Unleaded Avgas Transition Plan

Boulder Municipal Airport (KBDU)

Plan Prepared: November 2025

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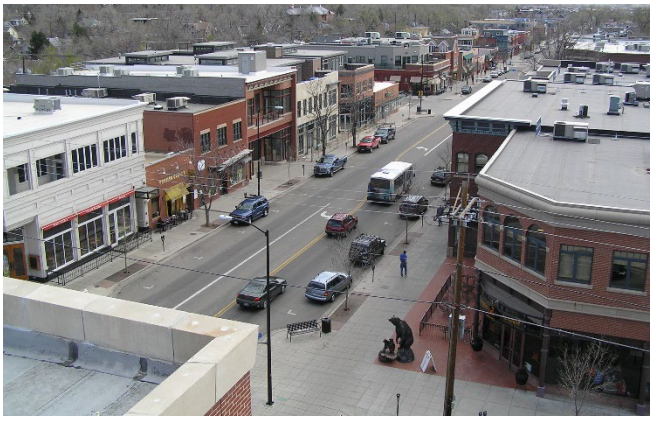
I. Introduction

Executive Summary

Boulder Municipal Airport (KBDU), which is owned and operated by the City of Boulder, is classified as a public use local general aviation airport by the FAA's National Plan of Integrated Airport Systems (NPIAS). The CDOT Aeronautics Division classifies the facility as an GA – Local airport in the Statewide Airport Inventory and Implementation Plan (i.e., the Airport System Plan). The Airport is located northwest of the City of Denver, approximately 13 miles west of Interstate 25, and approximately 18 miles north of Interstate 70. The Airport is also situated on the east side of Foothills Parkway (Highway 119 at the northern limits of the City of Boulder). According to the 2025 Colorado Aviation Economic Impact Study, KBDU generated $78.3 million in total business revenues in 2023. Of that, $69.5 million came from on-airport activities, while $8.8 million was attributed to visitor spending. The airport supported 281 total jobs, contributing $23.3 million in total payroll and $43.4 million in total value added to the local economy. These figures reflect KBDU's diverse aviation functions, including flight training, glider operations, aerospace research, and emergency services. The airport also serves as a community hub, hosting events like Boulder Airport Day and concerts, while providing a strategic stopover for cross-country flights across Colorado's mountainous terrain. KBDU is one of 66 public-use airports contributing to Colorado's broader aviation system, which generated $68.9 billion in total economic activity statewide in 2023.



In congruence with Federal and State unleaded initiatives, the purpose of this document is to lay out a plan towards transitioning to cleaner aviation fuels by 2030. This plan may be revisited from time to time as the aviation industry progresses towards safe fuel alternatives and away from 100LL for piston powered aircraft.

II. Regulatory Background

Federal Aviation Administration EAGLE Initiative

Eliminate Aviation Gasoline Lead Emissions (EAGLE) The FAA and partners in the aviation community launched the EAGLE initiative as the result of a Congressionally mandated report from the National Academies. The EAGLE team's goal is to eliminate leaded aviation fuels in piston-engine aircraft safely by the end of 2030.

To achieve its lead-free aviation goal, the EAGLE initiative focuses on several key strategies. It aims to identify at least one unleaded fuel that is safe and suitable for use across the general aviation fleet. The initiative also works to minimize safety and technical challenges, particularly for high-performance engines operating on unleaded alternatives. EAGLE supports the expansion of production, distribution, and adoption of unleaded fuels while ensuring that 100 low-lead (100LL) fuel remains available during the transition period. Additionally, it promotes policies that fund airport infrastructure upgrades to accommodate unleaded fuel and endorses long-term plans to reduce or eliminate dependence on leaded aviation fuels.

The FAA is advancing a lead-free aviation system through two main approval pathways for unleaded fuel: the fleet authorization process, developed with the Piston Aviation Fuels Initiative (PAFI), and the traditional aircraft type certification or supplemental type certification (STC) process. Under the STC pathway, the FAA approved GAMI's G100UL fuel for a wide range of general aviation aircraft in 2022 and later approved Swift Fuels' 100R for specific Cessna models in 2024. In 2023, the FAA issued a Fleet Authorization Policy Statement outlining how unleaded fuels can be approved for broader use across the piston-engine fleet. Through PAFI, the FAA is also testing UL 100E, a high-octane unleaded fuel developed by LyondellBasell and VP Racing, with fleet authorization expected after successful testing. To support the transition, the FAA and EAGLE have created guidance for flight schools, and the Airport Cooperative Research Program is finalizing a guidebook to help airports manage the shift to unleaded fuels, expected by late 2025.

CDOT identified Boulder Municipal Airport as one of 5 airports subject to the requirements in HB24-1235

State of Colorado HB24-1235

In May 2024, HB24-1235, "Reduce Aviation Impacts on Communities," was signed into law. The legislation incentivizes the transition to unleaded aviation fuels in Colorado and establishes new requirements for certain airports located in densely populated areas or with significant flight activity over nearby residential communities. To remain eligible for discretionary grants, these airports must now submit additional information to the Division of Aeronautics. As outlined in the bill, the Division has identified five airports subject to these requirements: Centennial, Rocky Mountain Metropolitan, Erie Municipal, Boulder Municipal, and Longmont/Vance Brand.

The Division is required to allocate either 10% or up to $1.5 million of its annual discretionary grant program to support projects that aid in the transition to unleaded aviation fuel. It must also actively share information with airports regarding this transition. To qualify for discretionary funding, five designated airports must create, publish, and communicate voluntary noise abatement programs and submit them to the Division. Additionally, these airports must provide a written plan outlining their transition to unleaded avgas by January 1, 2026. Starting in the 2025 tax year, aircraft owners can claim a state income tax deduction covering 50% of the cost of obtaining a supplemental type certificate (STC) necessary for using unleaded avgas in their aircraft.

III. Airport Information

Based Aircraft Analysis

KBDU is home to approximately 187 aircraft consisting of: 139 fixed wing aircraft, 45 gliders and 3 helicopters. Predominantly, aircraft operating at KBDU are piston powered aircraft. Over half of all operations occurring at KBDU annually are based training aircraft and gliders requiring a tow aircraft both utilizing 100LL. An STC analysis indicates that 71% or 100 aircraft out of the 139 fixed wing aircraft are UL94 eligible.

Fixed Base Operator

An FBO, or Fixed Base Operator, is a commercial business granted the right to operate at an airport and provide a range of aviation services including but not limited to any one of the following: fueling, aircraft parking (ramp or hangar), maintenance, flight instruction, charter operations, and amenities for pilots and passengers.

Currently KBDU has one FBO, Journey's Aviation, which provides fueling for based and transient aircraft serving Jet A and 100LL fuels.

Fuel Infrastructure Inventory

Figure 1: FBO AvGas Fuel Truck Capacities

FBO	No. of AvGas Trucks	Current 100LL Capacity	Current Unleaded Capacity	Future Unleaded Capacity
Journeys Aviation	1	750	0	750
Total	**-**	**750**	**0**	**750**

Figure 2: FBO AvGas Fuel Farm Capacities

FBO	Fuel Farm	Current 100LL Capacity	Current Unleaded Capacity	Future Unleaded Capacity
Journeys Aviation	self serve	10,000	0	10,000
	Main Farm	10,000	0	10,000
Total	**-**	**20,000**	**0**	**20,000**

IV. Transition Plan

Engagement and Tenant Outreach

KBDU engaged multiple airport operators to collect information utilized in establishing this plan. This plan will be reviewed during quarterly noise abatement meetings and have a standing place in tenant meetings until a full transition is made. This plan is published on the airport's website and has been distributed to tenants through an email campaign. Updates to the plan and important transitional milestones will be communicated through similar means as they become available through official communications channels.

Incentives

In addition to State incentives reimbursing 50% of the cost of the STC, KBDU plans to offer full reimbursement of the cost of the STC to tenants per qualified based aircraft. To qualify the aircraft must be based at KBDU at the time of STC purchase issued to it's registration number. KBDU plans to offer a fuel subsidy to cover eligible fuel costs through the State's unleaded fuel subsidy program.

Recommended Infrastructure

Through the FAA and the EAGLE initiative, it has been mandated that if an airport offers 100LL it must continue to provide 100LL until 2030 when the industry targets having an approved alternative fuel in place. Given the complexity to safely transitioning all piston aircraft and the numerous fuels in various stages of regulatory approval, it is recommended to pursue infrastructure first and preserve the ability to choose the specific unleaded type of fuel at an appropriate time. Tentatively a 10,000 gallon above ground self-serve tank is being considered for a future grant funding request.

Funding Sources

KBDU plans to fund fuel subsidies through the unleaded fuel subsidy program the State offers in accordance with restrictions and caps outlined in the program. KBDU plans to request grant funding from the State to fund the installation of permanent infrastructure with local matching funds. KBDU will fund qualified STC reimbursements via a rent credit on a tenant's monthly bill.

Timelines

The following outlines a few key dates that are relevant to the anticipated implementation of this plan. These dates are intended to provide a general framework for planning and coordination purposes. All timelines should be considered provisional and may be adjusted as conditions evolve. As such, the deadlines identified below are subject to change based on the state of the industry, FBO needs/decisions, and any applicable federal guidelines or mandates. The airport's objective is to make a full transition away from leaded fuel by the date below or once a viable fleetwide drop-in replacement becomes available.

Retail Unleaded AvGas availability by: 12/31/2026.

Proposed Current Fuel Infrastructure Conversion: December 31, 2030 or sooner as industry conditions allow.

Plan Updates

At a minimum, this plan will be reviewed on an annual basis to ensure that it remains accurate, relevant, and aligned with the most current information, regulations, and industry best practices related to the transition to Unleaded AvGas.

Following each review and update, the revised plan will be shared and published using the communication methods outlined in the Outreach & Engagement section. By maintaining transparency and accessibility, the airport will ensure that all stakeholders remain informed of the current status of the Unleaded AvGas transition.