



Front Range Airport Scoping Meeting for Launch Site Operator License

Federal Aviation Administration

**Office of Commercial Space
Transportation**

June 13, 2017



**Federal Aviation
Administration**

Today's Goals

- Describe the proposal by Adam's County to operate a commercial space launch site at Front Range Airport
- Describe the launch site operator licensing process
- Discuss proposed activities
- Solicit feedback

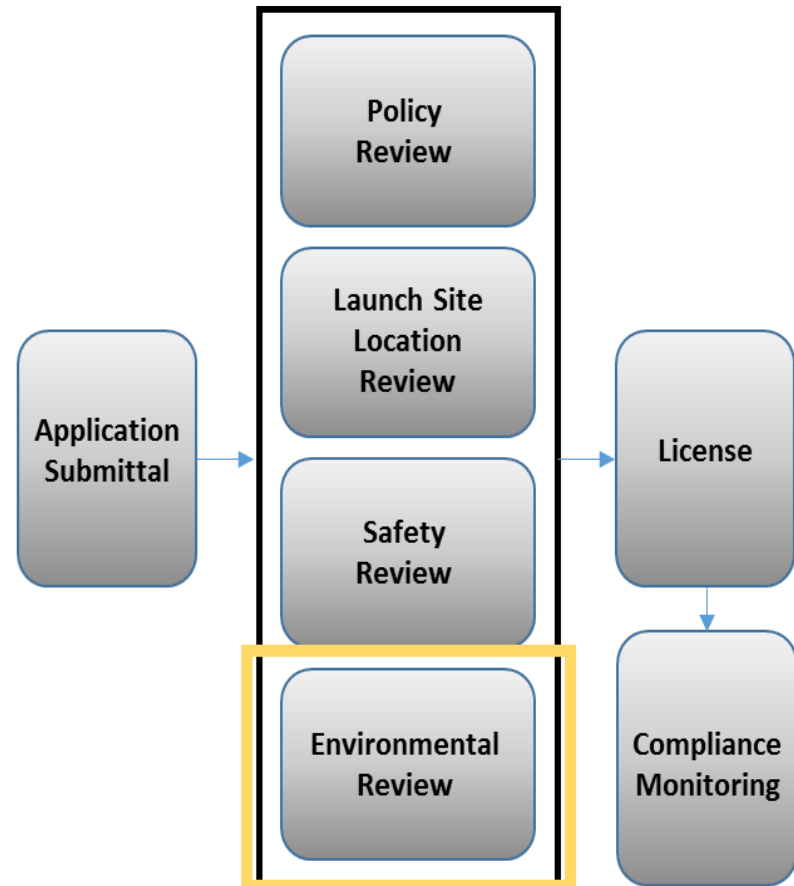
Why Are We Here?

- Adams County is proposing to operate a commercial space launch site at the Front Range Airport under a Federal Aviation Administration Launch Site Operator License.
- The license would allow Adams County to offer the site to one or more commercial launch operators for the operation of horizontal take-off and horizontal landing reusable launch vehicles (RLVs).
- The Federal Aviation Administration is preparing to analyze potential environmental impacts under the National Environmental Policy Act (NEPA) for this action and is collecting public comments on the scope of this proposed action.

Launch Site Operator License Process

The FAA conducts the following reviews for a Launch Site Operator License application:

- Policy review
- Launch site location review
- Safety review
- **Environmental review**



National Environmental Policy Act (NEPA) Process

- FAA actions with the potential to affect the environment must meet NEPA requirements
- The FAA is planning to prepare a Programmatic Environmental Assessment (PEA) to analyze the potential environmental impacts associated with the issuance of the license
- Under NEPA, “environment” includes the physical and biological environment, and human relationships to the environment

What is the Proposed Action?

- The FAA would issue a launch site operator license to Adams County for the operation of a commercial space launch site at the Front Range Airport
- The license would allow Adams County to offer the site to one or more commercial launch operators for the operation of horizontal take-off and horizontal landing RLVs at the airport
- The FAA would also provide conditional approval of the Airport Layout Plan (ALP) showing the launch site boundary

Proposed High-Level Vehicle Concept

Generic Horizontal RLV

- Take-off from runway under jet power
- Transit to a pre-coordinated area under jet power in communication with air traffic control
- Conduct rocket operations in remote area
- Return under jet power in communication with air traffic control



Proposed Operational Parameters

- Vehicles would take off and land horizontally under jet power
- Operations would take place during daylight hours
- Vehicle would fly no less than 50 miles and no more than 150 miles away from Denver International Airport to perform its rocket powered climb
- Rocket powered climb would take place in airspace that is roughly 100 miles long and 50 miles wide
- Airspace would need to be cleared for roughly 30 minutes while the vehicle performs rocket powered operations
- Taxiing of the vehicle to and from the mission preparation area to the runway does not require airspace to be cleared. Air Traffic Control will treat the vehicle like an airplane and assume it performs like one during those parts of the mission

Conceptual Infrastructure

- Aboveground propellant storage tanks
- Concrete pads for mission preparation
- Concrete pad for static hot-fire engine testing
- Aboveground water storage tank and water line
- Security fencing and access roads

How does a Programmatic EA Work?

- The analysis in this PEA is based on ***broad assumptions*** regarding RLV operations and infrastructure development
- Once a launch operator applies for a license to operate a launch vehicle at Front Range, a separate environmental document, tiering off of this PEA, would be required to support:
 - Issuance of that launch operator license or
 - Modification of an ALP to add additional infrastructure at the airport

Programmatic EA:
Broad, High-Level Analysis
Common to All RLV
Operations that could take
place at Front Range



Tiered Review:
More Detailed Analysis
based on Vehicle Specific
Operations

Programmatic NEPA Documents

	Programmatic Analysis	Tiered, Project-Specific Analysis
Nature of Action	Strategic, conceptual	Construction, operation, site-specific action
Alternatives	Broad, general	Specific alternative locations, construction, operation, site-specific
Impacts	Primarily qualitative	Generally quantifiable
Decision	Broad, strategic program, policy, or plan	Detailed, project- or site-specific, action-oriented
Mitigation	General, broad suite of potential measures that could be applied after site-specific analysis	Specific, precise refinement of measures identified at the programmatic level

Alternatives

Under the No Action Alternative, the FAA would not issue a launch site operator license to Adams County and the county would not proceed with operation of a commercial space launch site at the Front Range Airport



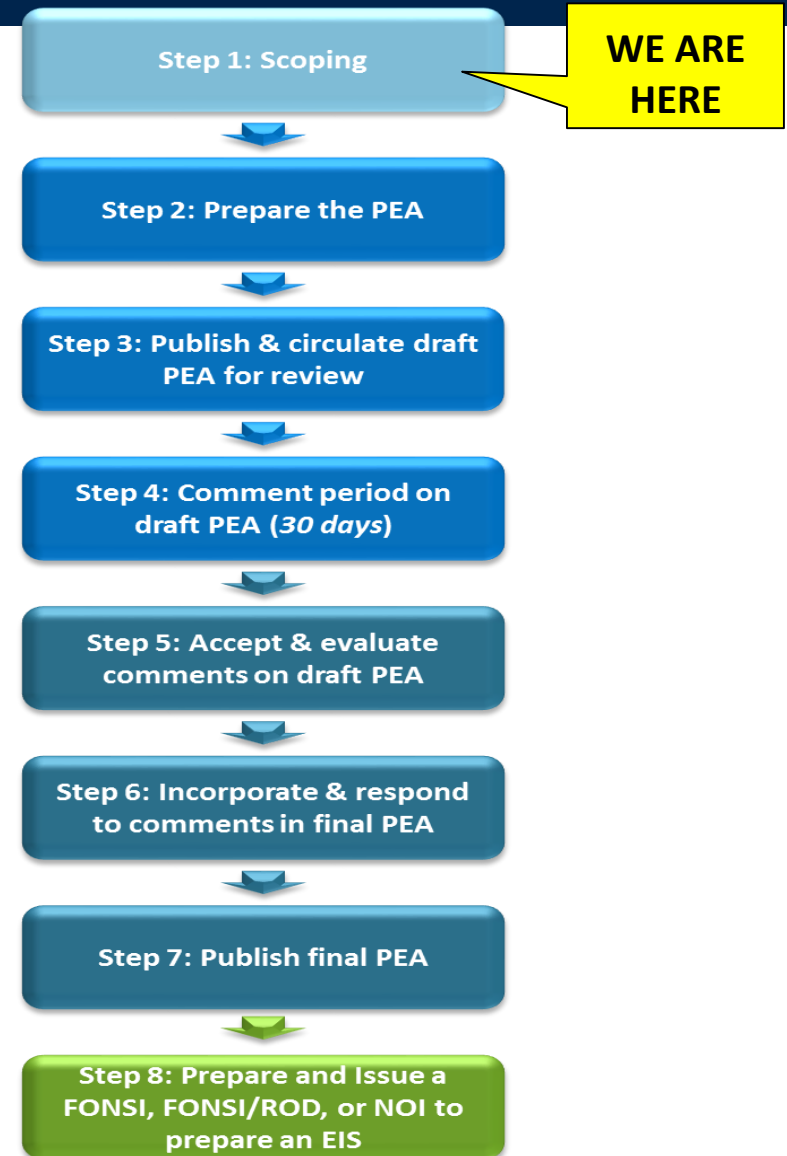
Source: Front Range Airport

Environmental Impact Categories

- Air Quality
- Biological Resources (including Fish, Wildlife and Plants)
- Climate
- Coastal Resources
- Department of Transportation Act: Section 4(f)
- Farmlands
- Hazardous Materials, Pollution Prevention, and Solid Waste
- Historical, Architectural, Archaeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomics, Environmental Justice, Children's Environmental Health Risks and Safety Risks
- Visual Effects (including Light Emissions)
- Water Resources (including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)
- Cumulative Impacts

Tentative Schedule

- **Mid to Late October 2017** – Publish Draft PEA for 30-day Public Comment Period
- **Early November 2017** – Hold public hearing on the Draft PEA
- **December 2017** – Release of Final PEA (incorporates comments on Draft PEA)
- **Early 2018** – FAA Announces Finding



Comments

- Submit comments as described in the Factsheet:
 - **By Email:** Spaceport_Colorado_PEA@icf.com
 - **Mail:** Stacey Zee, FAA Environmental Specialist, c/o ICF, 9300 Lee Highway, Fairfax, VA 22031
- Please submit comments by ***July 13, 2017***