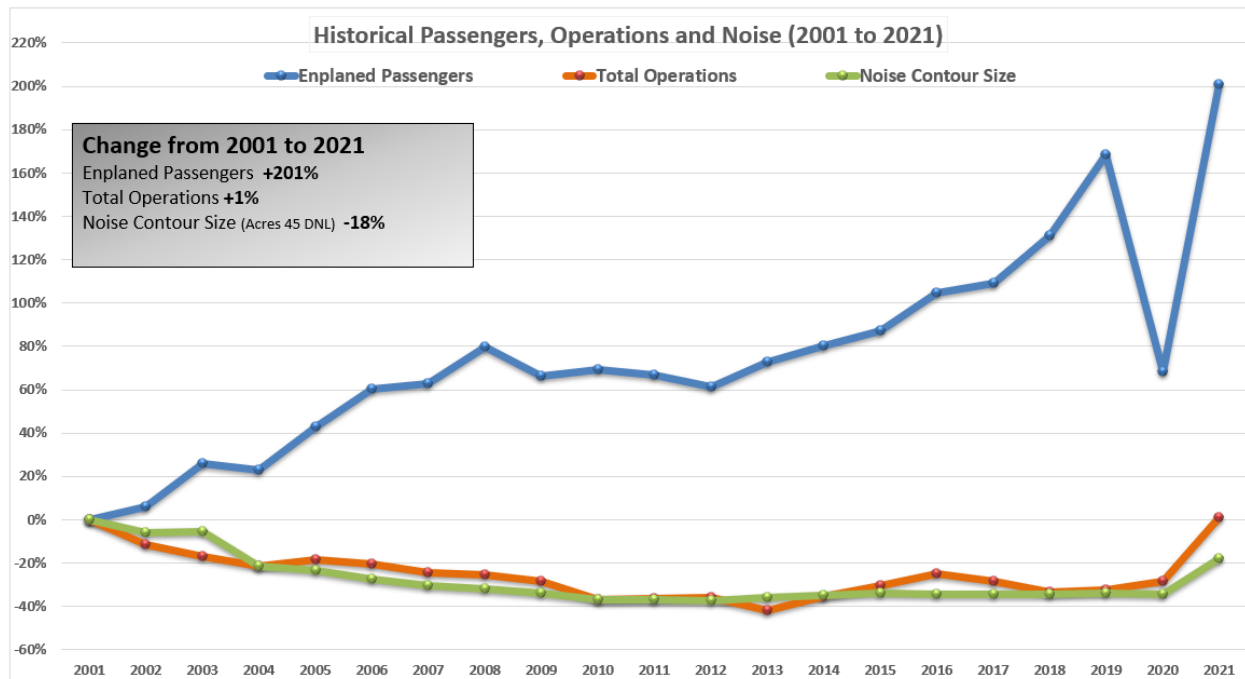
In 2020, 83% of aircraft utilized the preferred departure runway, (Runway 19 departing to the south) with departures being the noisier operation; 17% of aircraft utilized the preferred arrival runway (Runway 01 landing from the south). In 2021, 84% of aircraft utilized the preferred departure runway and 17% of aircraft utilized the preferred arrival runway. The prevailing wind direction is from the south, so the primary flow is departures to the south and arrivals from the north.

The preferential runway use can result in head-to-head operations where aircraft would depart to the south and land from the south. Due to traffic, head-to-head operations during busier times are discouraged, and landing on Runway 01 when aircraft depart on Runway 19 does not occur as often as in the past. The runway use is a result of the wind conditions that is the primary factor in the runway that is used by an operator.

**Voluntary Curfew.** Under the Airport Noise and Capacity Act passed by Congress, the Airport Board cannot unilaterally impose a mandatory curfew. The Board has nonetheless adopted a voluntary curfew for general aviation aircraft between 11:30 p.m. and 6:00 a.m. for landing, and between 10:00 p.m. and 6:00 a.m. for takeoff. Pilots also are advised that the Airport and tower are not staffed overnight, that fire/rescue and other services are not available during this period, and in winter, the runway, taxiway, and ramp are not plowed after the last scheduled passenger flight arrives, so that incoming planes risk landing on a snow-covered runway. The Airport receives a report from Flight View with N-numbers that allow staff to look up the addresses and companies that operate during the voluntary curfew (except life-flights). Any aircraft that do not conform to the voluntary curfew are sent a notification letter. Although the curfew is voluntary, the Board finds that the letter notifications substantially reduce the number of nighttime operations during the curfew.

**Summary of Noise Monitoring Results and Trends.** Improved engine technology and changes in fleet mix have contributed to generally lowering the overall noise contour size (see graphic below) over the past 20 years. In the past few years, the number of commercial operations has increased, but at a much slower rate than the number of passengers has increased. This is driven primarily by a shift in commercial aircraft types. The Airport has seen a move away from smaller capacity (19-30 seat) turbo prop aircraft to larger regional jet and mainline jet aircraft ranging in capacity from 70 – 187 seats. The Airport has also seen improvements in load factor, which is a measurement of how much seating capacity is being utilized. For example, a flight with an 80% load factor utilizes 80% of its seating capacity. The combination of higher capacity aircraft, with a more efficient use of that capacity, has allowed the Airport to serve more passengers with less overall environmental impact.

### Historical Passengers, Operations and Noise (2001 to 2021)



**Developing Measures: NEXTGEN.** Previously, the Board worked extensively with the FAA and the Park to provide a “NextGen” satellite-based precision arrival procedure from the north that makes the landing path to Jackson safer, with less flight miles, while avoiding most noise sensitive areas of the Park. NextGen is an umbrella term for the FAA’s ongoing transformation from a ground-based to a satellite-based system of air traffic management. NextGen is designed to increase safety while reducing environmental effects. When fully implemented, NextGen will allow aircraft to safely fly closer together on more direct routes. Because routes are more direct, there are reductions of delays both in the air and on the ground. These benefits should reduce carbon emissions, fuel consumption and noise.

A new generation approach to Runway 19 was implemented by the FAA in March 2013. When it was sanctioned and adopted, it was the first instrument procedure in the United States with a curved approach component that included design for noise abatement purposes. While initially having minimal use over the conventional arrival, in 2021 the Global Positioning System approach was being used by approximately 97% of jet aircraft flying Instrument Flight Rules approaches to Runway 19 (83% of all Runway 19 jet arrivals). This procedure has become the dominate instrument approach procedure flown at the airport.

As a continuation of the 2013 approach enhancements to Jackson Hole, in December 2021, the FAA Air Traffic Division implemented a new flight procedure at Jackson Hole Airport that uses newer more advanced technology to shift noise further from the Park. This procedure uses Required Navigation Performance (RNP) technology and is designed to include noise abatement goals developed within the Part 150 Study (with the goal to reduce noise). This new procedure provides for noise abatement benefits by shifting noise further to the east over or east of Highway 89 and away from the noise





sensitive areas of the Park as defined by the Use Agreement providing for reductions in CO2 emissions. Procedures are developed under specific flight procedure design criteria that comply with safety and terrain separation standards. While initially there is limited use of this new procedure it is expected become more used over time.

Additionally, the Airport has initiated a Southern Departure Procedure Study to examine potential departure procedures to the south using similar technology to address community concerns about noise. The results of this study are expected in late Summer 2023.

**Fly Quiet Program.** These programs are custom tailored environmental compliance plans to encourage airlines, business jet operators (single and fractional owners) and private pilots to operate newer generation quieter aircraft and operate aircraft as quietly as possible at the airport. The primary purpose of a fly quiet program is to foster a participatory approach to complying with existing noise abatement procedures and objectives by including stakeholders in the process from the beginning.

The development of a Fly Quiet Program for the Jackson Hole Airport was approved in the Part 150 Noise Study; the inaugural Fly Quiet Program debuted in 2021. Under this Program each airline and corporate jet operator with a minimum number of flights is graded and ranked on its performance; these scores are then made available to the public via the Airport's website, newsletters and publications. The Fly Quiet Program rankings also show whether an operator is working to improve its performance and ranking. The overall goal of the program is to influence airlines and corporate operators to fly new generation quieter aircraft and operate as quietly as possible at the Airport, along preferred routes. It also will include sustainability criteria (such as emissions) in subsequent iterations of the program. The Fly Quiet Program will focus on continued improvement and collaboration with the users to reduce noise on a voluntary basis.

**Scenic Helicopter Tours.** The National Parks Air Tour Management Act of 2000 ("ATMA") requires the preparation of a management plan before scenic air tours may be conducted over a national park. The ATMA provides an exemption for overflights while landing and taking-off from an airport.

In 2001, an operator sought authorization to operate scenic helicopter flights from the Airport. Because there was uncertainty as to how the ATMA applied due to the Airport's location within the Park, the Board adopted a moratorium on scenic flights pending receipt of an FAA opinion. That opinion clarified that scenic flights which overfly the Park merely for purposes of landing and taking-off, did not trigger application of the ATMA. The Board was then required to lift its moratorium. After the summer of 2002, no scenic helicopter tours occurred from the Airport for the next 18 years.

In August 2018, the Airport received an application from Wind River Air LLC (WRA) to provide scenic helicopter flights from the Airport. The Board requested that WRA consult with Grand Teton National Park, the National Wildlife Refuge, and the Town and County regarding those agencies' noise concerns before pursuing its application. WRA performed the requested consultations.



In December 2019, the Board hosted an Open House for the community to provide comments directly to WRA. In response to public concerns, the Board directed a review of its legal obligation to allow operations of scenic helicopter tours from the Airport. The Wyoming Congressional Delegation was consulted, and a letter was written to FAA Flight Standards asking for a re-evaluation of the safety R-44 helicopter which WRA proposed to operate. FAA responded that WRA's proposed operations met all applicable safety standards.

At its March 2020 meeting, the Airport Board listened to an entire day of public testimony, almost all of which was against approval of the WRA application. Noting that it was obligated by law, the Board approved the application and issued a License Agreement to WRA. The WRA License Agreement was renewed for another one-year term in 2021.

The WRA Agreement contains provisions designed to prevent overflights of the Park except when departing or arriving from the Airport. It requires that WRA comply with the Airport's noise abatement plan; avoid overflights of noise sensitive areas of the Park, as required by the 1983 Agreement; and comply with ATMA, to the maximum extent its operations from the Airport requires such compliance "as determined by the federal agency having jurisdiction." It also requires WRA's aircraft to be equipped with automatic dependent surveillance-broadcast (ADS-B) which when activated permits its aircraft to be tracked, and to activate the ADS-B whenever operating to and/or from the Airport.

At the request of the Board, WRA then consulted with public land management agencies, and entered into a Voluntary Commercial Air Tour Management Agreement for Public Lands in Teton County, Wyoming. Under this Agreement, WRA voluntarily agreed to fly routes with minimized impacts on "respected areas" of these public lands.

The Airport's noise and flight tracking system can often track low altitude operations, such as the helicopter flights, from ADS-B equipped aircraft in areas to the south, west and east of the Airport. Because of Blacktail Butte, low altitude operations to the north/northeast cannot be tracked

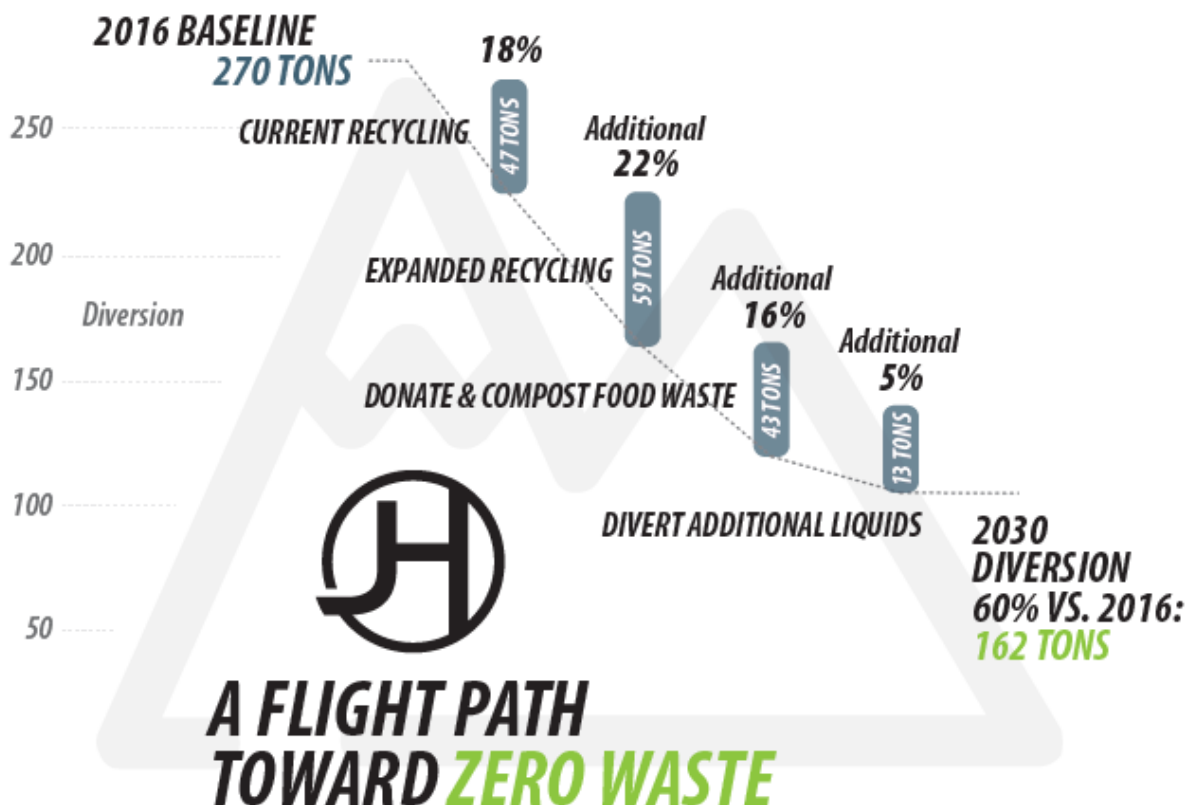
During 2020 WRA flew approximately 103 scenic tour operations from the Airport, and in 2021 it flew approximately 264 such operations. Since summer of 2020 there is no evidence of tour flights having overflowed the "noise sensitive areas" of the Park (Snake River and to the west), as defined in the 1983 Agreement. All such operations have flown east of Blacktail Butte. However, flight tracks of WRA operations show some overflights of portions of the Park along Gros Ventre Road and north of Kelly (southeast of Blacktail Butte). WRA denies that any flights have violated the ATMA. The Airport has made these flight tracks available to the Park and FAA for investigation. FAA has determined that these flight tracks did not evidence a violation of the ATMA.



## Waste Management And Recycling

**Recycling.** In the 1990s, the Board, with the support of all tenants, started a small recycling program. This program has grown from a limited number of recyclables to a broader program in partnership with the Teton County Integrated Solid Waste & Recycling Center (ISWR) and Haderlie Farms, a local composting organization. The Airport has multi-stream recycling available in the terminal for recycling aluminum, #1 plastic, glass and newspaper. The Airport also recycles cardboard, white paper, magazines, textiles, fluorescent bulbs, ink/toner cartridges, batteries, e-waste (electronic devices, parts, and equipment), waste motor oil, waste cooking oil and bear spray.

In 2018, the Airport conducted a waste audit and developed a Waste Management Plan. Aligning with local organizations to pursue the objective of net zero waste, the Board approved an ambitious goal called the Flight Path Toward Zero Waste: a goal of 60% diversion by 2030 (compared to the 2016 baseline).





With the onset of the pandemic, we saw challenges on the waste management side. There were substantial increases in single use items (i.e., to-go containers, packaged cutlery, gloves, masks, etc.). Additional Personal Protective Equipment for staff and users, as well as cleaning supplies had an impact on waste nationwide. However, over the last two years, the Airport's Waste Diversion Program has continued to keep pace, even with the challenges of COVID-19 (i.e., single use items, transition to more disposable materials).

Based on recommendations from the Waste Management Plan the Airport continued to implement additional initiatives. Notable progress in 2020-2021 includes:

- **Installation of new waste and recycling units in the Terminal, built specifically with the Airport's specialized recycling needs in mind**
- **Completion of a successful pilot project at the new rental car facilities to initiate a recycling/liquid program in hopes of future expansion**
- **Expansion of the composting program. The composting program at Jedediah's (back of house) was modified to increase ease of use for the restaurant workers and to help with the collection of additional compostable materials. With this enhanced composting program in place, the Airport is now realizing an upward trend in diversion of materials from the landfill by composting.**



**↑ 78%**  
Compostable material  
from 2020



**18,000+ lbs.**  
Compostables collected every year

- **Donated food/beverages are collected at the security checkpoint donation box. These collections average approximately 160 lbs. of goods monthly, which are then distributed by our local food rescue to those in need.**

An additional initiative that is unique to Jackson Hole, is the implementation of a bear spray rental program. The Airport has long had a special recycling program for bear spray, since it is not allowed through security or in checked baggage. Recently the Airport has added the ability for passengers to rent bear spray through an onsite vendor. In the waste hierarchy, reduction is considered preferable to recycling, and preventing people from "owning" and then discarding unused bear spray, visitors now have the option to rent bear spray and then return any unused spray.

The Airport tracks and reviews the waste diversion over time. In taking a deeper dive, the Airport examined landfill numbers comparing January - September 2019 with that of January - September 2021 and has seen a reduction in tonnage to the transfer station of 5.4% while also experiencing close to a 10% increase in overall passenger activity. This equates to a 13.8% decrease in waste per passenger. To date, the Airport has maintained an annualized diversion rate of 37%.

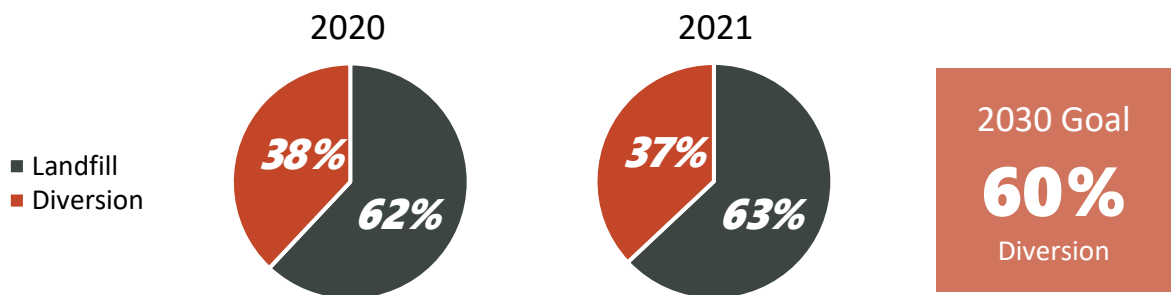


The Waste Diversion Program has increased diversion over the past few years; however, the rate of diversion has plateaued in this last year. Reasons for the plateau are likely a result of challenges due to COVID-19, as well as having already accomplished implementation of core waste reduction initiatives. When the diversion rate plateaus, it is important to evaluate what the primary drivers of this could be and assess additional actions/programs to keep moving toward the Airport’s overall environmental goals.

To continue toward the goal of 60% waste diversion by 2030, the Airport will focus on what measures have been working, as well as where improvements in these programs can be made. Elements targeted for 2022 include enhancing the recycling program at the rental car facility (including potential liquid diversion), improving Jedediah’s composting program (with the new remodel) and adding new waste stations where needed. The Airport will continue to track overall waste diversion and work to identify additional opportunities for improvement in programs while working with other environmental stakeholders to put into place new programs and technologies beneficial to increasing the diversion rate.

The waste tracking tool was completed in summer 2019, and initial implementation of waste management initiatives showed an increase in the diversion from 18% in 2016 to 26% in 2019 (as reported in the last Biennial report). As a result of the initiatives indicated above, the diversion rate increased to approximately 37% for 2021.

Airport Waste Diversion and Disposal – January 2020 to December 2021



↑ 14.4 tons  
Waste Avoided

↑ 0.6 tons  
Waste Donated

↑ 25 tons  
Waste Recycled

↑ 3 tons  
Waste Composted



## Air Quality and Emissions

**GHG Emissions Inventory.** In 2020 and 2021, the Airport continued to work on measures to reduce and offset its greenhouse gas emissions. In 2019, the Airport completed a baseline Greenhouse Gas Emissions Inventory based upon the Airport Cooperative Research Program (ACRP) methodology. The data was based upon 2017 data in order to align with the most recent Teton County GHG Emissions Inventory, which was an update to the County's 2008 GHG report. Of the total 56,363 tons of GHG emissions associated with the Airport, most (95.4%) are associated with aircraft, which the Airport neither owns nor controls. 1.4% of the emissions (774 tons) are Airport controlled, which includes elements such as employee commute, fleet vehicles owned by the Airport, and facility heating/cooling/lighting. Due to the low emissions factor in the valley (owing to the presence of hydropower), the bulk of the Airport controlled emissions sources comes from the employee commute, representing more than 50% of airport emissions, which is currently offset through the Good Traveler program (see below). The Airport is coordinating with the Jackson Hole Climate Action Collective, as an active member, to help facilitate and align with the next GHG community wide emission inventory and climate action plan.



**Good Traveler Program.** In 2019, the Airport became a member of the Rocky Mountain Institute's Good Traveler Program, a program focused on offsetting greenhouse gas emissions associated with travel. As one of the early adopters, the Airport continues to be an active member of the advisory board for the Good Traveler Program, which is focused on improving the

program. While reductions are an important part of becoming net zero, because such a small portion of the overall GHG footprint is controlled by the Airport, the Board decided to take voluntary action to encourage individuals flying through the Airport to offset their emissions. Based on current costs, an individual can offset 1,000 miles of flying or 400 miles of driving with a \$2 offset. These offsets are available and advertised through the Jackson Hole Airport Wi-Fi landing page and social media outlets. **In 2020 and 2021, the Airport continued to offset all airport-controlled emission sources in this manner, including employee commute, Airport fleet and facilities. Airport emissions offsets to date total over 1,378.4 tons.**



## Emissions Reductions to Date from Good Traveler Program

The Good Traveler Program at JAC resulted in a total reduction of:

# 1,378.4 metric tons

In Green House Gas Emissions

-OR-

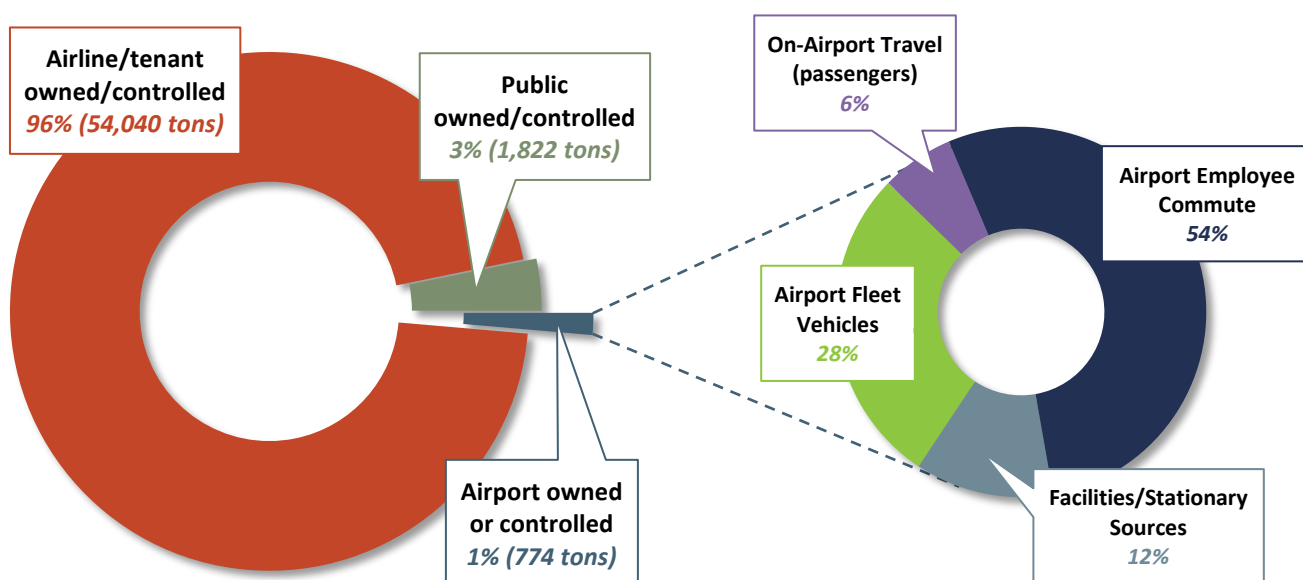
 **300**  
Passenger vehicles driven

 **166**  
Homes' energy use

 **22,792**  
Seedlings planted

Additional outreach and partnerships to expand this program are planned throughout 2022, including partnering with a local organization to fund a local carbon reduction project to target the offset funds generated by Airport users in the Jackson Hole community. While there are currently regional offsetting projects, a local project can provide more localized benefits by bringing a carbon reduction project to the valley.

## 2017 Airport-Wide Greenhouse Gas Emissions (56,363 Total Tons)







**Climate Mitigation Partnerships.** The Airport recognizes that the aviation industry contributes to climate change and is dedicated to working on mitigating climate change where able. In 2021, the Airports Council International signed on to a net zero goal for the aviation industry by 2050. This commitment paired with local goals show the importance of this issue. Since the last Biennial Report, the Airport became a working member of the Jackson Hole Climate Action Collective, is partnering with the collective on the Climate Action Plan (CAP) Development and is looking for additional ways to mitigate climate change.

**Sustainable Aviation Fuel (SAF).** Sustainable Aviation Fuel is a low carbon sustainable aviation fuel made from renewable biomass and waste resources that results in a substantial reduction in overall carbon footprint. In 2019, the Airport provided 7,300 gallons of blended sustainable aviation fuel to Jackson Hole Aviation, the Fixed Base Operator (FBO). While this event was used to raise awareness and showed that SAF is both safe and results in a substantial decrease in emissions, limited SAF supply, and the location of that supply is currently the largest hurdle in implementing SAF on a large scale. While SAF



currently is allowed to be blended with conventional fuel, in 2020, United Airlines completed the first flight where one aircraft engine operated with 100% SAF. The Airport is tracking these developments and additional suppliers and looking for opportunities to integrate SAF on a broader scale in the future.



## Energy And Power

**Energy and Power.** Since 2011, when the Airport received LEED Silver Certification from the U.S. Green Building Council for the Terminal Building Expansion, the Airport has targeted additional terminal updates to support energy reduction. Additional energy efficiency upgrades since then have reduced the Airport's energy consumption by 117,900 kilowatt hours per year. Power supplied to all airport owned and operated facilities is now 100% Green Power.

**Membership in US EPA Green Power Partnership Program.** In 2019, the Airport became an official partner of the US EPA Green Power Partner Program and continued the partnership in 2020 and 2021. This is a voluntary program that encourages organizations to purchase green power (power generated by renewable energy sources) to reduce their environmental impact. The partnership currently has more than 1,700 partner organizations voluntarily using billions of kilowatt hours of green power annually. The Airport works with Lower Valley Energy to procure 100% of its annual electric use through green power sources through local and regional green power sources such as Horse Butte Wind Farm, and several micro-hydroelectric facilities and other regional wind farms.



## Water Quality

**Per- and Polyfluoroalkyl Substances (PFAS) are a substantially new element to this year's biennial report and are described in this section.**

**Background.** PFAS, a family of over 5,000 chemicals, is found in a wide range of everyday products such as non-stick pans, microwave popcorn bags, water repellant fabrics and applications, pizza boxes, and even some brands of dental floss. In recent years, PFAS has been determined to have potential health impacts.

In 2016, the U.S. Environmental Protection Agency (EPA) established a lifetime health advisory (LHA) of 70 ppt (parts per trillion) for PFOA and PFOS (two PFAS compounds) in drinking water based on the agency's assessment of peer-reviewed science. Lifetime health advisories are concentrations that are not expected to cause adverse non-carcinogenic health effects after a lifetime of exposure. The LHA is based on exposure of a 70-kg (154 lbs.) adult consuming 2 liters of water per day, for a 70-year lifetime. It is considered a chronic or long-term health advisory. As of the time of this report, PFAS has not been classified as a hazardous or toxic substance, or as a carcinogen, by EPA or the Wyoming Department of Environmental Quality. Although the EPA health advisory is non-enforceable and non-regulatory, it provides the best currently available reference value for state agencies and other public health officials in evaluating PFAS concentrations in drinking water.

EPA has also adopted 70 ppt as the "preliminary remediation goal" for cleanup of PFAS in groundwater. Although this preliminary goal is non-enforceable and non-regulatory, it also provides the best currently available reference value for state agencies and other public health officials in evaluating PFAS concentrations in groundwater.

**Airport Considerations.** PFAS is also found in high-performance fire-fighting foams. As a certificated air carrier airport, the Jackson Hole Airport is required by the FAA to use Aqueous Film Forming Foam (AFFF), which contains PFAS, as a fire extinguishing agent for aircraft fire emergencies. Because AFFF has been discharged over a period of years at the Airport, as required by FAA, and because the Airport is committed to the safety and health of its passengers, staff, and surrounding community, a voluntary program was initiated to:

1. **Limit the future use of PFAS.**
2. **Identify if there were any PFAS contaminants on the Airport and surrounding areas.**
3. **Ensure that drinking water sources are preserved to the most protective standard adopted by any jurisdiction in the United States.**

**Steps Taken to Limit Future Use.** The Airport has implemented measures to limit the use of AFFF containing PFAS at the Airport going forward. While the FAA still requires the use of PFAS in emergency situations until a suitable alternative can be found, the Airport has identified ways to minimize future use of the required AFFF unless required for life safety.



Under these measures, PFAS will only be used on the Airport under circumstances where it is necessary to protect human life. These measures include:

- **Eliminating the need to discharge foam for required training exercises.**
- **Purchasing and using a “No Foam” system which eliminates any discharge of AFFF for required Aircraft Rescue and Firefighting (ARFF) vehicle equipment calibration.**
- **Transitioning to a MIL-F-24385F certified AFFF product containing PFAS ingredients that have the lowest risk to human health.**
- **Making changes to post-emergency response plans, so to the maximum practical extent there will be timely containment, collection, and proper disposal of AFFF containing PFAS in the event of an aircraft fire emergency.**

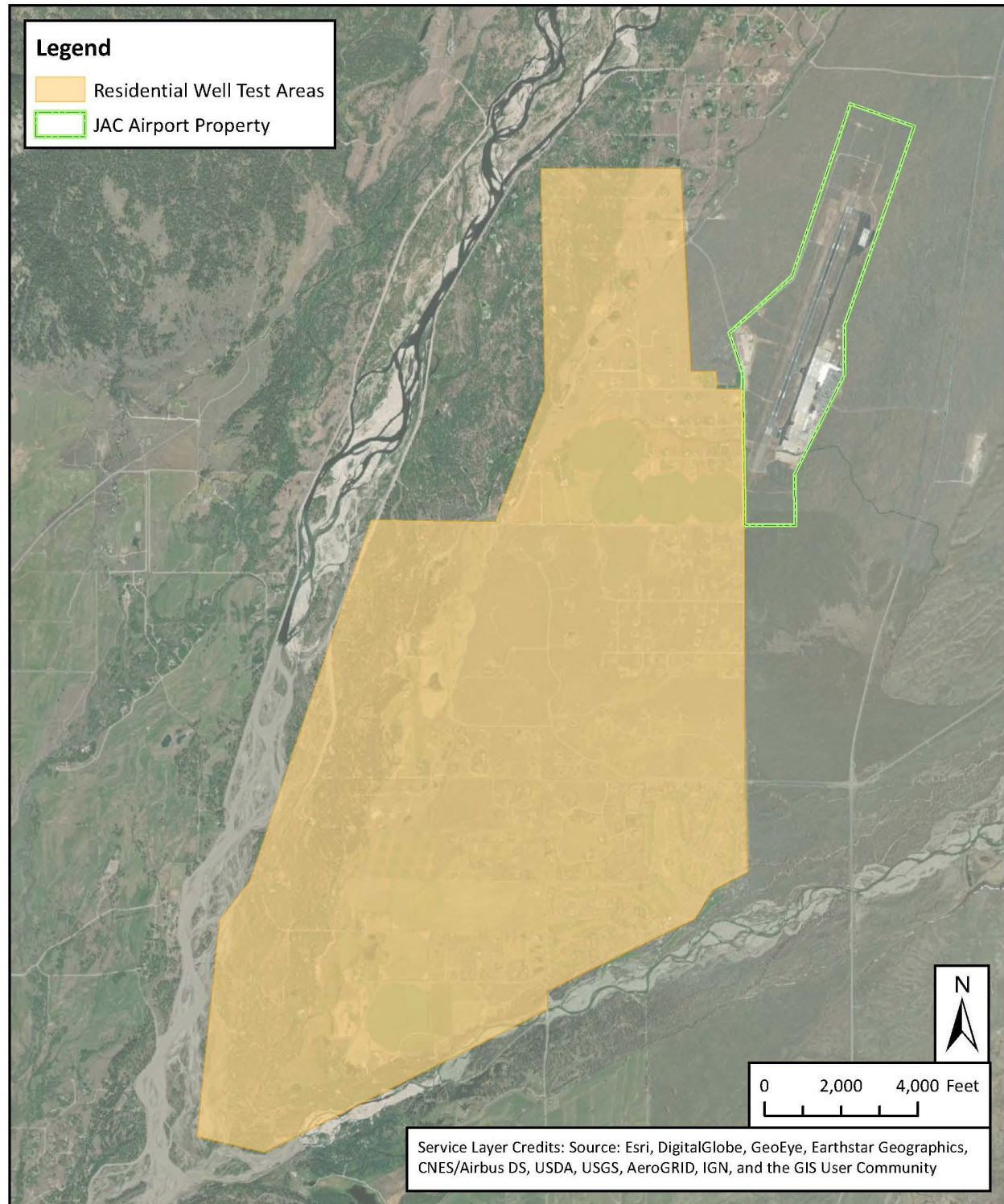
The Airport is staying abreast of changes to FAA requirements with respect to the use of AFFF containing PFAS and is preparing to shift away from such use as soon as possible, if and to the extent FAA authorizes the use of a PFAS-free AFFF product.

**Investigation Summary.** Understanding that fire-fighting foam containing PFAS has been used on Airport property in the past, the Airport proactively initiated groundwater sampling on and off Airport property to determine if and to what extent PFAS exists and had migrated. This investigation was voluntary; the Airport had not been directed by any agency, authority, or regulatory requirement to undertake this process. The Airport has provided all investigation reports to, and communicates regularly with, the Wyoming Department of Environmental Quality, Teton County Public Health, the Teton Conservation District and Grand Teton National Park. The Airport chose this path as part of its commitment to protect the community and the natural environment.

To date, Airport wells were tested on three separate occasions in 2020 and 2021. PFAS concentrations in two wells initially exceeded the 70 ppt threshold. However, tests conducted in November 2021 indicated that in at least some of these wells, PFAS concentrations have dropped below the 70 ppt threshold. Continued semi-annual testing of these wells will monitor PFAS concentrations for trends.

This on Airport testing led the Airport to initiate voluntary testing of groundwater from wells in neighborhoods to the west and southwest of the Airport between February 2020 and November 2021. Only one home in the Phase I testing area tested above the 70 ppt Lifetime Health Advisory established by the EPA. The Airport Board, in an abundance of caution, provided whole house filtration systems certified to remove PFAS to each homeowner that requested such a system within this Phase I testing boundary. The groundwater study area was then expanded to Phase 2 and Phase 3 areas to better determine the extent to which PFAS had migrated off the Airport. With this boundary having been defined, the Airport is now committed to an ongoing monitoring program of select wells twice a year to determine if PFAS levels in the area are changing over time. Test results for each phase are summarized below.

## Groundwater Study Area







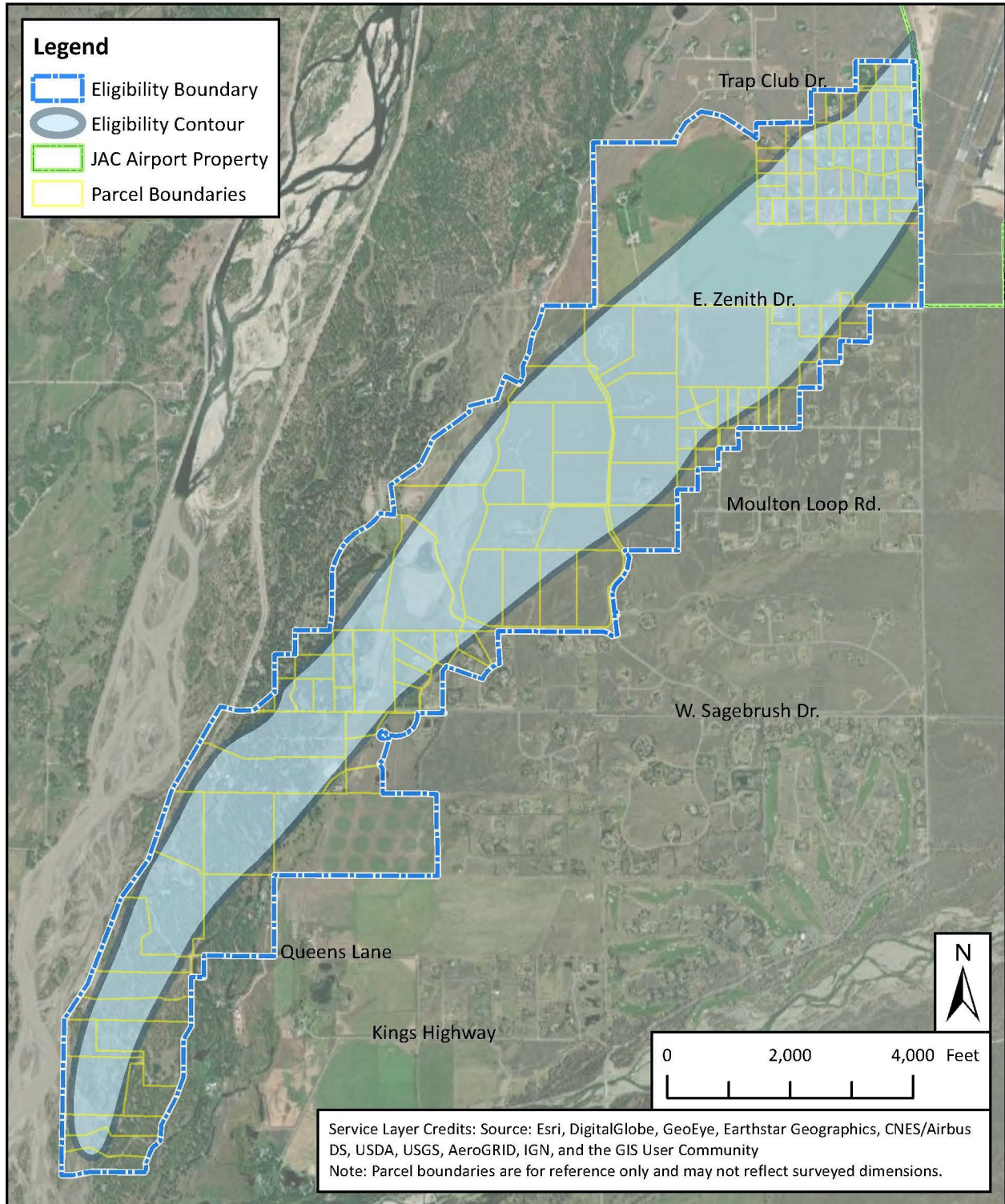
## Groundwater Test Results

| Phase                                      |  | Number of Homes Tested |  | Results > 70 ppt LHA |
|--------------------------------------------|--|------------------------|--|----------------------|
| <b>1</b>                                   |  | <b>32</b>              |  | <b>1</b>             |
| <b>2</b>                                   |  | <b>13</b>              |  | <b>0</b>             |
| <b>3</b> <i>(3 Utilities serving 100s)</i> |  | <b>74</b>              |  | <b>0</b>             |
| <b>3A</b>                                  |  | <b>6</b>               |  | <b>0</b>             |

**Eligibility Boundary for Airport-Provided Residential Drinking Water Filters.** As noted above, the Board initially offered whole-house filtrations systems to all homes within the Phase 1 testing boundary. On June 29, 2021, the Board voted to offer whole-house filtration systems for installation on domestic water wells in the Phase 2 and 3 areas, which based on available testing data from domestic water wells, are estimated to test at or above a 10 ppt threshold for combined PFOA and PFOS. An “allowance for variability” concept was authorized for use in developing both the Eligibility Contour and the Eligibility Boundary (see Eligibility Map Figure). This will account for possible seasonal testing, and other factors contributing to variability over time. The level of 10 ppt was determined to be a conservative threshold, as compared to the LHA of 70 ppt, in order to provide an increased level of consideration for the community.



Residents whose parcels fall within the Eligibility Boundary are eligible to receive, at no cost to them, a whole-house domestic water filtration system that is certified to remove PFOS and PFOA. Water filters will be provided for domestic water wells only. The Water Filtration Table below provides a summary of the filter systems installed as of December 2021.

## Eligibility Boundary for Airport-Provided Drinking Water Filters





## Water Filtration Systems Installed to Date

| Phase | Number of Filter Systems                                                          |    | Number of Homes                                                                     |    |
|-------|-----------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------|----|
| 1     |  | 51 |  | 41 |
| 2     |                                                                                   | 12 |                                                                                     | 7  |
| 3     |                                                                                   | 19 |                                                                                     | 8  |

The Board also decided to provide, at its expense, one year of replacement filters for each system installed. The original and replacement filters will together maintain the systems for a period of two years after initial installation. As this anniversary approaches, the Board will review the available groundwater data to determine if additional filters will be provided at Board expense.

**Additional Sampling.** The Airport is scheduled to replace its runway in the Spring of 2022. This project will disturb soils which may be contaminated with PFAS. In December 2020, the Airport therefore conducted an on-site investigation within the 2022 runway project to determine the extent to which PFAS is found in Airport soils. The investigation consisted of 28 soil borings with three samples taken at various depths and into the water table with a “grab” groundwater sample collected.

PFAS compounds were detected in 14 of the 28 borings. PFOA and PFOS were not detected above the modified Human Health Screening Level in the zero to five feet below surface level in any of the 28 borings. The runway project depth is typically less than five feet; thus, the project should not contact soils which are contaminated with PFAS above the modified Human Health Screening Level.

***The Airport continues to evaluate next steps in the process to better refine its understanding of PFAS in groundwater under and around the Airport. The Airport plans to continue collecting data to determine the extent to which PFAS levels in groundwater vary seasonally and change over time. The Airport continually updates its PFAS webpage and is dedicated to keeping the public informed. It also continues to work with local partners on this issue and was grateful to be the recipient of a \$40,000 grant from the Teton Conservation District to support a portion of the PFAS sampling.***

**Water Quality Monitoring.** The monitoring above is specific to PFAS chemicals, as an emerging issue. The Airport has long supported water quality modeling due to its location in the National Park and because the Snake River is identified as a Class 1 watershed. The United States Geological Survey (USGS) has been conducting the Airport’s water quality monitoring for 10 years at 19 wells located north of the Airport, and to the south and southwest of the Airport. In 2019, the Board updated their contract with USGS to do annual water quality modeling near the Airport, and this type of water quality monitoring will continue, supplemented by the additional PFAS monitoring noted above.





The cost of this monitoring to the Board was approximately \$358,218 for a five-year term. Results from the historic studies include:

- **Generally, water in the Snake River Alluvial Aquifer down gradient from the Airport was determined to be of good quality with no constituents exceeding USEPA maximum contaminant levels or advisories.**
- **Previous studies did not detect petroleum products or glycols above laboratory reporting levels; however, results of water quality monitoring indicated low dissolved oxygen and corresponding high iron and manganese concentrations, as well as low concentrations of triazoles, which can be indicative of small amounts of deicing fluid seeping into the groundwater system.**

The Board will continue to work with USGS and other agencies and partners to better understand the conditions within the aquifer.

**Stormwater Detention and Filtration.** In 2019, the Airport Board completed a stormwater detention and filtration system for the entire landside area of the Airport. In partnership with the Teton Conservation District, the Board made a \$2.5 million investment in protecting water quality, continuing its legacy of environmental stewardship. Stormwater runoff from all landside impervious surfaces as well as all airside aircraft parking ramps now filters through the system, removing oil, sediments and other materials before being released into the soil and eventually groundwater. This results in substantial protection to the local Class I aquifer. The system allows for a significant decrease in total suspended solids (80% minimum) and a decrease in total petroleum hydrocarbons (upwards of 90%) as a biologically active "filter cake layer" builds up in the system over time. The system was built to be capable of capturing and filtering a 100-year storm event.



***In connection with the runway reconstruction project scheduled for spring of 2022, the Airport will be installing nearly 6 miles of slot drains, two (2) on each runway shoulder, the full length of runway and paved safety area. The slot drain system will divert runoff water to the Airport's existing storm water filtration system. This will capture virtually all of the stormwater and deicing within the entire airfield. Though it will reduce the capacity of the filtration system (reduction to a 5-year flood event rather than the 100-year event) but filtering all airfield stormwater runoff it will have a positive impact on water quality.***

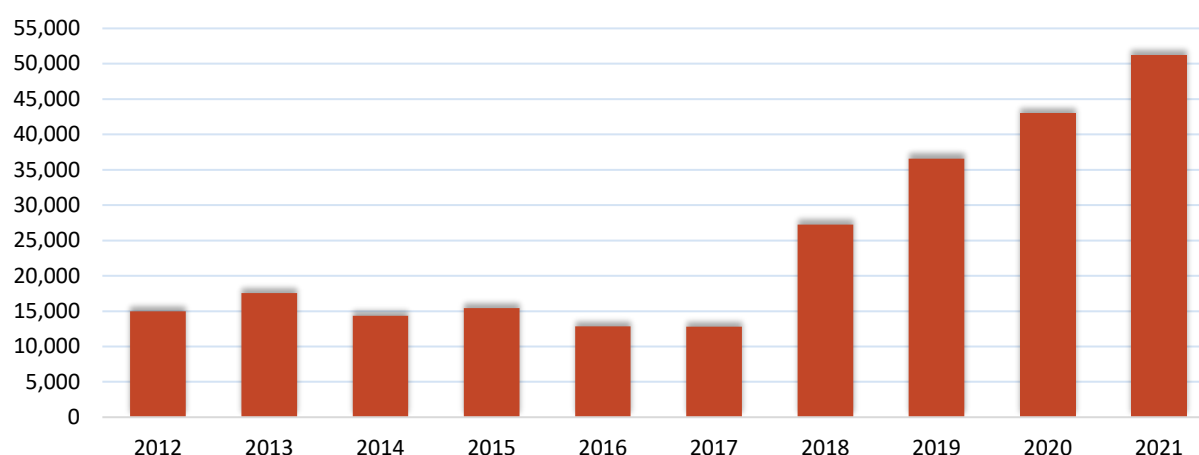


**Glycol Recovery.** The Airport has constructed an aircraft de-icing pad at the north end and just to the east of Taxiway Alpha. The de-ice pad parking spots have been reconfigured and are large enough to handle two Boeing 757s or three 737s simultaneously. There are two spent glycol collection drains on the east and south sides of the pad, which funnel the used glycol into a 30,000-gallon underground collection tank, which is just south of the concrete pad. There is also an underground valve that can be closed to divert rainwater and other precipitation away from the collection tank during times (or seasons) when de-icing of aircraft is no longer necessary.

Before the spent glycol is collected, it flows thru two oil-water separators which are 1,000 gallons, and 3,000 gallons respectively. The tank monitoring system is powered by four large solar panels, which supply power to a battery bank that sits next to the tank volume display panel.

When glycol is applied to aircraft some falls to the ground and is available for collection. Although the concentration of glycol in the fluid collected at the pad is lower than historical levels, the amount of glycol collected is significantly higher than in the past, which can be due to many factors, including airline deicing practices. The recovery data after construction of the deicing pad is included in the following graphic. The Board's goal is to collect and recycle as much glycol as possible. This means that snow melt and other water is collected as well. When snow and other water is collected (depending on weather conditions), this leads to lower concentrations, but maximizes the glycol removed from the environment, which benefits overall water quality.

#### Deicing Gallons Recovered (2012-2021)



**Wetland mitigation work in GTNP.** The Enterprise Ditch crosses the Airport and is used seasonally for off-Airport irrigation. As part of the landside improvements project, this Ditch was put into a culvert, which impacted approximately 0.3 acres of wetland. The Board worked with the Park to mitigate these impacts on an offsite location within the Park (Christian Creek). The restoration and revegetation work done at Christian Creek was completed in October 2019 and was monitored in 2020 and 2021 to ensure success of the project.



## Wildlife Management

The Airport has a Wildlife Hazard Management Plan (WHMP) that was developed in coordination with the National Park Service. The WHMP sets forth strategies to (a) increase separation between aircraft and sage grouse, through restoration of brood rearing habitat in disturbed areas of the Park, to draw sage grouse hens farther from aircraft movement areas and eventually outside of the Airport boundary; (b) restore two historic lek sites and develop a satellite lek near the restored brood-rearing habitat located off-Airport to attract male sage grouse; and (c) modify Airport conditions to make areas within Airport boundaries less attractive to sage grouse. Implementation of the WHMP alternatives and Greater Sage-Grouse Habitat Restoration Plan should enable the Board to minimize the risks of wildlife and bird strikes within this environmentally sensitive ecosystem.

The Upper Snake River Basin Local Sage-Grouse Working Group awarded a \$20,000 grant to the Park Service for this project. The remainder of the project funds have come from the Airport Board. The Park has been processing the sites to ensure they are weed and exotic plant free and reestablishing the native vegetation to better support Greater Sage-Grouse moving into those areas.

***New in 2021, the NPS has started work on a satellite lek off Airport property. The first step of this project is to eliminate invasive species and make the area attractive to the Greater Sage-Grouse. Additional work is expected on this during 2022 and 2023 and the Airport continues to be a contributing member of the Greater Sage-Grouse working group.***



## Visibility and Screening

The Airport has planted trees and other native vegetation to reduce the visual impacts of Airport buildings. The Airport will continue to plant additional trees and replace existing trees to improve the overall visual screening of Airport facilities and buildings year-round.

The Airport also continues to work with the Dark Skies Initiative to reduce light pollution and protect the scenic night sky in the Park and Jackson Hole. New in 2020 and 2021, the Airport worked with contractors to continue these principles of low light and screening to the new parking areas and changes to traffic flow in the terminal area.



# Community & Employee Programs



People are an integral part of any comprehensive sustainability program. “People Helping People” is the mission of the Airport. This mission was more important than ever since 2020 and the onset of the COVID-19 pandemic. The Board and its employees seek to embrace this mission in every aspect of airport operations. Whether we are helping guests, co-workers, or partners, we seek to operate as a team at the Airport and to support the community. The Board therefore works to integrate the Jackson Hole community in its sustainability programs, initiatives, and environmental strategies. The Board strives to support our partners, staff, and broader community initiatives through the various programs highlighted below. The achievements during the last two years highlight how the Airport continued to support its employees, community, and overall goals, even in the face of challenges.



## Certifications and Awards

Certifications are one way to measure progress and to take steps toward building a cycle of sustainable, continuous improvement. Recognition and certifications help verify the path that the Airport is taking and how it stands in the community and the industry. The Airport received the following certifications or awards in 2020 and 2021:

- **Honored with the Jay Hollingsworth Speas Airport Award 2021 for Environmental Excellence.** The Jay Hollingsworth Speas Airport Award was established in 1983 and is co-sponsored by the American Institute of Aeronautics and Astronautics (AIAA), the American Association of Airport Executives (AAAE), and the Airport Consultants Council (ACC), and is given to airports that show exemplary innovation in community/airport/environmental enhancements. The Airport received the award based on its comprehensive sustainability achievements.
- **Awarded a \$40,000 grant from Teton Conservation District for PFAS-associated water sampling.**



- Recognized by Yellowstone/Grand Teton Clean Cities (YTCC) with Green Fleet Award for reduction of greenhouse gas emissions.
- BEST Assessment and Certification (Emerald Tier) Renewal through the River Wind Foundation: three years consecutively. This certification is described by the Riverwind Foundation: “The Jackson Hole Airport became the latest organization in Jackson Hole to reach the Business Emerald Sustainability Tier (BEST) level of sustainability performance. The standards in the BEST program are comparable to the world’s *most rigorous and comprehensive environmental, community, and economic sustainability criteria.*” <sup>1</sup>



## Collaborations

Collaboration within the community and broader agencies is a cornerstone of how the Airport operates. The Airport strives to be a good neighbor, and in 2020 and 2021 the following events, outreach programs, and actions were taken to increase collaboration at the Airport. This is also supplemented by the list of specific COVID-19 actions that are included in a pandemic focused section in the Resilient Resource category.

**Community Events and Outreach.** The Airport provided sponsorship, leadership, or assistance for the following community events in 2020 and 2021. While all these partnerships are still active, some of these programs were paused during COVID-19 spikes when needed for public safety. We look forward to continuing these partnerships:

- Touch a Truck Event with Jackson Hole Children’s Museum, Title Sponsor
- Participation in 4th of July Parade and other holiday parades
- Rotary Club High School Scholarships
- Dubois Aviation Days
- Flights and Feathers Program – partnership with Teton Raptor Center
- Pet Partners Program – therapy dog teams
- Host program
- High School Ambassador program
- JH Chamber program
- Womomentum Women in Leadership Participation
- Leadership Jackson Hole Program
- “Behind the Scenes” tours to school groups

<sup>1</sup>Riverwind Foundation Press Release, <https://228k3g4ee2bb2v3oe82te2b2-wpengine.netdna-ssl.com/wp-content/uploads/2019/07/JAC-BEST-Certification-Press-Release.FINAL-004.pdf>



- Expansive Terminal Art Program
- Water quality communications and coordination
- Homeowners Association (HOA) meetings, local organizations, and other presentations for community
- Isaac Crabtree – Construction video blogs
- Construction communication plan development for runway rehabilitation

**Community Partners.** In addition to the specific events listed above, the Airport’s community outreach program highlights key groups that are supporting the overall mission of the Airport by participating in community programs. Programs which the Airport and community partnered in/with during 2020-2021 include:

- Teton County Emergency Operations COVID-19 Task Forces
- Grand Teton Foundation Store
- Teton County Health Department
- Teton Conservation District
- The Good Traveler Program
- Jackson Hole Climate Action Collective
- Yellowstone -Teton Clean Cities
- Riverwind Foundation: Jackson Hole & Yellowstone Sustainable Destination Program
- Habitat for Humanity–ReStore
- Jackson Hole Children’s Museum
- Jackson Cupboard
- Jackson Hole Food Rescue: Reduce Food Waste (by donating all nonperishable food items collected at the checkpoint)
- Teton County Integrated Solid Waste and Recycling: “RRR” (Reduce, Reuse, Recycle) Business Leader
- Energy Conservation Works: Partner for Energy Efficiency
- Lions Club International: eyeglass recycling
- Browse and Buy: thrift store donations
- Jackson Hole Chamber of Commerce
- Northwest Chapter of AAAE Annual Conference Planning committee for 2021



## Employee Benefit Program

**Employee Housing Program.** Located in a competitive and expensive housing market, the Airport provides a housing and transportation stipend to full-time staff. This may allow some employees to live near Jackson while it assists others with their transportation expenses. This was updated in 2021 to account for changes in housing prices and was increased to \$1,000 a month per employee.

Additionally, the Airport has recently signed two master leases: a 2-bedroom apartment in Victor, and a 1-bedroom apartment in Kelly. These units will be used for short-to-medium terms for new employees moving from out of town, employees in transitional housing circumstances, or potentially for short-term emergency housing for someone who loses their housing. The Airport intends to be proactive in pursuing additional master leasing opportunities and sees this as a first step in the development of a longer-term housing strategy. For now, these two units have already proved to be highly valuable to our staff in providing stable and secure housing.

**Employee Referral and Incentive Program.** In 2021, challenges with staffing were prevalent nationwide. In that year the Airport approved a sign-on bonus of \$5,000 and a referral bonus of \$5,000, in addition to a service award program. This program was developed to be competitive in the hiring market, assist staff with the high cost of living and help with recruiting and retention.

Work has also just been started on a Career Portal for the Airport's web site. This will be a page on the web site where open job listings are featured, benefit information is shared, and applicants may apply online.

**Employee Survey.** In March of 2021, a biennial survey of all staff was conducted that included questions on housing, transportation, and employee satisfaction. Information from these biennial surveys continues to inform decisions on benefits, demographic trend analysis and retention initiatives. The Airport received high marks and employee satisfaction was found to be very high.







**Employee Training and Certification Program:** The Airport supports continuing education of its employees. In 2021, numerous Airport employees advanced their professional development. Certifications and promotions were achieved for many employees of the Airport, including in the following areas:

- A.A.E. Designation
- ACE Security
- ACE Operations
- Airport Security Coordinator
- Firefighting Certifications
- CPA License
- Leadership Jackson Hole
- Contractor License
- Wyoming Storage Tank Class A Certification

**Airport Host Program.** The Airport has implemented an Airport Host Program for the last few years. While it was modified during the COVID-19 pandemic, the Airport looks forward to continuing this program. The hosts greet arriving and departing guests, assisting with travel needs and questions about the facility and local area. The hosts are essential to our guest experience, and we continuously strive to go above the expectations of Airport users. The Jackson Hole Chamber assists the Host Program in partnership with the Airport during the winter months. The Chamber staff provide guests with local knowledge, hand out reusable shopping bags and serve beverages in the baggage claim area for arriving guests.

**Employee Storm Support.** During adverse weather events, the Airport provides staff with hotel rooms. This initiative supports a sustainable work force while allowing the Airport to provide a high level of service during storm events.

**Employee Volunteer Program.** In support of our motto, “People Helping People,” the Board encourages employees to participate in volunteer activities by providing the benefit of paid Volunteer Time Off (VTO). Employees may use VTO to contribute their time and talents to recognized charities, causes and not-for-profit organizations in the surrounding community. Employees may take up to 16 hours of VTO per calendar year to participate in their chosen volunteer program.



# Resilient Resource



The Airport provides access to some of the most iconic landscapes in the world, as well as a remarkable town, Jackson Hole Mountain Resort, the National Elk Refuge, and the National Parks. We strive to serve the community as the mass transportation of the skies. Resiliency is the capacity to adapt and recover from changing conditions. In that vein, when the world was faced with a global pandemic in 2020, it was a test to everyone's resilience, including the Airport. New to the resilient resource content this year is an entire section dedicated to the actions that the Airport took in the face of the pandemic. The Airport responded and adapted to the changes brought about by the pandemic.

In addition to our initiatives supporting our environment and our community, economic responsibility is an important part of resilience, and one that we embrace through providing exceptional service to Airport users while protecting the environment that draws the visitors in the first place. The Airport prides itself on the fact that the Airport is self-sustaining, with no use of local property or sales tax dollars. Below are some ways we are a resilient resource to the community and the aviation industry.



## COVID-19 Pandemic

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Below is a list of the initiatives the Airport completed in response to the evolving conditions to address airport specific and community wide health considerations.

- Received Global Biorisk Advisory Council Certification which validates our cleaning, disinfecting, and infection prevention program
- Airport staff has remained in constant contact with St John's and Teton County Health Department to coordinate and share information on best practices
- The Airport's PIO attends meetings with the community PIO group to stay engaged with community messaging and concerns
- In coordination with Teton County Health Department, free Vault (COVID-19) tests are available for Airport users in the baggage claim exit corridor
- When the County enters "Red" public programs held in the Terminal are paused, non-essential staff are encouraged to work from home when possible, and remote attendance is encouraged for Board meetings
- The Airport hired two full-time seasonal staff members to help ensure compliance with the Federal Mask Mandate
- Airport staff participated in Teton County Emergency Operations COVID-19 Task Force
- The Airport has updated safety and cleanliness standards at every stage of the pandemic based on best practices, including sanitation of airport nightly, installation of a bipolar ionization system on the HVAC, sneeze guards, sanitation stations, publicly available masks, spacing messaging (i.e., floor stickers), among many others.
- Air purifiers have been installed in the TSA Breakroom, Admin, and other locations where staff tend to congregate, as well as purchase of additional outdoor furniture to support staff break areas.



## Operations

The Jackson Hole Airport serves the Town of Jackson and Teton County, Wyoming, and is a gateway to Grand Teton National Park, Yellowstone National Park, and other nearby natural areas such as the National Elk Refuge. The Airport is part of the National Plan of Integrated Airport Systems (NPIAS) and is classified by FAA as a non-hub primary commercial service airport. The operational health of the Airport allows it to serve the community in a resilient and efficient way.

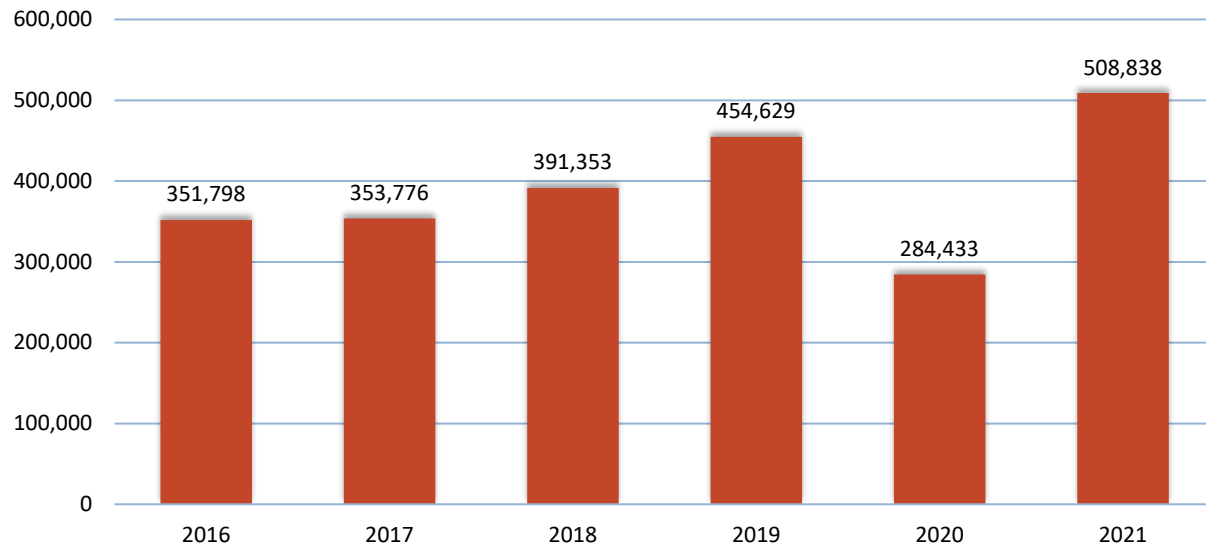
**The following is a description of the major categories of operations at the Airport during the 2020-2021 reporting period:**

**Air Carrier Operations.** 2020 saw a normal start to the year, with typical operations. As with many other airports, these operations and enplanements plummeted during March through May, during the first phase of the pandemic. Industry wide, there were questions about how quickly the aviation industry would rebound. Starting in the summer months, the Airport saw enplanements rebound quicker than most other airports. The outdoor recreation focused location paired with restrictions over international travel saw increased demand for places such as the Greater Yellowstone/Grand Teton area.

Commercial airlines operating regularly scheduled service at the Airport, either year-round or seasonally, change from time-to-time in normal years, and the pandemic also had an impact on this. For 2020-2021, the airlines serving the Airport were American, Delta, Alaska, and United Airlines, with Frontier Airlines providing summer seasonal service to Denver. New carriers during this period included the addition of Allegiant and Sun County. A total 284,433 passengers were enplaned in the pandemic year 2020, with enplanements rebounding to 508,838 in 2021.



## Jackson Hole Airport Enplanements



**General Aviation Operations.** The on-airport FBO, Jackson Hole Aviation, LLC, provides fueling and ground services to general aviation (private and corporate) and commercial airlines. It also operates hangars, located south of the Terminal, providing storage for aircraft. In the pandemic year of 2020 there were 10,807 general aviation operations at the Airport, with “operations” being defined as either a landing or take-off. In 2021, general aviation operations rebounded to 28,249.

**Ground Transportation Activity.** The Airport is located nine miles from the Town of Jackson and 21 miles from Teton Village. Public ground transportation is therefore important to meet the needs of the traveling public. The Board enters into annual contracts with providers of ground transportation services at the Airport. In 2020 and 2021, the Board entered into contracts with 31 and 40 ground transportation providers, respectively.

Two transportation network companies (TNC) also operate at the Airport. Under these contracts the independent drivers of Uber and Lyft may operate at the Airport. Airport access fees are charged using a “geo fence” which electronically detects when any in-service Uber or Lyft vehicle enters the Airport. These operations have increased from 13,272 in 2020 to 26,375 in 2021.

**Rental Car Activity.** The Board periodically solicits competitive proposals for a limited number of rental car companies that will be permitted to maintain a base of operations on the Airport (“on-airport rental cars”). As of 2021, the Airport was served by four on-airport rental car companies including Alamo, Enterprise, Avis/Budget, and National. Avis/Budget replaced Hertz in 2020. The Airport is also served by several off-airport rental car companies which offer shuttle service from the Airport to their locations in the Town of Jackson.



A Quick Turn Around (QTA) facility became operational in the winter of 2018-19. This replaced the separate facilities which the on-airport rental car companies had been using for over 25-years, and which had come to the end of their useful lives. Coordination with on-airport rental car companies was conducted in 2020 to partner on sustainability measures, including implementing a pilot program for waste reduction at the QTA. Sustainability language was also included in the most recent rental car contract language.

For the first time in 2021, the Airport entered into an agreement with Turo, a car sharing company that allows individually owned cars parked at the Airport to be used similar to the Transportation Network Companies. In 2021, rental cars experienced a shortage, and Turo provided users of the Airport additional options, while giving locals the opportunity to make money from an otherwise unused vehicle.

**Terminal Businesses.** Several businesses are located or supported in the Terminal building. Jedediah's operates a restaurant and gift shop in the secure passenger holding room and a snack bar in the non-secure lobby of the Terminal building. The contract with Jedediah's was renewed in 2019 and included sustainability language regarding the support of the Airport's waste diversion policies. Jedediah's worked with the Airport to refine the composting program. Waste diversion is included in the contract as well. In 2021, in response to the pandemic and because the restaurant will be closed for renovation for about six months in 2022, the contract with Jedediah's was amended and extended. The NPS operates a gift shop inside the passenger holding area. During 2020 and 2021 the Board also had contracts with three companies to provide vending services in the Terminal.

**Inter-Agency Helibase Operations.** Pursuant to a Second Amendment to the 1983 Agreement, Bridger-Teton National Forest and the Grand Teton National Park have established an interagency helibase at the Airport. The joint base consists of a 3,200 square foot building, two 30' by 30' helicopter landing pads and one 40' by 40' pad. In 2021, construction of two additional helicopter landing pads north of the existing location was completed. There is also spill containment parking for fuel trucks and a mobile communications trailer.

The helibase building houses offices, a crew ready room, a physical fitness room, a training/meeting room, a storage area stocked with gear and equipment for response crews, and an operations center. In 2020 and 2021, the crew based at the helibase responded to numerous wildland fires and conducted many short-haul search and rescue (SAR) operations in the Park and National Forest. The helibase directly serves 2.5 million acres of federal land and is available to assist in rescue and fire operations on 18 million acres across the Greater Yellowstone Ecosystem.



## Airport Planning

Planning is vital to having a facility which efficiently meets both current and future needs. Effective planning allows the Airport to adjust to changing conditions, meet tenant and user needs, reduce impacts, and create a cycle of improvement. Since the Master Plan Update of 2011 (20-year planning document), several supplemental plans have been completed. The first three plans listed below supplement previously completed planning materials that help guide airport improvements. The plans in boldface type below are new completions in 2020/2021 and will assist with planning going forward.

- **Completed a landside parking and traffic study in 2012, the results of which were implemented in 2018/2019 and will be included in the future Master Plan.**
- **Prepared an Updated Airport Layout Plan (ALP) that was submitted to FAA and approved in November 2019.**
- **Developed a Construction Phasing Plan and Communication Plan for the Runway Rehabilitation, slated for 2022.**
- **Produced a PFAS Management, Mitigation and Remediation Plan, to provide information to the public and affected governmental agencies regarding PFAS, and to be updated periodically.**
- **Completed a Sustainability Management Plan (SMP) in 2019, which is helping guide the Airport in its sustainability goals and implementation, creating a cycle of continuous improvement. This is planned to be updated in early 2022.**
- **Created a Sustainability Accomplishments Report in 2018, with a highlights report updated in 2021. In addition to the SMP, this Report details those items completed under the SMP. This will help track sustainability progress over time.**

*These plans created the foundation for the 2020-2021 Airport improvements which are summarized below.*



## Facility Improvements

**Terminal and Terminal Area Improvements.** Based on existing and future needs, several projects are in the planning, design or construction phase to make terminal and terminal area improvements. Terminal improvements include:

- **Gate Remodel and Expansion: The gate area adjacent to the restaurant will be expanded in 2022, adding two additional gates and common use technology for flexibility with space and airline operations. The pet relief area and mothers' room will also be relocated.**





- **Terminal Food Market:** The addition in 2021 of a new Marketplace in the baggage claim building for enhanced user experience and options. This includes additional seating area and options for food, drink and other essentials.
- **Checkpoint Project:** The Security Screening Checkpoint is the oldest part of the terminal building at the Airport. To accommodate new security screening technology, the Checkpoint will be underdoing a complete remodel and expansion. The holdroom area (area where passengers wait to board aircraft) adjacent to the checkpoint will also be expanded by 1,000 square feet to create additional seating and flexible space.
- **Restaurant Remodel and Expansion:** Restaurant area expansion to twice its current size in 2022 will allow for additional space and updated seating and service areas. This will include a full basement to allow for additional storage. The design has taken into account flow of foot traffic, ease of access and efficiency.
- **Entrance Vestibule and backflow:** Updates to the exit for deplaned passengers in 2021 allowed for enhanced security and reduced the need for staffing at that location.
- **Temporary Airport Administration Space:** In 2021, the board room and Airport administrative offices were relocated to a temporary modular building to allow for other terminal expansions.

**Runway Reconstruction.** The Airport has a single 6,300-foot runway (at an elevation of 6,450 feet), which was built in the 1960s to accommodate the Douglas DC-3 aircraft then serving the Airport. The runway is 150 feet wide, and is asphalt overlaid with a porous friction course surface. Due to the age and the condition of the pavement, in 2019 the Airport started planning for a runway reconstruction project, which was designed, bid and initiated in 2021. In 2022, the Airport will be closed during the spring to complete this important project. A detailed communication plan was developed to message and coordinate the Airport closure.

Sustainability was integrated during the planning and design of the runway reconstruction project, including the following sustainability features:

- **Nearly 6 miles of slot drain will be installed (2 on each shoulder, full length of runway & paved safety area).** The slot drain system will divert runoff water to the Airport's existing storm water filtration system.
- **Screened and crushed ~20,000 CY of subbase course onsite at the Airport using native material excavated onsite:**
  - Kept ~1,300 - 2,000 trucks off the road (that would have likely hauled material from Idaho Falls)
  - Saved ~28,000 - 45,000 gallons in fuel for hauling alone (roundtrip to/from the Airport to Idaho Falls)
  - Saved 10%-30% (estimated) on the unit cost for P-154 subbase course compared to importing the material. Total project cost savings ~\$300k.
- **Will reuse and recycle a portion of the existing pavement section and incorporate into the new pavement section as full depth reclamation—amounts to ~85,000 CY:**



- Will keep ~5,500 - 8,500 trucks off the road (would have likely hauled to Idaho Falls)
  - Will save ~120,000 - 187,000 gallons in fuel for hauling alone (roundtrip to/from the Airport to Idaho Falls)
  - Total project cost saving ~\$3M - \$5M (estimated), includes the cost to import other material in lieu of using full depth reclamation.
- Will revegetate using native seed mixes acquired by GTNP staff.

**General Aviation Operation and Facilities:** A fixed-base operator (FBO) is an entity which is granted the right by an airport to provide aeronautical services such as fueling, hangaring of aircraft, tie-down and parking, and aircraft maintenance. At some airports, the FBO also provides aircraft rental, aircraft charter and flight instruction. To ensure that a wide variety of aeronautical services are available to the public on an airport, the airport owner typically grants the FBO the right to sell fuel, which is usually a lucrative activity, in exchange for the FBO's agreement to also make available a wide range of less lucrative aeronautical services.

Jackson Hole Aviation, LLC ("JHA-LLC") is currently the only FBO at the Jackson Hole Airport. JHA-LLC operates at the Airport under two types of agreements, (a) a Master Operating Agreement ("MOA") granting it the right to operate an FBO on the Airport, and (b) a lease of Board-owned hangars and related facilities. JHA-LLC is authorized to operate an FBO at the Airport under its existing MOA and lease through April 26, 2023, with no rights to renew.

In 2017, the Board determined that when JHA-LLC's lease expires in April 2023, it would exercise its "proprietary exclusive right" granted by FAA regulations, to own and operate the sole FBO on the Airport. The Board found that due to the Airport's location within a National Park, the area available for general aviation is limited, and having more than one FBO operating at the Airport would result in inefficiencies and duplication of facilities. These and other factors led to the Board's decision to own and operate the sole FBO at the Airport beginning in April 2023.

In years past, five general aviation hangars existed on the Airport. They were numbered 1 through 5 respectively, and each had been financed and built by the FBO. Hangar 5 also contains a general aviation terminal. Each hangar was built pursuant to an agreement that ownership would transfer to the Board upon the expiration of a term - usually 20 years. These terms have expired, and ownership of all hangars on the Airport has now transferred to the Board. Hangars 1 and portions of Hangar 2 are at the Airport and used for Board purposes for the storage of vehicles and equipment. Hangar 3 was obsolete and has been demolished. Only Hangars 4 and 5 now remain available for use by general aviation aircraft. Hangars 4 and 5 and the FBO terminal are also nearing the end of their useful lives.



## Security And Screening Updates

Security and screening are important elements of the experience at any airport. For JAC, having security as a function performed by the Board allows the Airport to adjust more readily to changing needs as operations fluctuate.

**Operation of Passenger Screening.** The Jackson Hole Airport is one of several airports in the country which have "opted out" of security screening performed by the Transportation Security Administration ("TSA"). Security screening for opt-out airports is performed by screening contractors under agreements with TSA which provide standards and funding. Due in part to its unique history and organizational structure, the Board is currently the only airport operator in the United States which itself has been awarded a screening contract by TSA. This program supports the community through employment of up to 58 screeners and allows the Airport to improve communication and enhance the customers' experience.

New for 2020/2021 were the measures the Airport screening team put in place to keep the traveling public and employees safe during the COVID-19 pandemic. These initiatives are detailed in the COVID-19 section of this document. Credentialing Authentication Technology (CAT) was rolled out at the Jackson Hole Airport in the fall of 2020. This technology provides even greater efficiencies and conveniences for passengers as they enter the security screening process. Additionally, a passenger screening area improvement project is currently underway to accommodate the next generation of screening technology. Staff will be working with screeners and the public to minimize disruptions during this construction project.

The Board operated passenger and baggage security screening at the Airport during 2020 and 2021 under a fixed-price contract with TSA. Pursuant to this contract, the Board has recruited, trained, and maintains a workforce of approximately 58 security officers and support staff. These officers operate both the passenger screening checkpoint and checked baggage screening, all in accordance with TSA standards and operating procedures. In 2021, the Board screened more than 500,000 passengers and their checked baggage. Screening wages were also increased to retain and recruit additional staff.

**Law Enforcement and Security.** Because it is served by scheduled air carriers, and security screening of passengers and baggage is performed, the Board is required by federal law to ensure a law enforcement presence at the Airport. In light of the volume of enplaned passengers, and the Airport's distance from the Town of Jackson, law enforcement personnel are required to be physically present at the Airport during all hours in which passenger or baggage screening is conducted.

To meet this requirement, the Board entered into a Memorandum of Understanding ("MOU") with the Town of Jackson under which law enforcement officers from the Jackson Police Department are stationed at the Airport. Under the current MOU, the Board reimburses the Town to provide these law enforcement services.



In June of 2021, the installation of the exit lane breach control system in the entrance vestibule was completed. This equipment has provided an automated solution and relieved the need to staff this access point.

In spring of 2021 the Airport began implementing an electronic key and lock system. The electronic key system allows the Airport to manage more efficiently over 100 doors that are not included in the access control system. These doors are primarily office doors. With the electronic key system, access can quickly be removed as needed and avoid the cost and time of rekeying doors. The system is currently being used in the airline and new administration offices. The conversion will continue to switch over other doors as additional construction projects occur.

**Information Technology Updates.** Many updates have been completed in the last two years to account for airlines operating at the Airport, including adapting to additional user needs with a focus on user experience and efficiency. The following projects were completed during 2020/2021.

#### **Expanded Common Use Platform**

- Accommodated three airlines in summer of 2020 to:
  - Four airlines winter 2020/2021
  - Seven airlines summer 2021
- Deployed four common use kiosks in the Ticketing Lobby
  - New overhead signage and integration with Common Use System
- Gate Information Displays (GIDs) Monitors installed in holdroom
- Deployed four common use kiosks in the Ticketing Lobby
- Upgraded firewall equipment for greater integration with the airlines

#### **Standardization of fiber and copper cabling**

- Preinstalled common use cabling between rooms
- This simplifies deployment of new tenant equipment, and eliminates abandoned infrastructure when tenants depart

#### **Additional IT Improvements**

- New IT room in South Basement
- Upgrade to a digital Automatic Terminal Information System (ATIS) project in the Control Tower which has helped air traffic and airline efficiency
- Upgraded Milestone Camera System
- Expanded camera storage for retention purposes



## Financial Management And Planning

Successful financial planning and management is another important element of making the Airport a resource for the community. New to 2020 and 2021 are considerations relative to the pandemic and the associated Congressional actions that have supported recovery of the aviation industry, in response to the historic downturn. Below is a summary of the finance and capital improvement plan, which is a mark of the overall financial health of the Airport.

**Overview of Airport Finance Requirements.** In terms of operating revenues, the Board is a financially self-sustaining entity. In 2020 and 2021, it received no operating revenue from Teton County, the Town of Jackson, or the State of Wyoming. All operating expenses are matched by operating revenues, which are generated by rentals and fees from airport users. These include airport tenants such as airlines, rental car operators, the fixed base operator and ground transportation providers. The Board also receives landing fees, fuel flowage fees and user fees from others who conduct business on the Airport.

Each year the Board establishes an operating budget based on expected revenues. Cash reserves are retained for those years in which revenues do not match anticipated expenses to account for both operating needs as well as capital project expenses.

The Board receives grants from the FAA, along with occasional grants from the Wyoming Aeronautics Commission for capital improvements at the Airport. New to this reporting period, additional federal funds have been made available due to the pandemic. The Airport has received Coronavirus Aid, Relief, and Economic Security (CARES) Act grant funding as well as the Airport Coronavirus Response Grant Program (ACRGP) funding, both targeted at assisting airports during the pandemic. The Airport also anticipates receiving additional funding from the latest Bipartisan Infrastructure Law.

To protect the FAA's investment, federal law provides that revenue generated by the Airport will be expended for the costs of the Airport, the local airport system, or other local facilities owned or operated by the Jackson Hole Airport Board as the airport owner, and which directly and substantially relate to the air transportation of passengers or property. This is generally described as a "revenue diversion" prohibition.

The Airport Board operates under other financial constraints. The 1983 Agreement requires that all rates and fees charged to the public by the Board and its subcontractors and licensees shall be fair and reasonable. As the recipient of FAA grants, the Board is also subject to an FAA requirement that it establish a fee structure which will make the Airport as self-sustaining as possible under the circumstances. In most cases, this requires the Board to charge market rentals and fees to airport tenants and users.



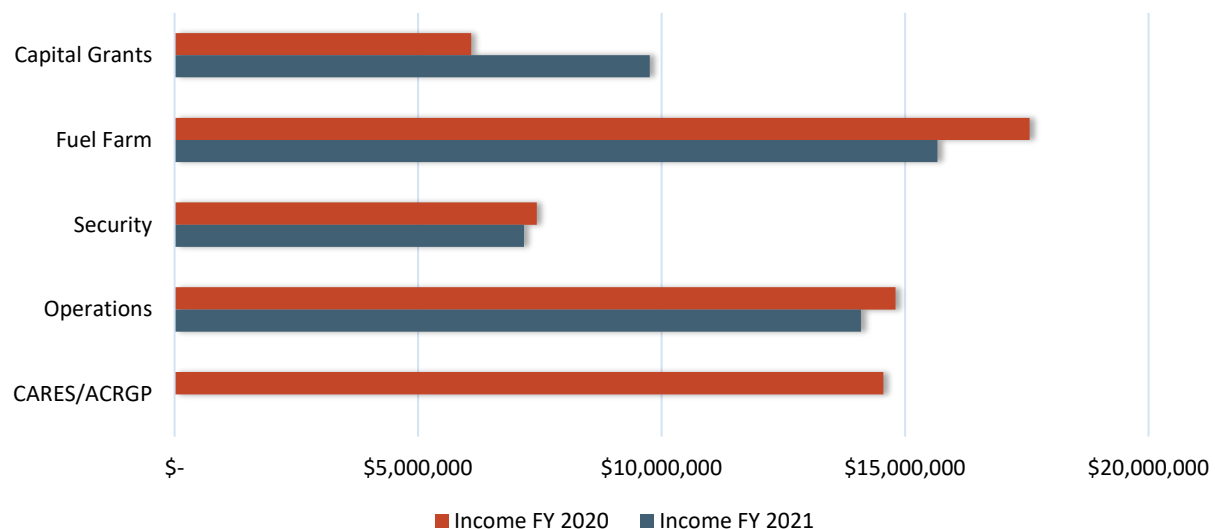


**Summary of Finances.** Operating revenues and expenses are those incurred with respect to ordinary airport operations. The Board's operating revenues and expenses from year to year will therefore depend on the Airport's aircraft and passenger volume. For instance, fees received from many tenants are on a "percentage of gross" basis; parking revenues are directly related to parking lot usage; landing fees and fuel flowage fees are directly related to aircraft activity. Operating expenses do not immediately and automatically mirror aircraft and passenger volume and must therefore be closely monitored and changed by the Board when appropriate.

A capital outlay is an expense for the purpose of constructing or extending the life of a fixed asset, such as the runway or a building. Capital outlays at the Airport are funded in large part through grant revenues and Passenger Facility Charge ("PFC") project reimbursements. Grant revenues are dependent on both the appropriation of federal funds, and the Airport's passenger volume upon which the level of grant funding is partially based. A PFC on the other hand is a congressionally authorized charge imposed by airlines, on each ticketed passenger that utilizes the Airport, up to established caps on each passenger's entire trip. PFC's may be used by the Board for capital outlays approved by the FAA. The amount of PFC reimbursements received by the Board is therefore related, but not directly proportionate, to passenger volumes at the Airport. PFC collections at the Airport are currently pledged through the year 2031 to repay outstanding debt which was taken out for the terminal expansion project.

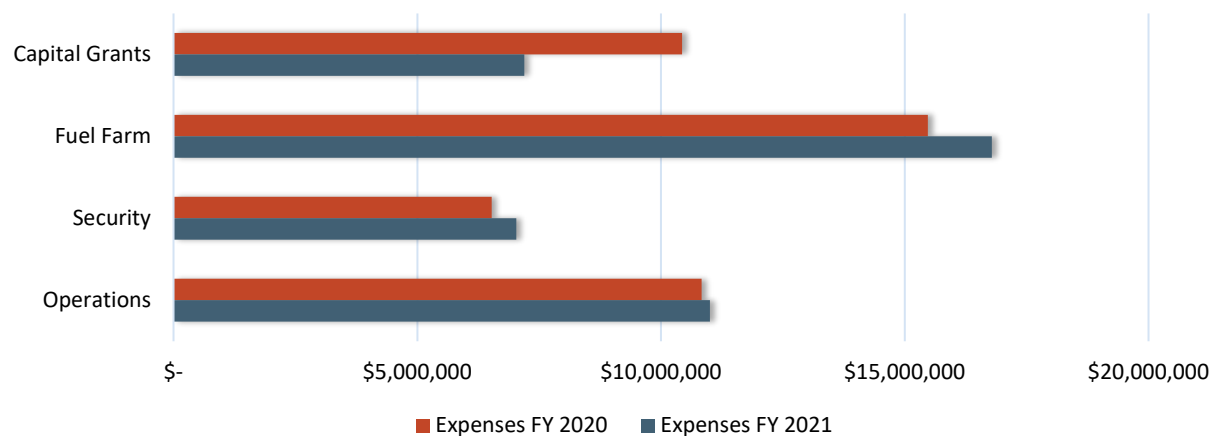
A summary of the major sources of revenue and expenses are included below, followed by a list of major projects. Note that the summary of income and expenses are listed by Fiscal Year. FY 2020 runs from July 2019 to June 2020, and FY 2021 runs from July 2020 to June 2021.

### Fiscal Year Income (2020-2021)





## Fiscal Year Expenses (2020-2021)



**Capital Improvement Plan.** For this year, the Airport has developed a “current + five year” budget to help with reviewing and meeting our capital and cash/capital reserve goals. The Airport continues to move forward with \$69.3 million in capital projects for FY 2021/2022. Eligibility for FAA and/or WYDOT grant funding requires the Board maintain a Capital Improvement Plan ("CIP"), which projects the estimated uses of federal grant funds over a five-year time horizon. Proposed capital improvements must be reflected on the CIP to be eligible for federal funding.

Funding for future capital projects will come from a variety of sources including:

**State and Federal.** For 2021 through 2025 the airport anticipates \$164.9 million in state and federally funded projects. Of that total, the financial plan anticipates \$150.5 million will be federally funded and \$14.4 million will be funded by the state. Included in these projects are the runway rehabilitation, taxiway rehabilitation, construction of the new ARFF building, and reconstruction of the GA apron. As we experienced with the runway project this year and in 2020, federal discretionary funds may be available at the end of each federal fiscal year, staff will continue to work closely with the FAA and WYDOT to prioritize projects and have projects ready to be able to compete effectively for those funds. In order to have well positioned projects ready, the Board may need to begin design and environmental work ahead of the FAA grant in order to have the best chance to be awarded these end of year funds.

**Customer Facilities Charge (CFC) and Passenger Facilities Charge (PFC).** Historically both PFC and CFC funds had been collected at approximately \$1.5 million per source annually or \$3 million total. We had projected that the collection of both CFC and PFC funds would be impacted by the pandemic with a resulting decreased rate of collections. However, passenger traffic at the Airport has remained strong, and CFC collections were \$1.7 million last fiscal year with PFC collections of \$1.8 million. Over the next five years these numbers will generally follow changes with passenger traffic.



CFC's are collected by the rental cars at a rate of \$5 per day. CFC funds have been pledged as the dedicated source of funding for repayment of the QTA bond. The bond will be fully repaid in 2028 or sooner depending on the collection rate. Following repayment, the Board can select other projects to fund with CFCs.

The amount of PFC collections adjusts with passenger enplanements. Staff anticipates this number to be close to \$2 million next year. It is anticipated that all PFC projects will be fully reimbursed by June 2031. Prior to supporting debt service on the terminal project, the airport typically used PFCs for equipment purchases.

**Non-traditional funding sources.** The Airport has been fortunate to receive funding from other sources including the WY Office of Homeland Security, Teton Conservation District, and Energy Conservation Works for appropriate projects.

Recently completed or planned projects are described on the following page.



## Recently Completed or Planned Projects

### TERMINAL

|                                                                    | Expected/Approved Contract |
|--------------------------------------------------------------------|----------------------------|
| Restaurant Expansion Project – Design/Construction                 | \$18,526,271               |
| Checkpoint Expansion – Design/Construction                         | \$15,089,375               |
| Terminal Ticket Counter Addition (Design) & Geotech                | \$699,498                  |
| ATO to Holdroom Expansion-Design/Construction                      | \$5,285,012                |
| Restaurant Kiosk Relocation (move to oversize baggage)-Des./Const. | \$1,092,157                |
| Automated Exit Lane-Design/Construct                               | \$249,008                  |
| Admin Office Remodel/Upgrades-Design/Construct                     | \$1,692,650                |

### AIRFIELD

|                                                                 |              |
|-----------------------------------------------------------------|--------------|
| Runway Design Phase I and Phase 2 Design/Construction           | \$38,618,153 |
| Taxiway A4 Reconstruction – Design/Construction – 2021_2022     | \$2,439,954  |
| Taxiway A1 Reconstruction – Design/Construction – 2021_2022     | \$2,202,905  |
| Expand GA Ramp Design/Construction - 2022_2023                  | \$3,507,590  |
| Expand Existing Detention System Design/Const. - 2022_2023_2024 | \$3,291,533  |
| Taxilane and Deice Pad Expansion Design/Const. - 2022_2023_2024 | \$13,862,575 |
| Taxiway A Rehab (North) Design/Const. - 2022_2023_2024          | \$8,451,262  |
| Reconstruct GA Apron Design/Const. - 2023_2024_2025             | \$14,617,625 |
| Taxiway A Rehab (South) Design/Const. - 2023_2024_2025          | \$5,464,054  |
| Taxiway A2 A3 Reconst. New Bypass TW – Design/Const –24_25_26   | \$7,737,753  |
| Underground Treatment and Filtration System Design – 2025_2026  | \$17,400,000 |
| GSE Access Road (Non-Fed CO 2 for Runway project)               | \$ 660,000   |
| Additional Tanks Fuel Farm - Engineering & CA/CO                | \$250,000    |
| Additional Tanks Fuel Farm - Construction                       | \$2,500,000  |
| Runway Lights (replacement bulbs)                               | \$152,000    |

### LANDSIDE

|                                                  |              |
|--------------------------------------------------|--------------|
| SRE/ARFF Building Design Conceptual Design       | 2,000,000.00 |
| SRE/ARFF Building Design EA Development          | 750,000.00   |
| SRE/ARFF Building CA/CO/Construction             | \$55,000,000 |
| Parking Lot Fencing (now temporary office space) | 750,000      |

### EQUIPMENT

|                                |             |
|--------------------------------|-------------|
| New SRE (Broom or Plow trucks) | \$2,200,000 |
| New ARFF Truck                 | \$2,100,000 |



# Conclusion

While 2020 started similar to any other year, by March it was clear that the aviation industry and the world would see lasting impacts as a result of the COVID-19 pandemic. The Airport was greatly impacted by the pandemic with significantly reduced operations and the challenges of operating an airport amidst changing public health regulations. As travel started rebounding, areas of natural beauty became huge draws for many people, and Jackson Hole became an even more desirable destination. With an increase in general aviation associated with the pandemic, as well as a significant number of new people relocating to the valley, aircraft noise became a larger issue than in recent years.

In response to challenges the Airport:

- **Rolled out extensive COVID-19 measures to keep the airport operating and keep the community safe. The Airport was involved on not just the travel side, but community support in general during this public health crisis.**
- **Developed a Fly Quiet Program to promote voluntary actions to reduce noise near the Airport, as well as scoping a Flight Procedure analysis to address the potential for revised flight procedures (analysis to start in early 2022).**
- **Created a comprehensive plan to monitor the groundwater near the Airport for the presence and extent of PFAS chemicals, provided filters to homeowners based on sound, and used conservative science.**

In the light of all the challenges in 2020/2021, the three points above encompass some of the direct actions we completed in response to large challenges. We are working diligently to continue to be a leader in sustainability, act as a resilient resource for the community, and meet or exceed the expectations of the NPS and the community.

While the Board is proud of the progress it has made, it recognizes that more work is needed and will stay focused on the enhancing and improving conditions into the future.



## APPENDIX A

### Board Organization and FAA Obligations

Federal statutes authorize the Secretary of the Interior to enter into agreements with public agencies, such as the Jackson Hole Airport Board (the "Board"), for the operation of airports in or near national parks. Pursuant to that authority, the Department of the Interior (the "Department") and the Board entered into an Agreement dated April 27, 1983 (the "1983 Agreement"), for the operation of the Jackson Hole Airport (the "Airport") in Grand Teton National Park (the "Park"). The 1983 Agreement was originally for a term of 30 years and granted the Board two 10-year options to renew. The Board exercised these two 10-year options in 1993 and 2003, which extended the 1983 Agreement's term to 2033.

To be eligible for Federal Aviation Administration ("FAA") grants for capital improvements to airport infrastructure, the Board and other airport sponsors must comply with FAA regulations and grant assurances. Among these is a requirement that the Board either own or have leasehold control over the land on which the Airport is located for a term of at least 20 years. To maintain eligibility for FAA grants, in 2004 the Board began seeking an amendment to the 1983 Agreement to provide additional terms with extension options for the periods 2033-2043 and 2043-2053.

After an extensive environmental assessment process, on May 18, 2011 the Department of the Interior, acting through the National Park Service ("NPS"), entered into a Third Amendment to the 1983 Agreement (the "Third Amendment"). Under the Third Amendment, the term of the 1983 Agreement was extended to April 27, 2053, through the addition of two 10-year options. The Board has exercised the first option for an additional term of ten years, from April 28, 2033 through April 27, 2043, thereby giving it the requisite 20-year term required for FAA grant eligibility.

The Third Amendment also expanded the Board's obligations to explore reasonably available environmental mitigation measures. A new paragraph 4(i) of the 1983 Agreement requires the Board to act in good faith and in coordination and cooperation with the NPS to develop and implement reasonable and cost-effective mitigation measures as may be available to reduce environmental effects on the Park. Section 12 of the 1983 Agreement, as amended, requires the Board and the NPS to discuss and identify mitigation measures which may be available to comply with the requirements of paragraph 4(i). Finally, a new Section 13(h) was added which requires the Board to submit to the NPS a report describing the Board's activities and operations during the previous two calendar years, its efforts at reducing negative environmental impacts, and specifically, its efforts to reduce noise impacts on the Park. This is the fifth Biennial Report submitted under this requirement and covers the Board's activities and operations during calendar years 2018-2019.

The Wyoming Joint Powers Act was adopted in 1971 (the "WJPA"). The WJPA provided that previously established airport boards would become joint powers boards, without need to reorganize. As a result, the Board is now both a statutory airport board under the Wyoming Airport Act and a joint powers board under the WJPA. Joint powers boards usually operate under joint powers agreements.





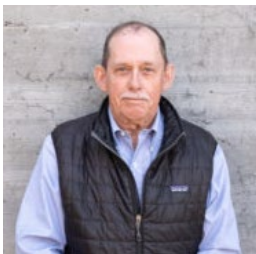
Since 1967 the Board has had the power, delegated by the Town and County, to acquire lands for airport purposes (by lease or otherwise). The Board exercised this power by entering into the 1983 Agreement in its own name with the Department of Interior. Also delegated to the Board was the power to acquire other property and to construct facilities for airport purposes. All facilities of the Airport have therefore been constructed and acquired in the name of the Board. The 2013 Joint Powers Agreement with the Town and County confirmed that the Board owns all airport improvements and facilities.

Under Wyoming Statutes, the Board is both a “body corporate,” and a “local governmental entity” which has separate existence and is distinct from the Town and County. Though it has certain governmental powers, in most instances the Board operates the Airport in its “proprietary capacity”. It has no power to tax. Its revenue comes only from its operations and grant funding.

**Members of the Board.** The five members of the Board are appointed jointly by the Town and County, each for a five-year term. In February of each year the Board reorganizes and appoints new officers. By tradition, Board members rotate positions, with each member thereby having the opportunity to serve as Member, Secretary, Treasurer, Vice President and President during their five-year term. Board members at the end of this reporting period (2020-2021) were:



**John Eastman.** John was appointed to the Airport Board in 2013. He is an accomplished business entrepreneur with 20+ years’ experience creating, building, and leading successful start-up businesses. John has extensive community board experience including the St. John’s Hospital Board, the Center for Resolution and Mediation, and the Historic Preservation Board. John was also recently appointed to the [National Parks Overflights Advisory Board](#).



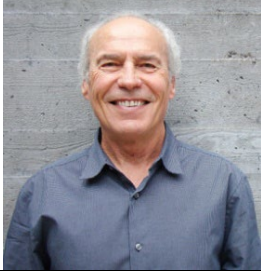
**Bob McLaurin.** Bob moved to Wyoming in 1979 to pursue his passion for rock climbing and mountaineering skiing. In 1985 he began his employment with the Town of Jackson. He was the Jackson Town Manager from 1990 through 1994. From 1994 through 2003 he was the Town Manager for Vail, Colorado. In 2003 he returned to Jackson to serve the Jackson Town Manager. He held this position until retiring in 2018. He has been active in numerous nonprofits in Jackson including the Teton Literacy Center, Jackson Hole Historical Society and the Jackson Hole Rotary Club.



**Ed Liebzeit.** Ed Liebzeit was appointed to the Airport Board in 2020. Ed is the past President and CEO of Jackson Hole Sotheby’s International Realty and currently practices real estate. Ed is active in the Jackson Hole community and has participated in numerous board’s.



**Valerie Brown.** Valerie Brown was appointed to the Airport Board in 2021. Valerie has an extensive background in executive roles in the finance industry. Valerie holds a bachelor's degree in chemical engineering from Oregon State University and a master's degree in business administration from Stanford.



**Jerry Blann.** Jerry has extensive Airport Board experience. He was appointed to the Airport Board in 2000 and has recently retired from the board at the end of 2021. Additionally, Jerry has held previous executive positions and Board level appointments. Jerry was the President of the Jackson Hole Mountain Resort for 22 years, where he oversaw more than \$200 million dollars in capital improvements before retiring in 2018.

**Airport Staff.** The Airport has a regular staff of 35 personnel which are engaged in administration, airfield operations and maintenance, project management, aviation fuel facility operations, community outreach, hospitality and other ordinary airport functions. It also has a security screening staff which averages 58 personnel. With total employment of over 90 staff, the Airport is one of the larger employers in Teton County. The Airport's senior staff are:



**Jim Elwood, Executive Director.** Jim came to the Jackson Hole Airport in 2014. Before coming to Jackson, Jim was the director of Aspen/Pitkin County Airport in Aspen, CO. While in Aspen he had significant accomplishments in improving the environmental stewardship of the airport. Prior to working in Aspen, Jim served as the Airport Manager in both Eagle County Airport and Pueblo Airport in Colorado. His many accomplishments in the industry include serving as Chair for the American Association of Airport Executives in 2008, and the Outstanding Leadership Award from Airports Going Green in 2013.



**Dustin Havel, Assistant Airport Director – Operations.** Dustin Havel came to the Jackson Hole Airport in May of 2016. Prior to working at the Jackson Hole Airport, he was the Assistant Aviation Director – Operations at the Aspen/Pitkin County Airport. Dustin Havel graduated Magna Cum Laude from Central Missouri State University with a Master of Science in Aviation Safety and has over 10 years of experience in Airport Operations and Management. He also has a Bachelor's degree in Aviation Technology – Maintenance Management and Bachelors in Business Administration – Computer Information Systems. An accredited Airport Executive, Certified Aircraft Rescue & Fire Fighter and Airport Certified Employee in all facets, Dustin has also logged over 250 hours of Instrument Rated Private Pilot flying time.



**Aimee Crook, Assistant Airport Director - Security Operations.** Aimee Crook is a Jackson Hole native who started working at the Airport the year she graduated high school. In 2000, Aimee graduated from the University of Wyoming with a Bachelor of Arts in Criminal Justice. Aimee was promoted to the Director of Security Screening in 2002 and played an intricate role in obtaining a Private Security Screening Contract on behalf of the Jackson Hole Airport Board. In 2016 Aimee became the Manager of Security Operations. Aimee is a Certified Member of the American Association of Airport Executives and currently serves as the Assistant Airport Director – Security.



**Michelle Anderson, Assistant Airport Director - Finance and Administration.** Michelle started working at the Jackson Hole Airport as the Office Manager in 2002. While working for the Airport, she earned her Executive MBA from the University of Wyoming. She has also earned her Accredited Airport Executive designation with the American Association of Airport Executives. During her time at the Airport, Michelle has helped the Airport successfully bid the private screening contract with TSA multiple times. Michelle was promoted to Assistant Airport Director in 2017. Her accomplishments include being awarded Wyoming's 40 Under 40 Award for 2017, and her recent appointment to the Board of the Wyoming Airport Operators Association.

**Board Obligations to FAA Generally.** In addition to its obligation to NPS under the 1983 Agreement, the Board has obligations to the Federal Aviation Administration ("FAA"). In accepting federal grant funds, the Board is required by law to give 39 different "assurances" to FAA regarding its use of grant funds and operation of the Airport. If the Board breaches these assurances, it will be ineligible for future grants and may be required to repay prior grants. Principal grant assurances include the following:

**Grant Assurance No. 4:** The Board must certify that it has "good title" to airport land. Where the airport sponsor does not own the underlying ground, this term is defined to include a lease of at least 20 years past the date of the grant.

**Grant Assurance No. 21:** The Board must "take appropriate actions . . . to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft." This is accomplished to the south and west of the airport by the Teton County Airport Zoning Resolution, which prohibits structures above certain heights surrounding the airport and conditions near the airport which are hazards to aircraft in flight.

**Grant Assurance No. 22:** The Board must make the airport available "for public use on fair and reasonable terms and without unjust discrimination, to all types, kinds, and classes of aeronautical uses." Under this requirement the Board may not prohibit scenic flights or other particular types of



aeronautical operations, must accommodate all airlines which wish to serve the airport, and in most cases must permit all general aviation operations and businesses.

Grant Assurance No. 23: The Board may not grant or permit any "exclusive right for the use of the Airport" by persons providing aeronautical services to the public. For instance, it cannot specify that all flight training will be provided by a single private operator at the airport. Though it may not grant an exclusive right, as the operator of the airport the Board may exercise its "proprietary exclusive right" to operate any or all aeronautical activities on the airport using its own employees.

Grant Assurance No. 24: The Board must maintain a rent and fee structure which will make the airport as self-sustaining as possible under the circumstances. This is interpreted to require, in most cases, the charging of market rent on the land side of the airport and a reasonable rental on the airside of the airport.

Grant Assurance No. 24: All revenues generated by the airport must be expended for the capital or operating costs of the airport, or other facilities owned or operated by the Board and directly and substantially related to air transportation. A violation of this grant assurance is often referred to as "revenue diversion."



## **APPENDIX B**

### **Mitigation Measures from the Final Environmental Impact Statement**