

Staff Update

Date: April 28, 2026
To: Douglas County Board of County Commissioners
Through: Douglas J. DeBord, County Manager
From: Daniel Roberts, Assistant Director, Operations
Subject: Sedalia Public Works Operations Biochar Facility Project

Overview

Douglas County's biochar and waste diversion site will be a one-stop-shop for the waste that trash companies usually don't take - things like paint, unwanted electronics, slash from landscaping projects or large-scale fire mitigation projects, and green yard waste like leaves or lawn clippings.

The County plans to open services in phases beginning in 2026:

1. May 2026: Slash and green waste operations expand from one to six days per week
2. July 2026: Electronics recycling drop-off opens
3. August 2026: Household hazardous waste disposal opens
4. September 2026: Biochar facility begins accepting feedstock

Staff is now seeking approval of a construction contract to place previously acquired equipment into service and begin phased public operations.

About Biochar

Biochar History

Douglas County's biochar and waste diversion project originated from ongoing efforts to address wildfire risk and improve waste diversion services for residents.

In December 2023, the Douglas County Wildfire Action Collaborative – a task force of local fire suppression and mitigation experts – presented the concept of a biochar facility as a way to address a recurring challenge: large volumes of woody biomass from wildfire mitigation, forest health work, storm cleanup, and tree removal had

limited local disposal options and often required costly hauling. The proposed facility would create a local outlet for this material, reduce disposal costs, and support additional mitigation efforts. The resulting material, called biochar, could be sold to fund operations.

Biochar is produced by converting organic material into a marketable, carbon-rich material with uses in soil improvement, water conservation, filtration, and land restoration. It presents an opportunity to address wildfire mitigation and materials management needs through a single operation that would also generate revenue.

The idea grew from there. Rather than focusing the site only on one waste need, the County advanced a broader site concept that would not only process slash from wildfire mitigation projects locally but also serve as a centralized location for multiple resident drop-off and recycling services.

GreenWorks - A One-Stop Drop

This broader service model is now referred to as GreenWorks, with the biochar facility serving as one component of the overall site.

The Sedalia site was identified as a suitable location because it is located in an industrial area with direct access to US-85, compatible with surrounding uses, and has sufficient space for phased operations and future recycling services.

In July 2025, the Board of Douglas County Commissioners approved \$3 million for biochar processing equipment and a lease agreement for the Sedalia property where the facility would be located. This phase focused on securing specialized equipment and site control while planning and design continued.

In December 2025, the Board approved an operational model that would combine multiple public services in one location, including slash-mulch, green yard waste, household hazardous waste, electronics recycling, and biochar production. Staff also outlined a phased startup plan and long-term cost recovery model supported by future program revenues.

Resident and Operational Benefits

Bringing together several waste diversion services at one centralized site will create a more convenient and efficient service for residents, while saving money.

For residents, GreenWorks will provide one location for multiple services that are currently offered at different sites, on limited schedules. For County operations,

centralized services will allow staffing, equipment, and site resources to be managed more efficiently.

5. Green waste and slash-mulch services will expand from 30 to 300 days per year and save \$100,000 annually.
6. Electronic recycling services will eliminate more than 400,000 miles of annual resident travel to the current drop-off location in Aurora and save \$105,000 per year.
7. Household hazardous waste services will eliminate the current annual cap of 1,060 residents and save \$200,000 annually.
8. Leaf drop services will expand from just three Saturdays in November to year-round availability and save \$21,000 annually.

Project Cost

As the project advanced from concept planning to final design, project costs became more defined and expanded to include buildings, storage areas, utilities, sitework, and infrastructure needed to support both the biochar operation and future waste diversion programs.

The initial July 2025 approval addressed equipment and site control, while the current phase addresses facility construction and supporting infrastructure needed for operations.

Contract Cost Breakdown

Biochar Building	\$2,730,028
Site Work & Utilities	\$3,607,407
Product Storage Structure	\$822,719
10% Contingency	\$716,015
Total Cost	\$7,876,169

Capital Recovery

With one biochar production unit in operation, the facility will generate approximately \$2 million in annual revenue against \$1.6 million in annual operating costs, resulting in an estimated \$400,000 per year available for capital recovery.

Capital recovery will accelerate significantly with the addition of a second production unit, which - subject to grant funding - will come online in 2029. At that stage, annual revenue is projected to increase to \$4 million, while operating costs are estimated at \$2.1 million, producing approximately \$1.9 million annually for capital recovery.

Based on current projections, total capital recovery is anticipated to be achieved between 2035 and 2036, as phased production increases and revenues from biochar operations continue to grow.

Community Engagement

Douglas County has conducted ongoing public outreach to inform residents about this project, explain the role of the biochar facility, and provide opportunities for community questions and feedback.

During 2025, the County published newsroom articles on the County's website, sent email updates to subscribers, and posted to social media about project-related updates, providing residents with information and education on the project.

On Jan. 28, 2026, Douglas County invited residents to join a public open house to learn more about biochar technology and how the new facility is intended to benefit the community. The event included a staff presentation on the project followed by a question-and-answer session with project subject matter experts and Commissioner Abe Laydon.

Staff Recommendation

When complete, GreenWorks is intended to provide residents with a centralized location for multiple waste diversion services, support wildfire mitigation efforts, reduce hauling needs, and establish long-term County infrastructure for future operational needs.

Staff is seeking approval of a construction contract with Bauen Studios to place previously acquired equipment into service and begin phased public operations.