Vance Brand Airport Unleaded Aviation Fuel Transition Plan

Executive Summary

This transition plan fulfills the requirements of Colorado HB24-1235, "Reduce Aviation Impact on Communities," signed into law in May 2024. As one of five Colorado airports identified by the Colorado Division of Aeronautics as having significant number of flights over densely populated residential areas per the legislation, Longmont Airport must submit this plan to the Division by January 1, 2026 to remain eligible for Division grant funding.

Legislative Requirement: Phase out sales of leaded avgas (100LL) by January 1, 2030
Plan Submission Deadline: January 1, 2026
Planning Phase Begin Date: Q2 2026
Primary Objective: Transition from underground leaded fuel storage to above-ground unleaded aviation fuel system through contracted FBO operations

Funding Dependency: All timeline projections are contingent upon successful acquisition of funding. It is likely that federal and state grant funding will be required for the successful implementation of this plan. If FAA Airport Improvement Program (AIP) funding is required and subject to federal appropriations cycles, infrastructure installation may be delayed until 2029. Without secured funding, infrastructure improvements may be delayed, though planning and stakeholder engagement activities will continue.

This plan details the transition from an aging underground leaded fuel tank to a modern above-ground unleaded fuel system, operated by a contracted Fixed Base Operator (FBO). The airport will select an unleaded fuel option based on market availability, aircraft compatibility, and cost-effectiveness. The phased approach balances infrastructure requirements with aircraft owner support while meeting the January 1, 2030 compliance deadline.

Legislative Background and Requirements

HB24-1235 Overview

Colorado House Bill 24-1235, codified in CRS 43-10-108.5(2)(c)(I), requires the Colorado Division of Aeronautics to identify airports with significant number of flights over densely populated residential areas, which are subject to additional requirements to be eligible for Division grants. The Division identified the Longmont Airport and four other Colorado airports (Centennial, Rocky Mountain Metropolitan, Erie Municipal, and Boulder Municipal) as those that must develop and submit unleaded aviation fuel transition plans by January 1, 2026. This legislation addresses the health and environmental impacts of lead emissions from aviation gasoline.

Compliance Requirements

- Submit transition plan by January 1, 2026
- Phase out sales of leaded avgas by January 1, 2030
- Demonstrate stakeholder engagement and aircraft owner support
- Provide infrastructure development timeline and cost estimates

Potentially Available State Incentives

- Transitional Fuel Price Subsidy Grants through the Division of Aeronautics
- State Income Tax Credit for aircraft owners acquiring Supplemental Type Certificates (STCs)
- Discretionary Grant Funding for airport infrastructure improvements (subject to plan approval and fund availability)

Based Aircraft Fleet Assessment

Current Fleet Composition

- **Total Based Aircraft:** 145 aircraft
- **Flight School Aircraft:** 22 aircraft

Unleaded Fuel Compatibility Analysis

Using the EAGLE Initiative's interactive toolkit, the airport has assessed fleet compatibility:

Highly Compatible with all fuel options: ~85 aircraft (59%)

- Most Cessna 172s, Piper Warriors, Cherokees, and other low-compression engines

- Aircraft with engines rated for 91 octane or lower
- Flight school fleet (22 aircraft) fully compatible

Compatible with Higher-Octane Unleaded: ~50 aircraft (34%)

- High-performance singles (Bonanzas, Cirrus, Mooneys)
- Light twins with higher compression engines

Require Further Assessment: ~10 aircraft (7%)

- Vintage aircraft and specialized engines

The majority of based aircraft and all flight training operations can transition to unleaded fuel with minimal or no modifications and the approval of a supplemental type certificate (STC).

Unleaded Fuel Selection Strategy

Currently, there are several available fuel options being vetted by the FAA and the aviation community abroad. As testing, development, certifications and infrastructure for these fuels move forward, the industry hopes to have a clear idea of what fuel will eventually come to replace 100LL in a universal manner.

Currently Available Options

Swift Fuels UL94

- ASTM D7547 compliant, 94 octane
- Likely to be available nationwide through established distribution
- Compatible with approximately 70% of general aviation fleet without modifications

GAMI G100UL

- 100 octane unleaded with FAA fleet authorization
- Not ASTM-compliant (proprietary formulation)
- Purports to be compatible with all aircraft currently using 100LL

Swift Fuels 100R (Expected 2026)

- ASTM-compliant 100 octane unleaded fuel in final development
- Expected commercial availability 2026-2027

- Drop-in replacement for 100LL across entire fleet

Selection Criteria and Final Decision

During the initial transition to unleaded fuel, the airport will evaluate and select **one single unleaded fuel type** based on:

- Aircraft fleet compatibility (minimize aircraft requiring STCs)
- Market availability and reliable supply chain
- Cost competitiveness with current 100LL pricing
- Distributor network and delivery logistics
- Long-term fuel industry trajectory

Decision Timeline: Assuming fuel development moves forward as predicted the airport will make its final fuel selection decision by Q4 2026, following:

- Market assessment of available products
- Fuel supplier proposals and pricing
- Based aircraft owner feedback from educational workshop
- Technical review of compatibility with existing and planned infrastructure

Initially, the selected fuel will serve as the airport's sole unleaded product, simplifying operations, training, and inventory management. The airport anticipates selecting either UL94 (if fleet compatibility is adequate) or 100R/G100UL (if higher octane is necessary for fleet needs).

Supplemental Type Certificate (STC) Support Program

Financial Assistance for Aircraft Owners

Direct STC Cost Subsidy

- Airport will reimburse 50% of STC acquisition costs up to $500 per aircraft
- Program Budget: $25,000 (covering approximately 50 aircraft)
- Eligibility: All based aircraft at Longmont Airport requiring STCs for chosen unleaded fuel
- Application: Online form with proof of purchase and aircraft registration

State Tax Credit Promotion

- Promotion of Colorado state income tax credit for STC acquisition (HB24-1235 provision)
- Estimated value: 50% of the STC cost up to $500 per qualifying aircraft
- Educational materials on tax credit eligibility and application

Transitional Fuel Price Subsidy

- If available, application for Colorado Division of Aeronautics transitional fuel price subsidy grants
- Subsidize price difference between unleaded and 100LL during initial transition period

Program Timeline

- Q2-Q3 2026: Finalize program details and secure funding for Support Program
- Q4 2026: Launch program and begin accepting applications
- 2027-2029: Active program period
- 2029: Final evaluations and closeout

Note: STC assistance program implementation is contingent upon airport budget availability and potential state grant funding.

Stakeholder Outreach and Engagement Plan

Communication Strategy

Educational Workshop (Q4 2026)

- A comprehensive workshop will be set up to cover:
    - Legislative background and HB24-1235 requirements
    - Unleaded fuel options and characteristics
    - Aircraft compatibility and STC process
    - Financial assistance programs (STC subsidy, state tax credits)
    - Timeline and infrastructure plans
    - Q&A session with aircraft owners
- Format: In-person at airport with virtual attendance option

- Materials: Comprehensive handout packet and online resource library

Ongoing Communication Channels

- **Email Updates:** Quarterly progress reports to all based aircraft owners
- **Website:** Dedicated transition page with FAQs, timeline, and resources
- **Media:** Updates on major milestones via the Airport newsletter
- **AAB Meeting Updates:** Dedicated time during the AAB to provide updates.
- **Bulletin Boards:** Posted updates at airport facilities and FBO

Stakeholder Feedback

- Online survey following workshop to gauge concerns and preferences
- Open-door policy with airport manager for individual discussions
- Anonymous feedback mechanism for concerns

Existing Fuel Infrastructure Assessment

Current System (FBO-Operated)

Underground Storage Tank

- Type: Single-wall steel underground tank
- Capacity: 12,000 gallons
- Fuel: 100LL (leaded avgas)
- Age: ~30 years (installed circa 1995)
- Condition: Approaching end of useful life
- Must be removed for safety and environmental compliance

Dispensing Equipment

- Self-serve island with single-hose dispenser (circa 2005)
- Fuel truck: 2012 Ford F-550 with 500-gallon tank
- Current condition: Operational but outdated

Infrastructure Reallocation

Cannot Be Repurposed:

- Underground storage tank (must be removed per EPA/Colorado regulations)
- Underground piping (will be removed with tank)
- Self-serve dispensing equipment (incompatible with modern systems)

Can Be Repurposed:

- Fuel truck: Can be cleaned and converted for unleaded service (~$5,000)
- Self-serve island canopy: Structure sound, can house new equipment
- Electrical service: Can support new dispensing equipment with minor upgrades (~$3,000)
- Repurposing of truck is contingent upon the city assuming ownership of it

New Infrastructure Development Plan

Above-Ground Storage Tank System

Primary Storage Tank

- Type: UL-142 double-wall steel above-ground storage tank
- Capacity: 10,000 gallons
- Location: Ramp area
- Features: Automatic tank gauging, overfill prevention, leak detection, high-level alarms

Secondary Containment

- Reinforced concrete pad with impermeable liner
- Capacity: 110% of tank volume (11,000 gallons)
- Dimensions: 35' × 25' with 3' containment walls
- Drainage: Controlled with oil-water separator

Dispensing and Support Infrastructure

Self-Serve Fuel Island

- Modern single-hose dispensing system (30 GPM flow rate)
- Card reader accepting credit/debit cards and fuel cards

- Cloud-based fuel management and monitoring
- Multi-stage filtration with water separator
- Emergency shutoff systems

Safety and Security

- Fire suppression equipment (ABC fire extinguishers)
- Spill response kit (50-gallon capacity)
- Security fencing, LED lighting, and surveillance cameras
- Grounding and bonding systems per NFPA 407

Environmental Protection

- Spill containment (110% capacity)
- Stormwater controls with oil-water separator
- Spill response plan and regular inspection schedule

FBO Operations Model

Contracted FBO Operator

The City of Longmont will contract fuel operations to a qualified Fixed Base Operator rather than operating fueling services directly. This model provides:

- Professional fuel management expertise
- Established fuel supply relationships
- Reduced city staffing and training requirements
- Industry-standard safety and compliance protocols
- Liability management through professional operators

FBO Responsibilities:

- Daily fuel operations and sales
- Routine maintenance and inspections
- Fuel quality testing and monitoring
- Customer service and support

- Safety and environmental compliance
- Staff training and certification

Airport Responsibilities:

- Infrastructure ownership and capital improvements
- Oversight of FBO compliance with lease agreement
- Fuel pricing approval
- Enforcement of transition timeline to unleaded fuel

FBO Selection Timeline:

- Q2-Q3 2026: Develop RFP for FBO services
- Q4 2026: Advertise, receive proposals, and evaluate
- Q1 2027: Select FBO and negotiate contract (contingent on funding approval)
- FBO operational start: Concurrent with new infrastructure commissioning

Project Costs and Funding Sources

Total Project Cost: $499,025

Phase 1: Underground Tank Removal - $60,000

- Tank removal and disposal: $20,000
- Soil sampling and analysis: $4,000
- Soil remediation (contingency): $30,000
- Site restoration: $6,000

Phase 2: Above-Ground Tank Installation - $115,000

- 10,000-gallon double-wall AST: $65,000
- Delivery and installation: $8,000
- Concrete containment pad: $22,000
- Piping and fuel lines: $12,000
- Tank accessories: $8,000

Phase 3: Dispensing Equipment - $61,000

- Self-serve dispenser and meter: $28,000
- Card reader and fuel management system: $12,000
- Filtration and water separator: $6,000
- Installation labor: $8,000
- Canopy renovation and signage: $7,000

Phase 4: Supporting Infrastructure - $48,000

- Electrical upgrades and lighting: $15,000
- Security fencing and access control: $12,000
- Security cameras: $8,000
- Fire suppression and safety equipment: $5,000
- Environmental controls: $8,000

Phase 5: Fuel Truck Conversion - $8,500

- Cleaning, testing, and upgrades: $8,500

Phase 6: Professional Services - $58,000

- Engineering and design: $18,000
- Environmental consultant: $12,000
- Project management: $15,000
- Permits and regulatory fees: $8,000
- Legal and compliance: $5,000

Phase 7: Tenant Support Programs - $33,000

- STC assistance program: $25,000
- Educational workshop and materials: $5,000
- Outreach and communication: $3,000

Phase 8: Contingency and Operational - $115,525

- Project contingency (15%): $57,525
- Temporary fuel supply during construction: $8,000

- Initial fuel inventory: $50,000

Funding Strategy

Federal Funding (Target: $200,000)

- FAA Airport Improvement Program (AIP) grant
- Eligible: Tank removal, environmental remediation, new infrastructure
- Match requirement: 10% (airport responsibility: $20,000)
- **Challenge:** Federal appropriations are subject to annual budget cycles, and the FAA has input on what the priority projects that they will approve grants for.
- **Risk:** If AIP funding is required, project may be delayed until later appropriations

State Funding (Target: $150,000)

- Colorado Division of Aeronautics Discretionary Grants
- Requires approved transition plan and city-operated/contracted fueling
- Competitive grant process
- **Challenge:** Limited annual funds available; not guaranteed

Transitional Fuel Price Subsidy (Target: $20,000)

- If available, would support fuel price parity during transition
- Application concurrent with discretionary grant

Airport Funds ($129,025)

- **Limitation:** Insufficient to complete project without external funding

Funding Scenarios

Best Case Scenario: FAA and State grants approved 2026-2027

- Construction begins: 2027
- Unleaded fuel available: 2028
- 100LL eliminated: 2030

Moderate Scenario: State grant approved 2027; FAA funding delayed

- Construction begins: 2028

- Unleaded fuel available: 2029
- 100LL eliminated: 2030

Worst Case Scenario: FAA funding required but delayed to FY2029 appropriation

- Construction begins: 2029
- Unleaded fuel available: Late 2029/Early 2030
- 100LL eliminated: 2030
- **Risk:** May require emergency interim measures or contract extension requests

The airport will pursue all available funding sources simultaneously and adjust the project scope if necessary to meet the January 1, 2030 deadline within available resources.

Project Timeline

2026: Planning and Grant Applications

Q2 2026 (April - June)

- **Planning phase begins**
- Finalize transition plan details
- Conduct based aircraft fleet compatibility analysis using EAGLE toolkit
- Begin preliminary engineering and site assessment
- Develop FBO RFP for contracted operations

Q3 2026 (July - September)

- Prepare grant applications (know where the money is coming from)
- Advertise FBO RFP
- Order above-ground storage tank (long lead time item)
- Begin permitting process

Q4 2026 (September - December)

- **Host educational workshop for based aircraft owners**
- Submit FAA AIP grant application if able
- Submit Colorado Division discretionary grant applications if able

- Receive and evaluate FBO proposals
- Launch STC assistance program

2027: Funding-Dependent Activities

Scenario A: If Grants Approved Early 2027

Q1 2027

- Receive grant funding awards
- Select FBO operator (if not already selected) and negotiate contract
- Finalize contractor selection
- Secure all construction permits

Q2-Q4 2027

- Begin construction (tank removal, site preparation)
- Continue construction (new tank installation)
- Install dispensing equipment and safety systems

2028: Construction and Commissioning (If Funding Secured 2027)

Q1-Q2 2028

- Complete infrastructure construction
- System testing and commissioning
- FBO training and operational setup
- Staff safety training

Q3 2028

- Begin unleaded fuel sales
- Maintain limited 100LL availability during transition
- Monitor system performance

Q4 2028 - 2029

- Dual-fuel operations (unleaded and 100LL)
- Continuing STC assistance for aircraft requiring modifications

- Gradual reduction of 100LL inventory

2029-2030: Final Transition

Scenario B: If FAA Funding Delayed to FY2029

Q1-Q2 2029

- Receive delayed FAA grant funding
- Accelerated procurement and permitting
- Select FBO and contractors

Q3-Q4 2029

- **Expedited construction timeline**
- Tank removal, installation, and commissioning on compressed schedule
- Begin unleaded fuel sales by Q4 2029

Q4 2029

- Announce 100LL termination date: January 1, 2030
- Final 90-day notice to aircraft owners
- Final STC assistance opportunities

January 1, 2030

- **100LL sales terminated (compliance deadline)**
- 100% unleaded fuel operations
- Submit compliance report to Division of Aeronautics

Key Milestones (Funding-Dependent)

Milestone	Best Case	Moderate Case	Worst Case
Grant Approval	Q1 2027	Q2-Q3 2027	Q1-Q2 2029
Construction Start	Q2 2027	Q4 2027	Q3 2029
Unleaded Fuel Available	Q3 2028	Q2 2029	Q4 2029
100LL Eliminated	Jan 1, 2030	Jan 1, 2030	Jan 1, 2030

The airport commits to meeting the January 1, 2030 deadline under all funding scenarios, though accelerated timelines and interim measures may be required if federal funding is significantly delayed.

Environmental and Safety Considerations

Underground Tank Removal

- 30-day advance notice to CDPHE
- Pre-removal soil and groundwater sampling
- Continuous air monitoring during excavation
- Soil remediation per Colorado Tier 1 standards if contamination detected
- Post-closure assessment report to regulatory agencies

Above-Ground Tank Protection

- Double-wall construction with leak detection
- Secondary containment (110% capacity)
- Automatic shutoff and spill prevention systems
- Weekly visual inspections and quarterly system testing
- SPCC plan implementation

Operational Safety

- NFPA 407 compliance throughout design and operation
- Emergency response coordination with Longmont Fire Department
- FBO staff training (initial and annual refresher)
- Grounding and bonding for all fueling operations

Plan Updates and Communication

Review and Update Schedule

Annual Comprehensive Review

- Conducted every January beginning January 2027
- Full review of timeline, costs, fuel availability, and aircraft compatibility

- Consultation with based aircraft owners
- Review of industry developments and new fuel options
- Updated plan published on airport website

Quarterly Progress Updates

- Brief written updates (2-3 pages) distributed via email
- Posted on airport website
- Covers project progress, funding status, and upcoming activities

Immediate Updates Upon:

- Significant regulatory changes
- Grant funding decisions (approval or denial)
- Major timeline adjustments due to funding delays
- New unleaded fuel options becoming available
- Unexpected project challenges

Communication Methods

Primary Distribution

- Airport website (dedicated transition page with downloadable PDF)
- Newsletter/Email to all based aircraft owners and tenants
- Physical copies available at airport office and FBO

Ongoing Engagement

- Social media updates (major milestones)
- Bulletin board postings at airport facilities
- Email hotline for questions: unleaded@longmontairport.com (example)

Regulatory Reporting

- Annual report to Colorado Division of Aeronautics
- Updates to FAA as required for grant compliance
- Environmental monitoring reports to CDPHE

Success Metrics

Regulatory Compliance

- Transition plan submitted by January 1, 2026 ✓
- 100LL sales terminated by January 1, 2030 ✓
- Zero environmental violations during construction
- All permits and approvals obtained

Project Delivery

- Project completed within 110% of estimated budget
- Infrastructure operational by Q4 2029 (absolute deadline)
- Zero fuel quality issues in first year
- 99.5% system uptime (fuel availability)

Operational Success

- 100% of fuel sales transitioned to unleaded by January 1, 2030
- Zero safety incidents related to fuel operations
- Fuel pricing remains competitive with regional airports
- FBO contractor meets performance standards

Conclusion

This transition plan provides Longmont Airport with a realistic, achievable roadmap to comply with Colorado HB24-1235 requirements while acknowledging the critical dependency on funding acquisition. By transitioning to a contracted FBO-operated unleaded fuel system through removal of the aging underground tank and installation of modern above-ground infrastructure, the airport will:

- **Achieve full regulatory compliance** by January 1, 2030
- **Eliminate lead emissions** protecting public health and environment
- **Modernize fuel infrastructure** with safer, more reliable systems
- **Support aircraft owners** through comprehensive STC assistance
- **Maintain professional operations** through qualified FBO contractor

- **Position the airport** for long-term sustainability

Critical Success Factors:

1. **Funding Acquisition:** Securing $350,000+ in federal and state grants is essential. Without this funding, the project timeline will extend into 2029, creating minimal margin to meet the 2030 deadline.
2. **FBO Partnership:** Selecting a qualified FBO operator ensures professional fuel management and operational continuity throughout the transition.
3. **Fuel Selection:** Choosing the appropriate unleaded fuel based on fleet compatibility and market availability will minimize aircraft owner burden and ensure successful adoption.
4. **Flexibility:** The airport must remain prepared to adjust timelines, accelerate construction schedules, or implement interim measures if funding delays occur.

With an estimated investment of $499,025 and proactive pursuit of all available funding sources, this project represents a sound commitment to environmental stewardship and aviation safety. The airport will work collaboratively with based aircraft owners, regulatory agencies, fuel suppliers, FBO partners, and funding agencies to successfully achieve complete unleaded aviation fuel operations by January 1, 2030, regardless of funding challenges that may arise.

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Contact: Levi Brown, Longmont Airport Manager

Prepared in compliance with Colorado HB24-1235 and Colorado Division of Aeronautics guidance