

HANSCOM HIGH FLYERS:

Private Jet Excess Doesn't Justify Airport Expansion

Chuck Collins, Omar Ocampo, Kalena Thomhave, Jiaqin Wu

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CO-AUTHORS

Chuck Collins is director of the Program on Inequality and the Common Good at the Institute for Policy Studies, where he coedits [Inequality.org](http://inequality.org). He is author of nine books on inequality including [*The Wealth Hoarders: How Billionaires Spend Millions to Hide Trillions*](#) and [*Altar to an Erupting Sun*](#), a novel.

Omar Ocampo is a researcher with the Program on Inequality at the Institute for Policy Studies. He is co-author of numerous reports on billionaire wealth, housing policy, dynastic wealth, and the racial wealth divide. His work has appeared in *The Guardian*, *Common Dreams*, and *The Progressive*.

Kalena Thomhave is a freelance journalist and researcher working with the Program on Inequality at the Institute for Policy Studies. Her work has appeared in *The American Prospect*, *The Nation*, *The Progressive*, and more.

Jiaqin Wu was an intern for the Program on Inequality at the Institute for Policy Studies as part of the 2023 Next Leaders program. He is a student in the Master of Science in Data Science for Public Policy program at Georgetown University.

OTHER RELEVANT RESEARCH

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- [*High Flyers 2023: How Ultra-Rich Private Jet Travel Costs the Rest of Us and Burns Up the Earth*](#)
- [*High Flyers 2017: How the Private Jet Lobby Shifts Costs to the Rest of Us, Threatens Our Security, and Fuels a Warming Planet*](#)
- [*High Flyers 2008: How Private Jet Travel is Straining the System, Warming the Planet, and Costing You Money*](#)

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1301 Connecticut Ave NW, Suite 600, Washington, DC 20036 | Web: www.ips-dc.org

Twitter: [@ips_dc](https://twitter.com/ips_dc) | Facebook: <http://www.facebook.com/InstituteforPolicyStudies>

Contact Email: chuck@ips-dc.org

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Key Findings

A proposal to expand Laurence G. Hanscom Field airport in order to accommodate a 300 percent increase in private jet services is currently under consideration by the Massachusetts Port Authority (Massport). Located 14 miles outside of Boston, Hanscom Field is the largest general aviation airport in New England. After Boston Logan, Hanscom is the second busiest airport in New England.

Based on a comprehensive analysis of private flights traveling to and from Hanscom Field over an 18-month period, we find that the expansion would primarily serve the wealthiest travelers in the region, many who frequently take short-hop flights to recreational and luxury destinations.

- Between January 2022 and July 2023, we identified 31,599 private flights taken by 2,915 jets. Private jets departed Hanscom Field for 761 unique destinations. Over the 18 months studied, private Hanscom Field flights were responsible for an estimated 106,676 tons of carbon emissions.
- We estimate that at least half of these flights (49 percent) were for recreational and luxury travel. This statistic includes the more than 36 percent of flights (5,632 flights) that traveled to 212 airports near luxury or vacation destinations. In addition, more than 42 percent of Hanscom Field flights departed on weekends, also implying recreational travel.
- Roughly 16 percent of private jet flights from Hanscom Field were to destinations in New England. Nantucket, Martha's Vineyard, Portland, Portsmouth, Hyannis, and Rockland were among the top 10 flight destinations in New England. All of these destinations are either a short drive or a short drive and ferry ride from Hanscom Field.
- Approximately 41 percent of flights departing Hanscom Field had durations of less than one hour, with 14 percent lasting less than 30 minutes. Because take-off is the most fuel intensive part of a flight, short-hop flights are extremely energy inefficient compared to other transportation alternatives. Yet 81 percent of flights departing from Hanscom Field were in the air less than three hours.
- The private jet flyers on the 20 most active jets at Hanscom Field took 3,240 flights, a number that includes both arrivals and departures. These 20 aircraft accounted for more than 10 percent of all Hanscom Field private jet flights during the 18 months we studied. In addition, the 20 frequent flyers were responsible for 14 percent of total carbon emissions, releasing an estimated 14,930 tons of carbon emissions during the study period. For comparison's sake, the average American produces 14.8 metric tons per year in total emissions and the average Massachusetts resident is responsible for 8 tons per year. The global average is 4 tons of carbon emissions per person, per year.¹

Some of the most frequent flyers, however, may not be in our data set. Private jet owners may request that the FAA exclude their jets from public tracking registries, leading to gaps in the

data. Four Boston area billionaires –Robert Kraft, Jim Davis, John Henry, and Paul Fireman – have had their jets removed from the public registry.

Hanscom Field’s “High Flyers” — the top 20 private jet travelers using Hanscom Field — are profiled in full in the report. The top 20 include:

John Fish. Belonging to the Suffolk Construction magnate with estimated wealth of \$1.2 billion, Fish’s jet was the number three most frequent flyer out of Hanscom Field, but the number one carbon emitter over 18 months, releasing an estimated 2,329 tons of carbon emissions on flights that included 44 round trip flights to West Palm Beach and flights to Aruba; Aspen, Colorado; and Barcelona, Spain.

John W. Childs. The jet owned by private equity investor John Childs was the fifth most frequent flyer out of Hanscom Field but the third largest carbon emitter, releasing an estimated 1,407 tons of carbon over the study period. Child’s jet makes frequent trips to Vero Beach, Florida, where Child owns a home, and Rosario, Argentina, where he is part owner of a bird hunting lodge. In the last eighteen months, the jet has also traveled to Palermo, Italy; the US Virgin Islands; Palm Springs, California; and the Hamptons.

Arthur S. Demoulas. Arthur S. Demoulas, with wealth estimated at \$1.3 billion, is famous for his unsuccessful attempt to oust his cousin, Arthur T. Demoulas, from the leadership of New England supermarket chain Market Basket. The private jet registered in Arthur S.’s name was the 10th most frequent Hanscom Field flyer, with flights to Aspen, Key West, and London. Total estimated carbon emissions were 741 tons.

Owners Affiliated with Private Equity Firms. Seven of the top 20 Hanscom Field flyers are jets owned or connected to personnel at private equity firms based in the Boston area. These include powerful and influential firms such as J.W. Childs, Panther Residential Management, Thomas H Lee Partners, L.P. and Charlesbank Partners. Top executives based at these private equity firms own these jets through trusts and shell companies. Together, the seven jets took 1,244 flights and emitted an estimated 2,899 tons of carbon over the study period. We invited all parties listed in this report to further clarify. Representatives from Charlesbank indicated that these jets are not directly owned by Charlesbank Partners, but by individuals at the firm and are used for personal travel and often placed into pools for rental. The jet in the top spot on the frequent flyer list took a whopping 387 flights over the 18-month period, including 112 flights to and from Nantucket. All seven jets connected to top personnel at private equity firms took a combined 263 flights to and from Teterboro Airport outside New York City, a destination with many other excellent transportation alternatives.

Recommendations

Policymakers and the general public deserve to know more about the wealthy’s use of private jets. We call for greater transparency around private jet flights and their carbon emissions. Our recommendations also include:

- Suspend any private jet service expansions, planned or otherwise, at Hanscom Field and Boston Logan International airports.
- Eliminate the Massachusetts sales tax exemption on aviation purchases and fuel.
- Increase the excise tax on jet fuel, using the revenue to invest in green transit.

Introduction: Private Jets at Hanscom Field

Laurence G. Hanscom Field (KBED/BED) is a general aviation airport located in Bedford, Concord, Lexington and Lincoln, Massachusetts. Hanscom Field is New England’s largest airport serving private jets. A proposal to expand hangar capacity is currently being considered by airport planning authorities. The plan would essentially triple the airport’s capacity to serve private jets and add 27 hangars.

One of the stated goals behind hangar expansion is to *reduce* private jet traffic. The Massachusetts Port Authority (Massport), which operates Hanscom Field as well as Logan International and Worcester Regional Airports, claims that a recent surge in demand for private jet travel has highlighted the region’s insufficient hangar space for private jets. This in turn has led to an increase in “ferry flights,” jets that drop passengers at Hanscom Field or Logan International and then fly to another destination for parking and services. The new expansion project, Massport argues, would alleviate this pressure, provide sufficient hangar space, and reduce the need to transport empty planes for storage at nearby airports, thereby tempering Hanscom Field’s carbon footprint.² A forthcoming analysis will consider this question and determine what percentage of Hanscom Field departures and arrivals are ferry flights.

However, there is no evidence to suggest that increasing hangar capacity would decrease private jet air traffic and reduce emissions.³ It is likely to have the opposite effect: the more infrastructure designed to accommodate private aircraft is constructed, the more likely it is to *increase* private jet operations by encouraging owners and jet card holders to fly more, similar to how highway expansion directly leads to greater road congestion.⁴

In our May 2023 report, *High Flyers 2023: How Ultra-Rich Private Jet Travel Costs the Rest of Us and Burns Up the Planet*, we document how private jet operations collapsed with the onset of the Covid-19 pandemic but soon recovered and proceeded to break industry records over the next two years.⁵ In other words, private jet travel was at an all-time high in 2021 and 2022 with North America, particularly the United States, leading the way.

Worldwide, private jet operations were down 7.5 percent in the second quarter of 2023 as compared to the second quarter of 2022. However, there were still nearly 10 percent more global private flights during the second quarter of 2023 than there were during the same period in 2021 and more than 12 percent more flights in the second quarter of 2023 than there were across the same period in 2019.⁶ While the number of private jet operations is no longer peaking, worldwide private jet use has stabilized comfortably above pre-pandemic levels and is expected to continue to grow. Yet Hanscom Field is bucking this trend. Our data indicate that from the beginning of 2023 through July 15, there were 1,377 more private jet operations than there were during the same period in 2022 — an increase of 13 percent.⁷

The constituency of private jet users is a small minority of ultra-wealthy individuals. The median net worth of a private jet owner is \$190 million, and the median net worth of a fractional jet owner is \$140 million. Our May report, *High Flyers 2023*, documents how private jet travelers emit ten to twenty times more carbon emissions than commercial aviation passengers. We also report how private jets fail to compensate for their fair share of airspace use. While private jets make up one in six flights handled by the Federal Aviation Administration, these flights represent just 2 percent of the costs of maintaining the air traffic control system. Commercial airline passengers effectively subsidize private jet travelers.⁸ In *High Flyers 2023*, we advocate for private jet users to pay the full ecological and economic costs of their extravagant travel choices.

Massachusetts policymakers should weigh the arguments in favor of airport expansion against the potential emissions impact of increased private jet travel. An analysis of current private jet usage of Hanscom Field, alongside a study of trends in private jet travel nationwide, is an important window into potential future private jet travel at Hanscom Field.

What is a Ton of Emissions?

Based on our analysis of Hanscom Field flights over an 18-month period, we estimate that the private jets studied burned an estimated 106,676 tons of CO₂. What does this mean?

According to the US Department of Energy, US carbon emissions per capita — carbon emissions per person — are roughly 14.8 metric tons, which is one of the highest rates in the world. This rate includes fossil fuels emissions from industry as well as activities such as transportation and home and building energy use.⁹ In Massachusetts, average carbon emissions per capita — the average carbon footprint of a Massachusetts resident — is about 8 metric tons per year.¹⁰ Globally, the average carbon footprint is closer to 4 metric tons.

Experts argue we need to quickly move to reduce the average annual global footprint closer to 2 metric tons. This means that private jet setters and other large emitters have work to do: the top 10 percent of global emitters are responsible for almost half of the world's energy-related CO₂ emissions in 2021, compared with just 0.2 percent of the world's emissions coming from those in the bottom 10 percent.¹¹

Hanscom Private Jets: An Overview

The Institute for Policy Studies obtained and analyzed a comprehensive data set that details the flight activity of all aircraft to and from Hanscom Field between January 1, 2022 and July 15, 2023.¹² During this 18-month period, we identified 31,599 private flights.

Our number of identified private flights differs from the 36,808 private jet operations published by Massport for the calendar year of 2022.¹³ A number of reasons may explain this discrepancy:

flight tracking service companies covering a limited network; pilots refraining from using tracking signals or turning them off during flights; jet owners or flight operators successfully requesting the removal of flight data from flight tracking databases.¹⁴ Importantly, the FAA allows jet owners and operators to apply to restrict the FAA from sharing flight tracking data from tracking services and vendors through its Limiting Aircraft Data Displayed program.¹⁵ These owners and operators could include some of the most active users of Hanscom Field, which would result in their flights not being tracked and thus not recorded in our data set. This may explain any inaccuracies, if any, that may emerge. In spite of these limitations, we have a substantial data set relevant to both the public and lawmakers. We are happy to publish any corrections or updated data if specific owners and operators would like to be transparent about their ownership and operations.

In the 18-month period studied, there were 15,781 private jet departures from Hanscom Field and 15,735 private jet arrivals. There were an additional 83 flights that took off from but later landed at Hanscom Field; these flights were likely for the purposes of pilot training or recreational uses like sightseeing.

Of the private jet flights documented, 70 percent were operated by companies that provide charter services. We have identified 131 of these companies, the most prominent being NetJets. During the 18-month period, NetJets operated 9,344 flights, though this total does not include the flights operated by its subsidiaries like NetJets Europe and Executive Jet Management.

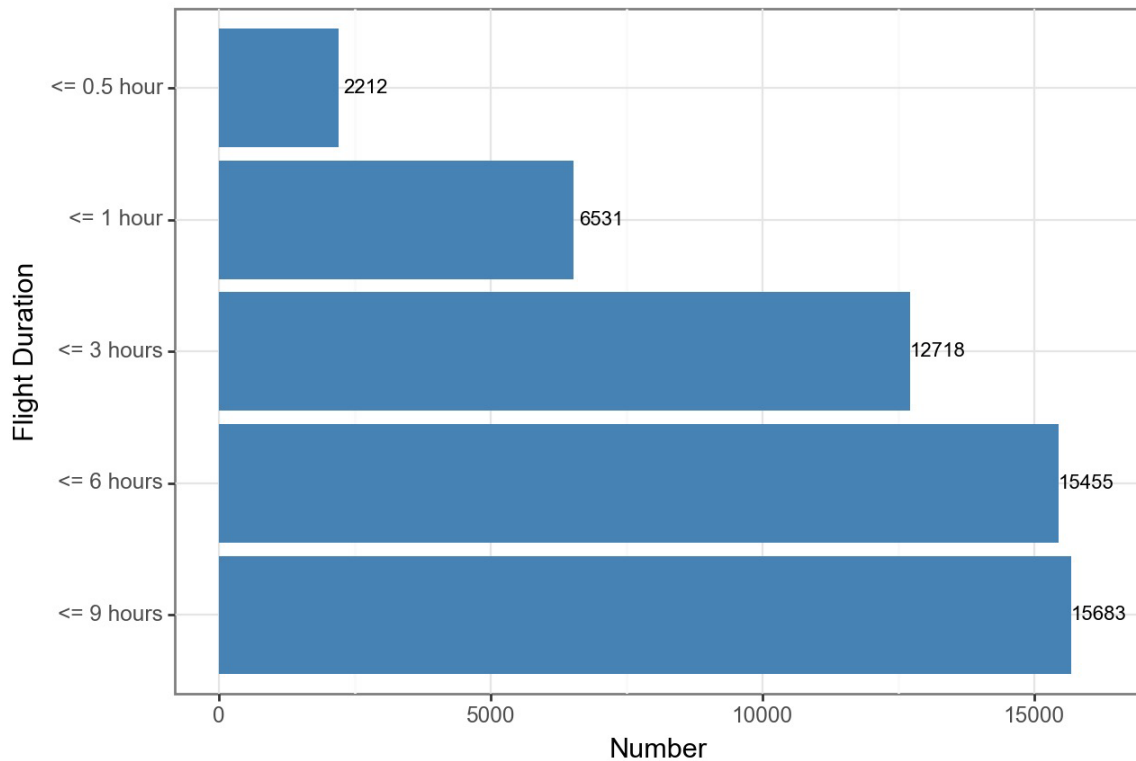
Short-Hop Flights

Private jets burn the most fuel on take-off. As a result, short-hop flights are much more energy inefficient than longer flights and alternative forms of transportation. Among all flights, average flight time was one hour and 44 minutes, with flights emitting an estimated total 106,676 metric tons of CO₂.¹⁶ Future research will assess how many of these are “ferry flights,” short trips to drop passengers and park jets at other facilities.

An estimated 2,212 departures from Hanscom (or 14 percent) were a half hour or less in duration and 6,531 (or 41 percent) were an hour or less. These flights included trips to Nantucket, Martha’s Vineyard, the Hamptons, and Portland, Maine, which are among the most frequent destinations from Hanscom Field.

The vast majority of the departures from Hanscom Field — 12,718 flights, or 81 percent of all operations — were shorter-haul flights, meaning flight duration was three hours or less.¹⁷ An estimated 17 percent — 2,737 departures — were medium-haul flights between three and six hours. Just 2 percent of flights — 240 departures — were long-haul flights of six hours or longer. Flight length data were missing from 86 flight records.¹⁸

Distribution of Flight Duration of Private Jets Departing from KBED



Source: Analysis by IPS of Flightradar24 data

Destinations and Arrivals

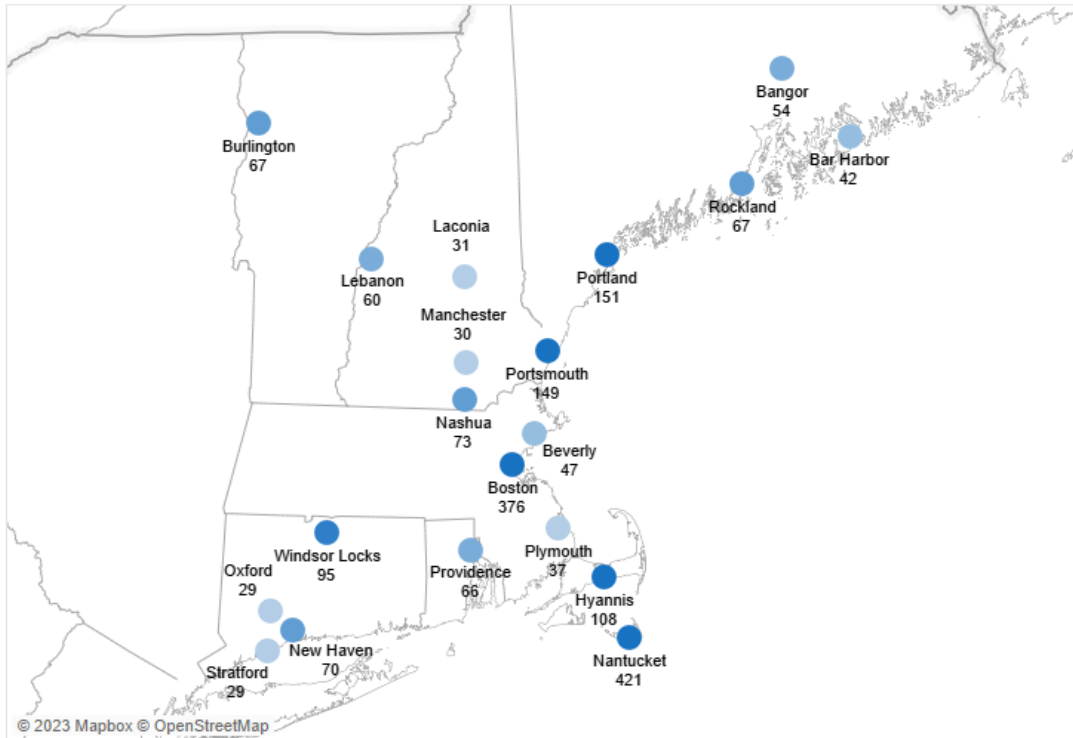
We identified 2,915 unique aircraft registration numbers that journeyed in and out of Hanscom Field during the 18 months studied. Aircraft registration numbers are like license plates; tail numbers, which start with the letter “N” for American aircraft, are recorded with the FAA.

During the study period, jets departing from Hanscom Field traveled to 761 unique airport destinations in 55 countries and offshore territories. Hanscom private jet flyers” — in their 14,338 departures inside the US — did not leave any corner of the country untouched, visiting every single state plus Washington, DC. The five most frequented states were New York (3,184), Florida (2,081), Massachusetts (1,367), Pennsylvania (678) and North Carolina (506).¹⁹ US territories like Puerto Rico and the US Virgin Islands had 72 and 16 visits, respectively.

The five most frequented airports were Teterboro Airport in New Jersey (KTEB), Westchester County Airport in New York (KHPN), Palm Beach International Airport in Florida (KPBI), Nantucket Memorial Airport in Massachusetts (KACK), and Washington Dulles International Airport in Virginia (KIAD). There were 2,517 trips to 50 different airports in New England, with more than half of these flights limited to Massachusetts itself. Again, some of these are likely “ferry flights.” In addition to Nantucket, Martha’s Vineyard Airport (KMYV), and Cape Cod Gateway Airport (KHYA) were popular destinations within Massachusetts.

Top 20 Destinations in New England

Private jets departing Massachusetts during the 18 month period ending July 15, 2023



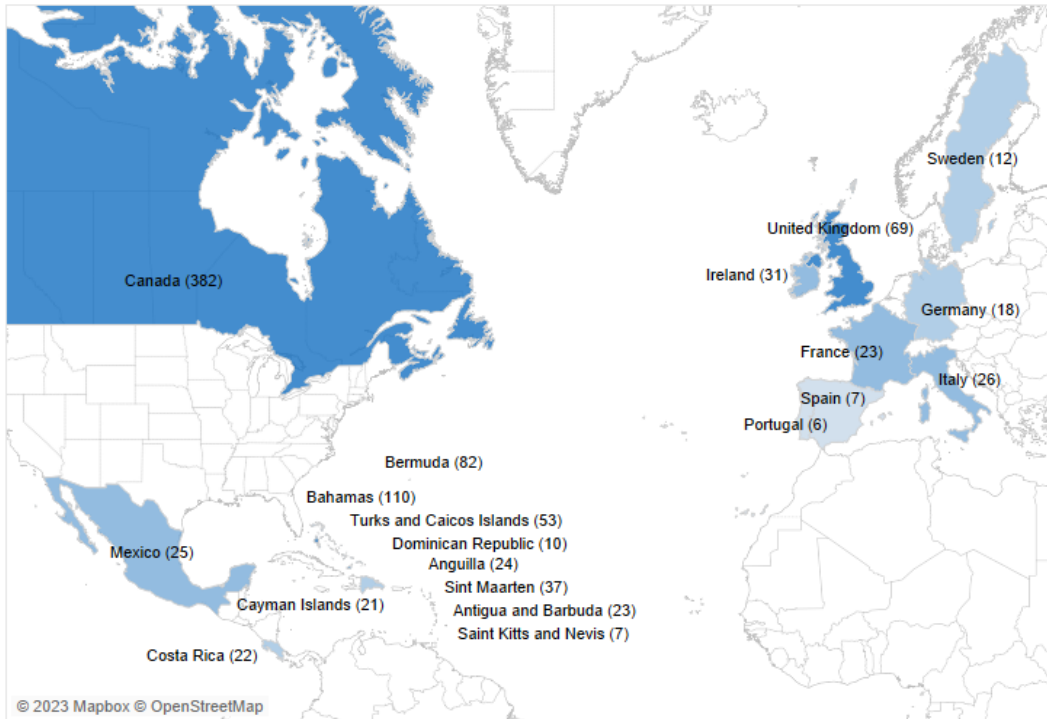
Source: Flightradar24

Nearly four out of ten destinations outside of the continental United States and Hawaii — 39.8 percent — were in Latin America and the Caribbean.²⁰ A total of 461 trips were taken to breathtaking luxury locales like Antigua and Barbuda, Aruba, the Cayman Islands, Costa Rica, the Dominican Republic, Mexico, Saint Kitts and Nevis, and Sint Maarten. The top three destinations in this region were the Bahamas (110), Puerto Rico (82), and Turks and Caicos Islands (53).

The top five international destinations were Canada, the Bahamas, Bermuda, the United Kingdom, and Turks and Caicos Islands.²¹

Top 20 International Destinations

Private jets departing Massachusetts during the 18 month period ending July 15, 2023



Source: Flightradar24

Bermuda, Turks and Caicos Islands, Anguilla, Cayman Islands, and British Virgin Islands are British Overseas Territories. Aruba and Sint Maarten are constituent countries of the Netherlands.

Recreational and Luxury Destinations

Like many ordinary travelers, it is not unusual to combine both business and leisure. According to a comprehensive four-year analysis of FAA flight records by *The Wall Street Journal*, a large segment of jets owned and operated by public companies took flights to resort destinations at least 30 percent of the time and sometimes as much as 50 percent of the time. The *Journal* noted that many of these companies' executives owned homes in these locales.²²

The Wall Street Journal looked at resort destinations only; it is likely safe to presume that the percentage of all recreational and leisure flights taken by private jets is much higher. Based on our analysis, we conservatively estimate that half of all flights departing from Hanscom Field are to luxury destinations or are recreational in nature. We believe this is a low estimate, especially when we take into consideration that more than 42 percent of all departures from Hanscom occur on weekend days.

In our analysis, private aircraft departures from Hanscom Field flew to 761 different airports in 277 cities. We identified 212 airports located near recreational or luxury destinations, resulting in 5,632 flights plausibly taken for leisure or recreational purposes. This number represents 35.7 percent of all departures. Recreational and luxury destinations include domestic locations like Aspen, Colorado; Atlantic City, New Jersey; Hilton Head Island, South Carolina; Jackson,

Wyoming; Key West, Florida; and West Palm Beach, Florida, as well as international destinations like Gran Canaria, Spain; Nice, France; Montego Bay, Jamaica; Nassau, Bahamas; Punta Cana, Dominican Republic; and Venice, Italy. As part of our calculation, we also presume that 25 percent of the flights to the remaining 549 destinations are personal and recreational travel in nature, especially where frequent flyers have second homes. See our methodology section for our analysis of these destinations and further comment on our assumptions.²³

Hanscom Frequent Flyers: ***20 Jets Account for 10 Percent of Flight Activity***

Over the 18-month period, 20 private jets stood out as the most frequent users of Hanscom Field. The top 20 frequent flyers took a total of 3,240 flights, including 1,622 departures from and 1,618 arrivals to Hanscom Field, accounting for 10 percent of all Hanscom Field private jet activity. These 20 jets emitted an estimated 14,930 metric tons of carbon during this period, accounting for 14 percent of all Hanscom Field private jet emissions.

Note that there are individuals and companies that may have taken a top spot on the Hanscom Field frequent flyer list if they did not have the option of petitioning to remove themselves from flight tracking systems. Such flyers include John Henry, owner of the Boston Red Sox and *The Boston Globe*, and Robert Kraft, owner of the New England Patriots. Nevertheless, the list of the top 20 Hanscom High Flyers includes private jets that typify luxury travel to and from Massachusetts.

Unsurprisingly, all of the private aircraft in the top 20 are owned by LLCs or corporations. We find that five jets are co-owned with other individuals and entities and seven jets are owned by private equity firms, one of which is a major investor in fossil fuel infrastructure projects.

Private jets are commonly owned by limited liability companies, corporations, trusts, or other vehicles of indirect ownership. Many of these systems of ownership are designed to obscure or mask the identities of the beneficial owners (see below for more discussion on masking ownership). This makes it difficult to know the exact identities of the most frequent flyers traveling in and out of Hanscom Field.

Private jets owned by an LLC where the principal registered agent is an employee of a company are likely to be used by multiple users at a firm or enterprise, including CEOs, senior partners, or managers of a firm. For the purposes of this report, we identify the person registered as the aircraft's or LLC's owner as one of the most likely users. Still, many jet owners regularly lend or rent their jets to others, sometimes to show income in their "money losing" (hence tax reducing) limited liability companies.

#1. Bronwen and John Ryan Carroll via Carroll Aviation Holdings LLC.

At the top of the list of the Hanscom High Flyers is a private jet registered to an LLC in the names Bronwen Carroll and John Ryan Carroll. Bronwen Carroll is a physician and assistant professor of pediatrics at Boston University Medical Center and John Ryan Carroll is a managing partner at Charlesbank Capital Partners, a private equity firm.²⁴ Both are graduates of Harvard. Spokespeople from Charlesbank clarified that these jets are personally owned and not owned by the firm and

often leased out for other users. The private jet registered in their names made an astounding 194 departures from Hanscom Field, a little more than one departure every three days, and 193 arrivals (for a total of 387 flights in 18 months). The LLC owns a Cessna 560XL jet through Carroll Aviation Holdings, a limited liability company registered in Massachusetts. We find 52 of the plane's departures and 60 arrivals were to and from Nantucket, Massachusetts (KACK). The second most popular destination was Teterboro Airport (KTEB) in Teterboro, New Jersey, an airport right outside New York City and the most popular destination for private jets in the United States.²⁵ The Carroll Aviation jet had 47 departures to Teterboro and 42 arrivals. Other destinations include multiple trips to Nassau, Bahamas (KYNN) and Montreal, Canada (CYUL). Single trips were taken to St. George, Bermuda (TXKF); Boca Raton, Florida (KBCT); and East Hampton, Long Island (KPJX). The aircraft's flight activity released more than 809 tons of carbon emissions in the 18-month period studied.

#2. Robert Epstein via Abbey Challenger LLC.

Our second most prolific high flyer out of Hanscom Field is connected to Robert S. Epstein. The registered owner of this well-traveled Bombardier CL-600-2B16 jet is an LLC, Abbey Challenger, which is in the care of real estate development company, The Abbey Group. Epstein is the company's CEO. He is also a managing partner of the Boston Celtics and serves on the board of a number of prestigious organizations and institutions.²⁶ Epstein has an estimated net worth of at least \$360 million. Out of 132 departures from Hanscom Field (KBED) made by Epstein's aircraft, nearly half were to Martha's Vineyard (KMVY). The jet's itinerary to and from Hanscom Field also included short-hop flights to Hyannis, Massachusetts (KHYA) and Windsor Locks, Connecticut (KBDL). Destinations also included a number of scenic locales including known vacation and recreational hotspots like San Juan, Puerto Rico (TJSJ) and Venice, Italy (LIPZ). More than 1,572 tons of carbon emissions were produced by the jet's flight activity, the second highest carbon footprint in the top 20. All of the aircraft's flight operations were handled by Solairus Aviation.

#3. John Fish via Suffolk Av LLC.

John Fish is heir to the Suffolk Construction company and is currently its chairman and CEO. He is often considered one of the most powerful and influential people in Boston and has successfully avoided being included in *Forbes'* much publicized billionaire lists despite having an estimated net worth of \$1.2 billion.²⁷ Suffolk Construction has a distinguished track record in green building construction. Fish has a \$12.2 million ownership stake in one jet, a Gulfstream Aerospace GV-SP (550) registered to a shell company, Suffolk Ave LLC. The aircraft that Fish owns is the third most frequent flyer with 117 flight departures and 119 arrivals over an 18-month span, or roughly one departure and arrival every five days. The plane's two most frequent destinations were West Palm Beach, Florida (KPBI) (44 flight departures) and Washington, DC (KIAD) (12 flights). Popular tourist destinations included Aspen, Colorado (KASE); Oranjestad, Aruba (TNCA); and Barcelona, Spain (LEBL). The carbon footprint of Fish's Suffolk Aviation aircraft was more than

2,329 tons, making his private jet the largest carbon polluter out of the top 20. All of the aircraft's flight operations were handled by Executive Jet Management.

#4. Bank of Utah Trustee.

Two of the jets most frequently on Hanscom Field's runways are registered to the Bank of Utah, a regional bank based in Utah. The bank refers to itself as an "industry leader" in providing aircraft trustee services.²⁸ Indeed, the Bank of Utah serves as trustee for more than 2,000 aircraft listed in the FAA registry — making the regional bank the largest registered owner of private aircraft in the country.²⁹

Clearly, the Bank of Utah has carved a niche for itself in the wealth management world in the form of aircraft owner trusts. Why would jet owners entrust their aircraft? One reason is that due to FAA rules, non-US citizens (or corporations with non-US-citizen leadership) who want to register their planes in the US must do so through a vehicle like a trust. More than half of Bank of Utah's corporate trust transactions have, in the words of the bank, "an international component." An added benefit of creating a trust for a private jet is *secrecy*. Because the jet is in trust with the Bank of Utah serving as the trustee, the aircraft's owner, according to the FAA registry, is simply the Bank of Utah. No other details about the identity of the true owner are available to the public. (See the section "Masking Private Jet Ownership" below).

The Honda HA-420 Hondajet owned by the Bank of Utah was the fourth most frequent flyer to and from Hanscom Field over the 18 months studied. The jet landed at Hanscom Field 102 times and departed the airport 103 times. The most popular destination for the Hondajet was Teterboro, New Jersey (KTEB), having flown there 47 times and departed from there 41 times. Because the aircraft is a light jet, its total carbon emissions for the 18-month period were 213.5 tons — a substantial number, but much smaller than the emissions of the other frequent flyers in the top 5.

#5. John W. Childs via JWC Winter LLC.

Businessman and founder of the private equity firm J.W. Childs Associates, John W. Childs' aircraft is the fifth most frequent high flyer out of Hanscom Field. Childs is often identified as a billionaire in the media, but our research indicates that he has an estimated net worth of \$570 million. Childs previously worked at prominent private equity firm Thomas H. Lee Partners, which is listed as the registered owners of two private aircrafts on this list (see #6 and #19). He is a major funder of Republican causes, including giving generous donations to right-wing politicians and libertarian think tanks.³⁰ Childs was caught up in a 2019 sting operation in Florida that also identified Robert Kraft for soliciting prostitution.³¹ The charges were later dropped.

Over the 18 months studied, the Bombardier Global BD-700 owned by Childs through JWC Winter LLC, a limited liability company formed in the state of Delaware with branches in Massachusetts and Florida, took off from Hanscom Field 103 times (and 104 arrivals). The three most frequent destinations — New Haven, Connecticut (KHVN); Teterboro, New Jersey (KTEB); and Windsor Locks, Connecticut (KBDL) — were in the Northeast and totaled 52 departures. There were six trips to Vero Beach, Florida (KVRB), where Childs owns a home, and three trips to Rosario, Argentina (SAAR), where he may have an ownership interest in a bird hunting lodge called Los Ombues.³² Childs' jet also made trips to many US and international destinations

including: Palm Springs, California (KPSP); Westhampton Beach, New York (KFOK); St. Thomas, US Virgin Islands (CYQS); and Palermo, Italy (LICJ). His large jet's carbon footprint to and from Hanscom Field was an estimated 1,407 metric tons, making it the third worst carbon polluter on this list.

#6. Thomas Lee Partners via Thomas H. Lee Management Company LLC.

Thomas H. Lee Partners, L.P. is a private equity firm headquartered in Boston. It was founded by financier and billionaire Thomas Haskell Lee, who at the time of his death in February 2023 had an estimated net worth of \$2 billion.³³ The current co-CEOs of the firm are Todd Abbrecht and Scott Sperling. Their net worths are estimated at \$40 million and \$220 million, respectively. The company owns several private jets and it is likely that the co-CEOs along with other executives and company directors use these jets for regular travel. Two of the company's jets appear on the list of Hanscom High Flyers (see also #19). Both jets are owned by LLCs registered in Delaware both with affiliate branches in Massachusetts. The jet that took sixth place on the top 20 departed from Hanscom Field 101 times in the 18 months studied, traveling mostly to US and large city destinations. There were an equal number of return flights to Hanscom Field from a variety of locations. These trips released an estimated 976 metric tons of carbon emissions. This super midsize jet also made six trips to Bermuda (TXKF), a popular vacation destination known for its beautiful beaches and being the center of offshore banking and reinsurance. Five trips were also made to San Juan, Puerto Rico (TJSJ). Other recreational destinations include: Westhampton Beach, New York (KFOK); Jackson, Wyoming (KJAC); and six different airports in Florida including Miami (KMIA) and West Palm Beach (KPBI).

#7. Michael M. and Karin S. Alper via MMA Consulting Inc and Alan S. Penzias via APA Consulting Group.

The Alpers live in Chestnut Hill where Michael Alper is an executive and doctor with Boston IVF, a fertility clinic with multiple locations.³⁴ Their private jet is owned by MMA Consulting Inc., a company they control (and not to be confused with the Massachusetts Municipal Association's Consulting Group). The Alpers share ownership of their very light jet with APA Consulting Inc, a corporation that lists Dr. Alan S. Penzias as the registered agent. Dr. Penzias is also a fertility specialist at Boston IVF. Their light jet took 82 trips from and 77 trips to Hanscom Field in the 18-month study period, emitting an estimated 147 metric tons of carbon. Primary destinations included 22 trips to Bangor, Maine (KBGR) where Dr. Alper and Dr. Penzias have an office, and 12 trips to Nantucket, Massachusetts (KACK).

#8. Michael W. Choe via Choe Aviation Holdings LLC and Brandon and Amanda White via White Aviation Holdings LLC.

Number eight on our list is a jet owned by the managing director and CEO of **Charlesbank Capital Partners** Michael W. Choe. He earned a bachelor's degree in biology from Harvard University and currently serves as a trustee; he is on the board of several businesses, including

Wayfair.³⁵ Our review of Wealth-X's database indicates that he is likely an ultra-high net worth individual with at least \$20 million in wealth.

The registered owner of the midsized Cessna 560XL that flies in and out of Hanscom Field is Choe Aviation Holdings LLC where Michael Choe is listed as its registered agent. White Aviation Holdings LLC is also listed as a co-owner of the aircraft (see #12). The Cessna 560XL departed Hanscom Field a total of 80 times in the 18-month study period, with Teterboro, New Jersey (KTEB) as the most frequent destination. The jet landed at Hanscom Field 76 times. Chicago (KDPA and KMDW) was another popular destination, as were numerous cities in Florida including Miami (KOPF), West Palm Beach (KPBI), Orlando (KORL), and Tampa (KTPA). Total emissions of this aircraft to and from Hanscom Field were 537 tons. Choe Aviation Holdings also has an ownership stake in the Bombardier Challenger CL-600 that appears as number 12 of our list.

#9. Panther Residential Management via Tail Aviation LLC, Tail Aviation II LLC, and Tail Aviation III LLC.

Tail Aviation LLC is the registered co-owner of the Gulfstream G280 jet that frequently traveled to and from Hanscom Field. The LLC shares ownership of the aircraft with two other limited liability companies registered in Delaware; all three have practically the same name, as the other LLCs are Tail Aviation II and Tail Aviation III. The address listed on the FAA registration leads to the corporate office of Panther Residential Management, a private equity real estate firm in Woburn.³⁶ The founder and managing director of the firm is Louis F. Karger. His net worth is unknown, but he is likely a very high net worth individual. Karger is also involved in the cannabis industry, serving as the director of dispensary companies Ayr Wellness and Sira Naturals. The latter has dispensaries in Needham, Milford, and Somerville. The super midsize jet registered to these three LLCs made 80 departures from and 79 arrivals to Hanscom Field, emitting more than 679 metric tons of carbon. All of the aircraft's flight operations were handled by Jet Linx Aviation.

#10. Arthur S. Demoulas via LJ60 LLC.

Number 10 on our list is Arthur S. Demoulas. His grandparents, Athanasios and Efrosini, opened a grocery store in 1917 that would later become the popular New England supermarket chain Market Basket. As a member of its Board of Directors in 2014, Arthur S. attempted to oust the company's president, his cousin Arthur T. Demoulas. This decision generated a backlash from the company's employees and customers. Protests and boycotts were organized to reinstate Arthur T. as president of the company. After two months of demonstrations, the faction of board members backing Arthur S. capitulated and reinstated his cousin. Arthur S. sold his remaining shares to Arthur T. for more than a billion dollars.³⁷ Arthur S. has a current estimated net worth of \$1.3 billion and, like John Fish, has successfully avoided being individually profiled by *Forbes*.³⁸ He is currently the principal of Ten Mountain Capital, a company that seems dedicated to managing Arthur S.'s assets. Arthur S. owns the tenth most frequent flyer on our list, a super midsized aircraft, through a shell company, LJ60 LLC. Over the 18 months studied, Arthur S.'s super midsized jet took 70 flights out of Hanscom Field. The primary destination was Nashua, New Hampshire (KASH). This could be an example of a "ferry flight," meaning that the aircraft is based at another nearby airport and is simply being "ferried" to its base. This jet's other destinations included popular tourist locations like Aspen, Colorado (KASE); Key West, Florida (KEYW); Las

Vegas, Nevada (KLAS); and London, England (EGSS). The plane's carbon footprint for the 18-month period was an estimated 741 metric tons.

#11. Carol C. and John J. Moriarty via Winchester Air Inc.

The Moriarty family of Winchester has an estimated net worth of \$350 million. John Moriarty is the president and founder of John Moriarty and Associates, a construction management firm. They appear to own a couple of private jets through a limited liability company called Winchester Air where Boston attorney Peter Hermes serves as the registered agent. The corporation Winchester Air has an affiliate branch in Florida. The Moriartys' Bombardier Global BD-700 business jet departed from and arrived at Hanscom Field 66 times each way, leaving a large carbon footprint by emitting an estimated 954 metric tons of carbon in an 18-month period. Most of these trips appeared to be recreational in nature, and included 13 trips to Nantucket, Massachusetts (KACK) and 11 trips to Naples, Florida (KAPF), where the Moriartys own property. Other destinations include trips to: Cork (EICK) and Kerry (EIKY), Ireland; Bermuda (TXKF); and Los Cabos, Mexico (MMSD).

#12. Brandon and Amanda White via White Aviation Holdings LLC and Michael W. Choe via Choe Aviation Holdings LLC.

The registered owner of the Bombardier CL-600-2B16 is White Aviation Holdings, a limited liability company registered in Massachusetts. Brandon White is listed as the registered agent. He is a managing director of Charlesbank Capital Partners and a confirmed high net worth individual with at least \$9 million in assets. The plane is co-owned with Choe Aviation Holdings LLC (see #8). In the 18 months studied, this aircraft departed Hanscom Field 65 times and landed at Hanscom Field 68 times. These flights emitted a whopping 1,355 metric tons of CO₂. Flights included 15 departures to Teterboro, New Jersey (KTEB) and 4 departures to London, England (EGSS). Other international destinations included: Liberia, Costa Rica (MRLB); Clare, Ireland (EINN); Samaná, Dominican Republic (MDCY); Genoa, Italy (LIMJ); Berlin, Germany (EDDB); and Hyeres, France (LFTH). US destinations included: Jackson, Wyoming (KJAC); Aspen, Colorado (KASE); and multiple trips to different locations in Florida including Boca Raton (KBCT), West Palm Beach (KPBI), Orlando (KORL), Naples (KAPF), Miami (KOPF), St. Augustine (KSGJ), and Tampa (KTPA).

#13. Kalitta Charters LLC.

The Dassault Falcon is owned and operated by Kalitta Charter, an airline charter company with corporate headquarters in Ypsilanti, Michigan.³⁹ The charter company provides a number of services including cargo shipments, air ambulance transportation, and of course, private charters. Douglas Kalitta is the current president and CEO. The company was founded by his uncle Conrad Kalitta. Both had careers in auto racing. Twenty-one other jets owned and operated by Kalitta flew in and out of Hanscom Field during the 18 months studied, but the Dassault Falcon was the most active, taking 58 round-trip flights. We note 56 of the 58 departures were to Columbus, Ohio,

where the company has an operations and maintenance base. Total emissions of the aircraft were over 463 metric tons.

#14. Chartright Air Group.

The Chartright Air Group is an aviation services provider based in Mississauga, Canada, a city a few miles west of Toronto. The company was started by Paul David Phelan, a businessman whose family dynastic wealth originated from newsstands in the 1880s. The Canadian Railway News Company later evolved into a food empire now known as Recipe Unlimited with a chain of restaurants and airline catering.⁴⁰ The current president of Chartright Air is Adam E. Keller. As of September 2023, the company has a large fleet that consists of one turboprop plane, a helicopter, and 39 jets, including a mid-sized Citation Excel that departed to and from Hanscom Field a total of 102 times over the 18-month study period.⁴¹ Flight activity from seven other jets owned and operated by Chartright Air was also identified, but the Citation Excel was the busiest. More than half of the destinations were to three cities in Canada: Toronto (CYYZ), Montreal (CYHU), and Hamilton (CYHM). Total emissions from this one aircraft's activity over 18 months was more than 332 metric tons.

#15. Henry J. Helgeson via AirDax LLC.

Henry Helgeson is the founder and CEO of Capital Bankcard, a credit card processing service provider founded in 1998. Helgeson is likely an ultra-high net worth individual with at least \$16 million in assets. He appears to own a Gulfstream Aerospace G-IV through a limited liability company registered in Delaware called AirDax LLC. This aircraft took a total of 112 flights (56 departures and 56 arrivals) during the period studied. Two of the most popular destinations were Portsmouth, New Hampshire (KPSM) and Nantucket, Massachusetts (KACK). The aircraft's flight activity released more than 906 metric tons of carbon emissions.

#16. Boston MedFlight via New England Life Flight Inc.

One of the few defensible uses of private jet travel is from Boston MedFlight, a nonprofit organization that is the owner of number 16 on our list, a Cessna 525C light jet used to provide air ambulance and other medical services for people who are severely injured or sick.⁴² Boston MedFlight owns the aircraft through New England Life Flight Inc. The nonprofit is registered and based in Bedford and located at Hanscom Field. In the 18-month period studied, Boston MedFlight departed from Hanscom Field 56 times, primarily to destinations in the northeast. These included nine trips to Rome, New York (KRME); seven to Bangor, Maine (KBGR); another seven to Portsmouth, New Hampshire (KPSM); and six to Nantucket, Massachusetts (KACK).

#17. Bank of Utah Trustee.

(See also #4). The 17th most frequent flyer to and from Hanscom Field over the 18 months studied was a Cessna 560XL, a midsize jet and the second belonging to trustee industry giant the Bank of Utah. It landed at Hanscom Field 55 times and departed the airport 53 times. The most popular origin and destination for this jet was Salisbury, North Carolina (KRUQ), having flown from Hanscom Field to Salisbury 20 times and having flown from Salisbury to Hanscom Field 22 times.

Total carbon emissions flying to and from Hanscom Field were nearly 307 tons over the 18 months studied.

#18. David R. Beamish via CSMC Holdings Inc.

David Beamish holds an ownership stake — along with 18 other individuals and entities — in the Pilatus PC-24 business aircraft via a shell company named CSMC Holdings Inc. He is a director at The Woodbridge Group, a foam manufacturing company headquartered in Mississauga, Canada. Beamish is likely a high net worth individual and has at least \$2 million in assets. Others who have an ownership stake in the aircraft include Michael Heim (\$70 million in assets) via Targa Resources Finance Corp; David V. Singer (\$9.5 million in assets) of Brunswick Corporation; Greg Welteroth (\$3.5 million in assets) via W Aviation LLC; and Bruce Barfield (\$35 million in assets) via Badrco LLC, among others. The Pilatus PC-24 made 50 departures from Hanscom Field and 50 arrivals. Fourteen departures were made to Portsmouth, New Hampshire (KPSM), where the aircraft's flight operator, PlaneSense, has its headquarters. Other destinations included recreational locations like Nantucket, Massachusetts (KACK); Martha's Vineyard (KMVY); West Palm Beach, Florida (KPBI); and Miami, Florida (KMIA and KTMB). Total emissions were more than 186 metric tons.

#19. Thomas Lee Partners via Thomas H. Lee Management Company LLC.

The private equity firm's second jet in the top 20 (see #6) — a Hawker 800XP manufactured by Raytheon — made 50 departures from Hanscom Field and 49 arrivals, emitting an estimated 361 metric tons of carbon. Top destinations included: Teterboro, New Jersey (KTEB); Philadelphia, Pennsylvania (KPHIL and KPNE); Nantucket, Massachusetts (KACK); and West Palm Beach, Florida (KPBI). Offshore destinations included: Nassau, Bahamas (MYNN); Hamilton, Bermuda (TXKF); and San Juan, Puerto Rico (TJSJ). Total carbon emissions were over 361 metric tons.

#20 Ronald Shaich via Eastwind Air LLC.

The last member of the top 20 list is centimillionaire Ronald M. Shaich, chairman of the CAVA group and founder and former CEO of Panera Bread. He has an estimated net worth of \$490 million. Through a shell company registered in Delaware, Eastwind Air LLC, Schaich appears to own a Hawker 800XP business jet. During the 18 months we studied, his midsize jet took 48 departures with 20 flights to Portland, Maine (KPWM). Other trips included flights to the Caribbean island of Antigua (TAPA), Turks and Caicos Islands (MBPV), and the Bahamas (MYGF). Destinations also included West Palm Beach (KPBI), Boca Raton (KBCT), Tampa (KTPA), and Miami (KOPF and KTMB), all in Florida. The flights to Portland, Maine were 20 to

25 minutes in length and emitted about 2,457 pounds of carbon per trip. In total, the trips taken by Shaich’s private jet to and from Hanscom Field emitted more than 475 metric tons of carbon.

Top 20 High Flyers
Individual private jets with the most flights in the 18 month period ending July 15, 2023

Rank	Registration	Beneficial Owner(s)	Manufacturer	Model	Departures in the Past 18 Months	Arrivals in the Past 18 Months	Total Emissions
1	N617CB	Bronwen Carroll & John Ryan Carroll	Cessna	560XL	194	193	809.4
2	N575AG	Robert Epstein	Bombardier	CL-600-2B16	132	134	1,572.4
3	N99SC	John Fish	Gulfstream Aerospace	GV-SP (G550)	117	119	2,329.1
4	N225DB	-	Honda Aircraft	HA-420	103	102	213.5
5	N626JS	John W. Childs	Bombardier	BD-700-1A10	103	104	1,407.5
6	N987LP	Thomas H. Lee Partners	IAI	Gulfstream G280	101	101	976.3
7	N917MM	Michael M. Alper, Karin S. Alper & Alan S. Penzias	Embraer	EMB-500	82	77	147.8
8	N617MW	Michael W. Choe, Brandon White, & Amanda White	Cessna	560XL	80	76	537.7
9	N209FB	Panther Residential Management	IAI	Gulfstream G280	80	79	679.5
10	N282N	Arthur S. Demoulas	Textron Aviation	700	70	70	741.8
11	N321WA	Carol C. Moriarty & John J. Moriarty	Bombardier	BD-700-1A11	66	66	954.4
12	N617BW	Brandon White, Amanda White, & Michael W. Choe	Bombardier	CL-600-2B16	65	68	1,355.7
13	N820CK	Kalitta Charters	Dassault/SUD	Fan Jet Falcon	58	58	463.1
14	C-FCGF	Chartright Air Group	Cessna	Citation Excel	58	54	332.5
15	N86MW	Henry J. Helgeson	Gulfstream Aerospace	G-IV	56	56	906.3
16	N46NE	Boston Medflight	Cessna	525C	56	59	173.5
17	N838C	-	Cessna	560XL	53	55	306.9
18	N251AF	David R. Beamish et al	Pilatus Aircraft	PC-24	50	50	186.1
19	N875LP	Thomas H. Lee Partners	Raytheon Corporate Jets	Hawker 800XP	50	49	361.3
20	N258MR	Ronald Shaich	Raytheon Corporate Jets	Hawker 800XP	48	48	475.5

Source: Flightradar24, Federal Aviation Administration, and Paramount Business Jets
Emissions are measured in cubic tons of carbon dioxide

The Missing Bay State Billionaire High Flyers

Where are some of the well-known Massachusetts billionaires on this list and are they flying out of Hanscom Field? The answer is: we don’t know. Four of the eight Bay State billionaires we identified as owning private jets have had their tail registration numbers removed from the public tracking registry.⁴³ These billionaires are Robert Kraft, Jim Davis, John Henry, and Paul Fireman.

Robert Kraft, chairman of the Kraft Group and owner of the New England Patriots and the New England Revolution, is worth an estimated \$11.1 billion, according to *Forbes*. Kraft owns multiple private jets, including a 2021 Gulfstream 6500 Business Jet (tail number N586GA), owned by a Delaware limited liability company, AirKraft Two Trust. However, there is no public tracking information regarding this jet *per request of the owner or operator*. We do know the jet was photographed on March 1, 2022 at the airport in Aspen, Colorado. Through International Forest Products, Kraft apparently owns a 2006 Bombardier Challenger 300, a 2012 Gulfstream G550, and a 2005 Gulfstream G200 jet.

Jim Davis, Chairman of New Balance, is worth an estimated \$5.1 billion, according to *Forbes*. He has a Gulfstream Business Jet, owned by JetShoe 2, LLC (tail number N990NB). However, there is no public tracking information on this jet per request of the owner or operator. But we did find Davis’ jet took at least 22 flights in and out of Hanscom Field, with destinations including Vero Beach and Melbourne, Florida, as well as Washington, DC.

Amos Hostetter, chairman of Pilot House Associates, has a net worth of \$3.5 billion according to *Forbes*, money made from founding and selling Continental Cablevision. Hostetter co-owns a Gulfstream G450 with registration number N454FX. In our analysis, this jet only took three round trip flights out of Hanscom Field to Philadelphia, Burlington, and Trenton. It appears to be leased or used frequently by fractional owners for travel outside New England.

Robert Hale Jr., CEO of Granite Telecommunications, is worth an estimated \$5.4 billion, according to *Forbes*. He has a 2018 Cessna Citation XLS+ Business Jet (tail number NF95RH) that is owned through Miles to Go LLC and is based at Norwood Memorial airport, not far from Hale's Quincy, Massachusetts residence. Tracking info is available, and the jet is very active. Between September 11 and September 20, 2023, the jet made to trips to Texas, Washington Dulles, Virginia, Thomasville, GA, Palm Beach International and Miami, FL, generally returning to Norwood.

Herb Chambers, of auto sales fame, is worth \$2.6 billion, according to *Forbes*. He owns a Gulfstream jet (registration number N142HC) and took 91 flights in and out of Hanscom Field, almost joining the top 20 frequent flyers group. His number one destination was the Caribbean paradise of Sint Maarten, having flown there seven times. Other frequent destinations include Miami, Florida and Teterboro, New Jersey, just outside of New York.

Seth Klarman, hedge fund investor and CEO of Baupost Group, is worth \$1.5 billion according to *Forbes* and Wealth-X. Klarman co-owns three private jets including a 2022 Bombardier Challenger 350 business Jet (tail number N502FX). Klarman also co-owns a 2018 Embraer Praetor 500 business jet (tail number N419FX) and recently purchased a 2022 Embraer Praetor 545. These jets are not blocked from flight tracking and are extremely busy, with almost daily flights; they appear to be used by multiple fractional owners or subleased/rented. These three jets made a combined 20 trips in and out of Hanscom Field during the 18 months we analyzed.

John Henry, owner of the Boston Red Sox and *The Boston Globe*, is worth an estimated \$5.1 billion according to *Forbes*. Henry has owned multiple jets through Algonquin Aviation LLC, based in Boca Raton, Florida. It appears that, until recently, Henry owned a Bombardier 700 jet. During its operation, Henry was able to remove the aircraft (tail number N627JW) from the public tracking registry. It appears the jet may have recently been sold and exported to Turkey. Algonquin Aviation LLC seems to still own a Gulfstream 500 jet (tail number N510GD) that has also had its flight data removed from the public tracking registry.

Paul Fireman, retired CEO of Reebok, is worth \$1.1 billion, according to *Forbes*. Fireman owns a Gulfstream 500 (tail number N72LN) through PFP Flight Holdings LLC. Fireman has had his flight data removed from the public tracking registry and we only find one arrival at Hanscom Field in our data.

Heir Pollution: Dynastic Wealth, Private Jets, and Hanscom

In *High Flyers 2023*, we coined the term “heir pollution” to describe the heavy carbon footprint of private jet travel by individuals who inherited their dynastic wealth or businesses from family members. In our top 20 list, there are at least four heir polluters: John Fish, Arthur S. Demoulas, Douglas Kalitta of Kalitta Charters, and Paul David Phelan of Chartright Air Group. The latter two are unique because they institutionalized their carbon footprint through the establishment of companies that provide charter services, effectively outsourcing their dynastic carbon footprint. These four heir polluters account for a quarter of all carbon emissions of the top 20.

Obscuring Jet Ownership Through Trusts and LLCs (and Minimizing Tax)

As evidenced by the fact that two of the top 20 Hanscom High Flyers registered their jets with the Bank of Utah as trustee and the rest are largely owned by LLCs, it is common for private jet owners to wish to hide their ownership interests from the public. While secrecy is not the only or even the main goal of registering an aircraft through a trust or LLC, anonymity is certainly a useful secondary benefit.

Another benefit can be found in the tax code. Private jet owners are treated quite well by the IRS. For instance, the owner of a private jet only needs to use his or her aircraft for direct business purposes 51 percent of the time in order for the jet to be deductible as a business expense. But that’s not all. As part of the 2017 Trump tax reform, business jets became eligible to immediately realize the benefits of accelerated depreciation. The bonus depreciation provision allows jet owners to write off the full cost of their jet within the first year of purchase, instead of depreciating it over several years as is the standard. The provision does not fully phase out until 2027 when the standard IRS-designated rule of 5 years will once more apply for jet purchases.

Private jet owners also form LLCs for simple liability protection — and because the businesses they set up offer even more tax benefits than simply writing off the cost of the jet. When a jet owner’s plane is in the sky, it does not always have the owner on it. The owner will often lease out the use of the jet to others. Because the LLC is in the business of charter operations, the jet owner can record a financial loss to minimize his taxes. And according to a ProPublica story for which reporters inspected the tax records of 30 wealthy, jet-owning US oligarchs, “Profits in the airplane chartering business for this set, judging from their taxes, were extremely rare,” meaning that it was not rare for these “losses” to shrink or eliminate a wealthy person’s tax bill.⁴⁴

One can also avoid a lump sum payment of state sales tax by setting up an LLC that will then lease the jet to the owner. In this way, one pays sales tax on the monthly lease payments, not the total bill — thus extending tax payments over years. Of course, if a state does not charge sales tax on private jet purchases, then this doesn’t matter. Massachusetts exempts private jets from state sales tax. According to the Massachusetts’ governor’s office, this sales tax exemption will cost the state \$26.7 million in fiscal year 2024.⁴⁵

Because of the creative ways that the “wealth defense industry” and the wealthy collude to avoid taxation, the web of LLC, trust, and corporation ownership of private jets can be intentionally

complex and confusing. Let's take Donald Trump's aviation assets as an example, specifically his gold-plated Boeing 757-200 (registration number: N757AF). The jet is owned by Trump through DJT Operations I LLC. The LLC leases the jet to Tag Air, Inc., which is a Trump-owned enterprise via DJT Operations II LLC. In April of this year, according to a recent report by Business Insider, Trump valued Tag Air at no more than \$1,001. In July, perhaps because of the civil fraud case against him in New York, he updated the filing: Tag Air was now worth between \$5 million and \$25 million.⁴⁶

The information we obtained for this study should not be so difficult to ascertain. Private jet ownership should be much more transparent — and the beneficial owners should be publicly disclosed. The private jet lobby has pressed for reduced transparency, trying to protect the secret identity of jet users. But there are social and security reasons for a greater transparency regime.

Private Equity, Private Jets and Climate Disruption

Seven of the top 20 most frequent flyers at Hanscom Field are private equity firms. Private equity firms hold trillions of dollars in energy investments including coal, oil, and gas, thereby playing a major role in driving the climate crisis by enabling continued fossil fuel extraction and the construction of new infrastructure.

According to a 2022 report on private equity and climate risks by Americans for Financial Reform Education Fund and the Private Equity Stakeholder Project, the ten largest private equity firms held at least 80 percent of their energy portfolios in fossil fuels as of October 2021. As the report observes:

As public markets attempt to shed [fossil fuel] assets, private equity asset managers have repeatedly acquired them and operated these fossil fuel assets out of the public eye and beyond the oversight of financial regulators. The billions of dollars private equity firms have deployed to drill, frack, transport, store, refine fossil fuels, and generate energy, stand in stark contrast to what climate scientists and international policymakers have called upon to align our trajectory to the 1.5 degrees Celsius warming scenario.⁴⁷

Registered agents that are affiliated with Charlesbank Partners, who own multiple private jets, are frequent Hanscom Field flyers. Charlesbank is historically a major investor in fossil fuel projects and formed Southcross Energy after acquiring Crosstex Energy, a major natural gas operation in Texas, Mississippi, and Alabama, for \$220 million.⁴⁸

Recommendations

Greater Ownership Transparency. There is no absolute right to privacy in benefiting from the publicly funded air traffic control system. The public has a right to know who owns the aircraft flying over their communities and consuming public services — and to know who is pressing for the expansion of private jet travel. Wealthy high-flyers should not have the ability to simply opt out of public data registries, just as car owners cannot hide their car license plates. If there are security concerns related to real-time reporting of jet locations, allow the data reporting to lag for

a week. This may require modifying the rules governing the FAA’s Limiting Aircraft Data Displayed program.⁴⁹

Stop Private Jet Expansion at Hanscom Field — and Everywhere. We recommend that Massport and other state and local agencies reject the expansion of Hanscom Field and reject any future plans at Logan International for increased private jet capacity.

Eliminate the Massachusetts Aviation Sales Tax Exemption. The private jet lobby and the aviation industry have lobbied to protect this sales tax exemption. If we tax bicycle and automobile sales, we should tax plane sales. Senator Michael J. Barrett and Representative Natalie Higgins have introduced “An Act relative to the repeal of sales tax exemption for aircraft,” S. 1758 and H. 2826.

Eliminate Massachusetts Sales Tax Exemption on Aircraft Fuel. Senator Barrett has also introduced legislation to repeal the sales tax exemption on aircraft fuel.

Increase Excise Tax on Jet Fuel and Invest in Green Transit. To reduce carbon emissions in the aviation sector, federal lawmakers should steeply tax private jet travel and direct those funds toward climate mitigation and green infrastructure. Legislation introduced by Senator Ed Markey of Massachusetts, the Fueling Alternative Transportation with a Carbon Aviation Tax Act of 2023, would do precisely this. If enacted, this legislation would increase the excise tax on jet fuel from 22 cents per gallon to \$1.95, effectively adding \$200 per ton of carbon emitted. Markey’s plan to increase the excise tax on private jet fuel would generate more than \$1.8 billion annually for transit alternatives.⁵⁰

Methodology

Flight Data. Air traffic data to and from Laurence G. Hanscom Field (KBED/BED) between January 1, 2022 to July 15, 2023 was provided to the Institute for Policy Studies by Flightradar24, a flight tracking company based in Sweden. The data set included, but was not limited to, the following: aircraft registration; the ICAO and IATA codes for origin and destination airports; the names of origin and destination airports; the names of origin and destination cities and countries; date and time of takeoff and landing; the length of flight time; and aircraft service type. Aircraft service types are divided into eight categories: business/private jets; cargo; general aviation; helicopters; military and government; passenger; non-categorized; and other.

Ownership. We were able to identify the ownership and co-ownership of private aircraft by consulting the Federal Aviation Administration's registry database. For governance of limited liability companies, we relied on OpenCorporates.

Emissions. Emission calculations were done utilizing Paramount's Private Jet Carbon Offset Calculator. There were four instances where specific airports did not appear in Paramount's search engine. These were East Hampton Airport (KJPX) in New York; Hilton Head Island Airport (KHXD) in South Carolina; Scottsdale Airport (KSDL) in Arizona; and Phoenix Mesa Gateway Airport (KIWA) in Arizona. In order to calculate the carbon footprint of flights to and from the aforementioned airports, we chose nearby airports as proxies. These proxy airports were Long Island MacArthur Airport (KISP) in New York, Beaufort County Airport (KARW) in South Carolina, Phoenix Sky Harbor International Airport (KPHX) in Arizona, and Falcon Field Airport (KFFZ) in Arizona. Paramount's Private Jet Carbon Offset Calculator also has an input where the user can include the jet model. For instances where the exact jet model was not an available option, we used the size of the jet as the input.

Wealth Estimates. Unless otherwise noted, all wealth estimates and asset holdings throughout this report are based on IPS research of Wealth-X's database. For billionaires, we also consulted *Forbes*, as *Forbes* has a real-time wealth tracking for billionaires.

Analyzing Destinations. There is, of course, no firm demarcation of what constitutes a luxury or recreational destination or a way to ascertain the traveler's intent and activity. For the purposes of consistency, we define any location with a major beach, ski-resort, golf course, or significant tourist attraction as a recreational destination. We also included destinations with a significant residential footprint of ultra-wealthy people, that is, cities and towns where ultra-high net worth individuals are known to have second or third homes, as luxury destinations.⁵¹ These include popular US cities like Chicago, Los Angeles, Miami, New York, and Washington DC and international hubs like London, Paris, and Zurich.

There are some places that are obvious recreational destinations, such as Aspen, Colorado, Cancun, Mexico and Aberdeen, Scotland. Aspen is a known ski resort town with a picturesque and extraordinary mountainous landscape that attracts tourists from all over the globe, especially during its winter months. Cancun has renowned beaches, a spirited nightlife, and is a popular place to vacation, especially for US citizens.⁵² Aberdeen, Scotland, the city, and the county that it is located in, Aberdeenshire, is well-known for golf tourism, a lucrative industry with a market expected to reach over \$40 billion by the end of the decade.⁵³ Aberdeen is home to dozens of golf

courses including the Royal Aberdeen Golf Club, one of the oldest golf courses in the world and founded in 1780.⁵⁴

Other well-known but less famous recreational destinations include Truckee, California and Jackson, Wyoming. There are ski resorts, a few golf courses, a horseback riding service, lakeside campgrounds, and hiking trails in Truckee. Jackson offers similar amenities but with an Old West aesthetic: ski resorts, hiking trails, wildlife refuge, and it is just south of Yellowstone National Park.

However, some recreational destinations are not so obvious. For example, few people outside of Ontario, Canada may be familiar with the Snow Valley Ski Resort in Barrie or the year-round resort at Boler Mountain in London (not to be confused with the city in the UK!) where individuals and families can engage in fun activities like snow tubing in the winter or mountain bike riding in the not so cold months of the year. Furthermore, there are locations where it is difficult to determine whether it should be categorized as a recreational destination. Just because a place does not have ski resorts, waterparks, golf courses, casinos, beaches, large landmarks, attractions, or it is not known as an international hub does not mean it is not a leisure or recreational destination.

Our estimate of the percentage of recreational and luxury destinations is conservative. For example, we did not count the 6,708 of the flights out of Hanscom Field — 42.5 percent — that depart on the weekend, a timing that suggests recreational use. There are some cities that we categorize as luxury, such as New York City and London, which would be frequent destinations for both work and leisure. For example, what percent of flights to Teterboro Airport (KTEB) in New Jersey are pure business travel? Flights that depart and return during business hours are good examples of business travel. Trips departing on a Friday morning and returning Sunday are more likely to be recreational. It would be reasonable to assume that some percentage of the 1,593 flights that departed from Hanscom Field to Teterboro was for leisure purposes.

To estimate a percentage of flights for personal and recreational use, we created a three-tier system. The first are flights to destinations known to be tourist hubs, vacation hotspots, or places visited for leisure/recreation. We counted most of the flights to those destinations as luxury or recreational. The second are global hubs for business like New York City and Chicago. We appraised 40 percent of these flights as leisure or recreational, following the methodology created by *The Wall Street Journal*. Finally, we assumed that 25 percent portion of the 7,951 flights to other destinations were personal or recreational. We looked at weekend vs. weekday departures, timing in relation to major sporting events, and seasonality of flights (winter flights to southern locations; summer flights to north country destinations).

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- ²⁰ The destination details of 285 flights are missing. These 285 records were not included in this percentage calculation.
- ²¹ Perhaps the most peculiar international destination was a singular trip to Tame Gabriel Vargas Santos Airport (SKTM) in eastern Colombia. NetJets, Workday Inc, AbbVie Inc, and Wealthgate Family Office LLC all have an ownership stake in the private jet that traveled to Tame, a small town located in the Arauca Department. Tame is home to three oil fields — Andina, Capachos, and North Andina - and they are operated and owned by both the Colombian state-owned oil company, Ecopetrol, and the Canadian multinational Parex Resources. It is not known whether the four corporations that own an ownership stake in the private jet are investors or shareholders in these oil companies or oil fields.
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