

General Biochar Pilot Information

- The biochar pilot ran from May 5 - June 5, 2025 with a total of **10 burn days** and **13 total site days** (3 days designated for setup and training)
- **3 crew members** (2 Public Works and 1 Parks & Recreation) processed **16 truckloads (~420 cu yards)**, **producing ~6.25 cu yards of biochar** (>95% material reduction) using a [Charboss](#), excavator, skid steer, and water truck
- The pilot used **~140 gallons of diesel** and **~300 gallons of water**

Typical Material Quantities

- The pilot processed **< 7% of Sanitation's average 5/5 - 6/5 material creation** (174 truckloads in a 30 day time period)
- Sanitation's 5-year average material production is **1635 truckloads/year** (~40,000 cubic yards/6000+ tons)
- Streets (**~160 truckloads/year**) and Parks (**~500 truckloads/year**) also produce wood waste material

Economics

- [Charboss](#) is not an efficient option for city operations due to materials processing capacity, efficiency and economics of operations. ([See longer analysis](#))
- Initial [TigerCat 6040](#) (larger machine) analysis shows quick processing of the City's typical wood waste and economic viability from low-end estimated revenue from sales of finished product and carbon credits.
- Reactor systems need further analysis but have significant benefits like: renewable energy generation, single operator capacity, 24/7 operation, high quality biochar, material flexibility.

Key Takeaways

- Charboss processing speed (~1 ton/hr) doesn't match quantity of material typically generated.
- Larger-scale equipment would process more material using the same or less staff time.
- Biochar production has the potential to meet multiple City, community, and specific department goals.
- Weather, material pre-processing, and material moisture content impact process efficiency.
- HMGP funding is a potential opportunity if wildfire mitigation can be scoped within operations for technology deployment.
- Operationalization of future biochar projects would require dedicated staff.

Additional Considerations

- Uncertainty regarding current wood waste disposal location with changes to I-26.
- There is regional interest in biochar.
- Closure of the Canton Paper Mill leaves wood waste unaccounted for regionally.
- Future storms will produce additional woody material that needs to be managed.

Recommendations/Next Steps

- Research larger capacity biochar systems: TigerCat 6040 and Reactors.
- Highlight pilot project success and Federal/City collaboration supported by multiple City departments.
- Organize biochar use trials (Parks planting, Stormwater water quality, Post Helene farm soil rehab).
- Explore regional collaboration or alternative technology deployment strategies such as contracting for services.