

# EASTERN WYOMING SEQUESTRATION HUB (EWS HUB)

**Developer / Lead:** Trailblazer High Plains Carbon Storage LLC (*subsidiary of Tallgrass Energy*)

**Location:** Laramie County, WY

**Status Category:** Permitted / Under Development

**Prepared By:** Carbon Solutions

## OVERVIEW

The Eastern Wyoming Sequestration Hub (EWS Hub) is a Tallgrass Energy project in Laramie County, Wyoming, developed to provide large-scale geologic storage of CO<sub>2</sub> in the Lyons Sandstone formation. Under Wyoming’s Class VI primacy program, the project will serve as a regional storage resource for emissions captured in Wyoming, Nebraska, and Colorado.

## OBJECTIVES

**Deploy Multi-Well Class VI Storage at Scale** – Establish a dedicated hub with six injection wells, supported by monitoring wells, targeting secure containment in the Lyons Sandstone.

**Enable Regional Decarbonization** – Provide up to 5.1 MtCO<sub>2</sub>/yr injection capacity, serving ethanol, ammonia, and power facilities across a three-state area.

**Integrate Transport and Storage** – Utilize the converted 392-mile Trailblazer Pipeline and associated compression facilities to directly link capture sites to storage.

**Advance State and Federal Collaboration** – Align with Wyoming DEQ’s Class VI primacy authority and BLM’s federal pore-space approvals, ensuring robust oversight and permitting.

## TIMELINE / MILESTONES

Tallgrass submitted Class VI applications for the EWS Hub in March 2022, and the Wyoming Department of Environmental Quality (WDEQ) deemed them complete the following day. Following technical review and draft permits in mid-2024, WDEQ issued its first final Class VI injection permit on October 30, 2024, for the Juniper I-1 well. Additional wells, including Spirea, Cypress, Barberry, and Azalea, received permits to construct, with final injection authorization pending post-construction testing. In 2025, the Bureau of Land Management granted a subsurface right-of-way covering 480 acres of federal pore space, and Tallgrass began construction of a 30,000-horsepower compressor station with feeder pipelines. Initial injection operations are anticipated to begin in the mid-2020s as infrastructure and approvals are completed.

## PROJECT DESIGN

**Geology:** The Lyons Sandstone provides thick, laterally extensive storage with high porosity and favorable pressure conditions, bounded by multiple confining formations for secure containment.

**Infrastructure:** Converted Trailblazer Pipeline delivers CO<sub>2</sub> directly to the hub; new compression and distribution pipelines link to injection wells.

**Regulatory Framework:** Wyoming DEQ (Class VI primacy) oversees permitting; BLM manages federal pore-space ROW. Injection into federal lands requires a Notice to Proceed and WOGCC unitization order.

**Community Engagement:** Public scoping (Sep–Dec 2023) resulted in 11 comments; outreach included 53 tribal, state, and local entities. Project siting minimizes surface disturbance, with most facilities on private/state land.

## KEY FACTS

- **Project Area:** 105,000 acres (0.32% federal pore space).
- **Initial Permitting:** Juniper I-1 received final Class VI permit (Oct 2024).
- **Planned Wells:** 6 injection wells + 6 monitoring wells.
- **Authorized Storage Capacity:** ~130 Mt total. (Juniper I-1: 7 Mt, Spirea I-1: 11 Mt, Cypress I-1: 29 Mt, Barberry I-1: 38 Mt, Azalea I-1: 45 Mt)
- **Injection Rate:** Up to 5.1 MtCO<sub>2</sub>/yr (*as all wells come online*).
- **Geology:** Lyons Sandstone (~9,000 ft depth), sealed by Goose Egg, Chugwater, and Satanka formations.
- **Transport Infrastructure:** Trailblazer Pipeline (392 miles converted for CO<sub>2</sub>), 30,000-hp compressor station with ~28 miles of feeder lines.
- **Partnerships:** CPP Investments (equity), ADM (offtake via Advantage Nebraska), Tallgrass Pipeline Co. (transport).

## STRATEGIC IMPORTANCE

The Eastern Wyoming Sequestration Hub is directly connected to the **Trailblazer CO<sub>2</sub> Pipeline Conversion**, a 392-mile project converting existing natural gas infrastructure to transport CO<sub>2</sub> from Nebraska and Colorado to the hub for injection. In addition, Tallgrass is pursuing the **Moxa Carbon Storage Project** through its subsidiary, Moxa Carbon Storage LLC. Moxa is a separate exploration project in southwestern Wyoming that is not directly linked to EWS operations but is being advanced in parallel to assess additional storage potential in the region.

