

PROPOSED BOULDER COUNTY COMPOSTING FACILITY

MEMO

TO: Boulder County Board of County Commissioners
FROM: Public Works Department, and
Office of Sustainability, Climate Action, and Resilience (OSCAR)
DATE: March 4, 2021

PRESENTERS

Jeff Maxwell – Director – Public Works Department
Susie Strife – Director - OSCAR

EXECUTIVE SUMMARY: The purpose of this memo is to provide background information on the process that led to an exploratory design of a [proposed compost facility](#) on the former Rainbow Tree Nursery site on US Highway 287 between CO 52 and Lookout Road in unincorporated Boulder County. A [Special Land Use Review application for the proposed facility](#) was filed in October 2020 by the Boulder County Public Works Department with the Community Planning & Permitting Department. The application was then put on-hold in December 2020 when design development cost estimates for constructing a compost facility at that site far exceeded preliminary estimates.

At a public meeting on March 4, the applicant, Boulder County Public Works, will make a formal request to the Board of County Commissioners (BOCC) to withdraw the application, SU-20-0006, from the Special Use Review process in order to provide an opportunity to review new information regarding engineering, financials, and compost markets, and to potentially hold more public discussions around a potential compost facility and other possible composting solutions.

This memo covers the history of how the compost facility came into consideration, the overall budget needed for the project, and the benefits of composting. This memo does not address the exploratory design of the proposed facility, the advisability of constructing it where it was proposed, or whether it is in compliance with Land Use Code criteria, as those issues may be discussed at future sessions with the public and the BOCC, should the application be officially withdrawn and the project be revisited at a later date.

HISTORY

2010-2016

In 2010, Boulder County published a [Zero Waste Action Plan \(ZWAP\)](#), which highlights the need to increase capacity for additional composting and support commercial food composting beyond what A1 Organics already currently processes. Boulder County's [Resource Conservation Division \(RCD\)](#) has been working for many years on increasing the portion of organic materials diverted from landfills and increasing compost capacity that would result in 12,000 more tons being diverted from the landfill (A1 already processes 38,000 tons), which would be 2.4% increase in total waste diversion. An additional 48,000 tons (10%) of organics diversion is possible through policy measures which would keep organics from being delivered to landfills, so RCD and [Office of Sustainability, Climate Action, and Resilience \(OSCAR\)](#) have had conversations with the [Resource Conservation Advisory Board \(RCAB\)](#) and other community partners about implementing such policies.

In 2016, a 15-year sustainability tax was passed by a majority of voters (70%) and the tax started generating revenue in January 2020. The Board of County Commissioners' (BOCC) intent in asking voters to pass the tax was that most of the tax proceeds be used to fund and expand existing sustainability programs and infrastructure that did not have secure long-term funding sources. In addition, input from public forums, community meetings, public hearings, and the former Board of County Commissioners shaped the ballot language to focus the revenue on energy efficiency and renewable energy services, zero waste, sustainable transportation, water conservation, and local food and sustainable agriculture. During public input sessions and hearings, zero waste leaders and advocates expressed the need for the county to explore creating a facility to handle construction and demolition waste (C&D) and a local compost facility in order to reach local zero waste goals and support that philosophy that local waste should be managed locally. In addition to helping meet the [county's Zero Waste Goals](#), supporting the use of high-quality compost on agricultural and farmlands would enhance soil regeneration, which is a goal identified in the Commissioners' Land & Water Stewardship [Strategic Priority](#).

2018-2019

In order to prepare for the Sustainability Tax revenue to be spent in meaningful ways set forth by the ballot language, the BOCC asked staff to explore any potential county-owned sites that would be viable compost and C&D facilities. Staff from various departments launched a Boulder County Sustainability Siting Work Group in order to create a map of all potential C&D Recycling and Composting sites within county limits. Led by long range planners in the [Land Use Department](#) (now Community Planning & Permitting), staff used GIS tools and the Boulder County Code to map potential sites for zero waste infrastructure based on site specifications developed by the work group. The Land Use staff originally mapped over 80 sites, yet many of those sites identified did not meet the site specifications needed for C&D processing or a compost facility.

In June 2019, Boulder County contracted with Resource Recycling Systems' (RRS) to conduct a [due diligence comparison and fatal flaws analysis](#) of the three selected sites. Given very few sites met all the criteria needed for these zero waste opportunities, three sites were put forth to further research: The former Rainbow Nursery (5762 N 107th St, Longmont), the former Longmont Landfill (10916 County Rd 5, Longmont, CO) and the St Vrain Road site (7698 St Vrain Rd Longmont, CO) near the Ron Stewart Parks and Open Space building. Staff determined that *no other sites in unincorporated Boulder County* were viable options to expand zero waste processing.

Further analysis revealed that the former Longmont Landfill was projected to have significantly higher site development costs due to it being on a closed landfill and there are many unknown landfill gas management risks. In addition, through this analysis it was discovered that the St. Vrain Road location had a fatal flaw in its proximity to Vance Brand Airport, because FAA Regulations prohibit development of facilities such as C&D and compost processing close to the airport. Therefore, based on the qualitative and quantitative review of the sites, road access, agricultural zoning and proximity to agricultural users for the end use of the compost, the consultants recommended the Rainbow Nursery location as the most viable site for a potential compost facility and concluded that C&D could not be allowed there under current zoning. It's important to note that the scope of this work was only a site comparison and fatal flaws analysis; it did not include a robust engineering design of all the sites reviewed. Therefore, accurate site-prep costs and robust engineered design costs associated with this selected location were not products of that analysis.

In November and December 2019, the BOCC met several times to review the analysis and discuss this project with a team of cross-departmental leaders and staff. During those meetings the BOCC gave direction to Administrative Services and Resource Conservation Division (now known as Public Works) to put out an RFP for a fully engineered compost facility design at the former Rainbow Nursery location. The BOCC also requested a deeper analysis on the capital and operational costs. Finally, the BOCC asked the Office of Financial Management to explore ways to fund a facility with a baseline estimate cost of \$7 million since this was an *initial* educated guess of what it would cost to build a compost facility processing 50,000 tons of compost/year without a robust design plan.

2020-2021

In early 2020, as part of larger financing package, the Office of Financial Management secured \$7 million for the compost facility through the sale of Certificates of Participation (COPs), scheduled to be paid back by annual payments from the Sustainability Tax revenue. Given the taxable nature of this portion of the COP payment, there is no expenditure deadline, allowing for flexibility on timing of repayment. It is also possible to transfer this COP to another Public Works project if the commissioners opt to not move forward with this project.

2020-2021 (Cont.) DESIGN RFP PROCESS

In 2020, staff from Public Works drafted a Request for Proposal (RFP) for the design of the compost facility using studies previously conducted. The selected consultants, PEH Architects, SCS Engineering, and A1 Organics, issued the [submittal package](#) to Community Planning and Permitting for Special Use Review (SUR) in October 2020. The estimated cost of this proposal is \$12.8 million. As of this submittal date, the Commissioners entered the quasi-judicial role of the review process, and staff ceased providing regular project updates to the Commissioners.

Where we are now

In early 2021, the project's executive advisory board decided it was best to put the project on hold within the CP&P review process in order to consult with the County Attorney's office on the most appropriate way to obtain further direction from the BOCC on whether to proceed with the project given the new information received since the SU application was submitted. Today's public meeting follows the legal guidance received, to allow the Commissioners to publicly receive a staff recommendation to withdraw the application.

LAND PURCHASE OF OLD RAINBOW NURSERY & OPEN SPACE

Boulder County purchased the Conservation Easement (CE) on the Rainbow Tree Nursery for the fair market value of \$169,625 in 1994 using open space sales tax proceeds. Then, in 2018, the county exercised its first right to purchase the [fee simple interest \(the land and water\) in the property](#) for \$600,361 and the CE was eliminated by merger with the fee simple interest in the property. The doctrine of merger by deed says that encumbrances against a property cease to exist when the owner of the encumbrance and the owner of the surface are the same party because the property owner is both the benefited and burdened party to the encumbrance, which is not possible. When the county purchased the fee simple interest, it was stated in the public record and closing documents that the property would be managed as open space but that the county would consider using the property to further the county's zero waste goals.

If the site were to be approved for use as a composting facility, POS would go through the requirements for a disposition of open space found in the sale tax resolutions approved by the voters since the property was purchased with open space sales tax funds.

COMMUNITY OUTREACH TO DATE

- Staff from multiple county departments have facilitated many conversations about the need for a composting solution with zero waste leaders, farmers, compost and agriculture specialists, and sustainability staff across our municipalities and town. Communications led by Public Works began in August of 2020 with the development of a communication plan and the project website. The need for outreach, engagement, and education was established in advance of the formal CP&P standard communication and public hearing processes associated with the SU due to the complexity of the project and the project team's understanding that site neighbors would likely have concerns/interest about the proposed operation of a compost facility. The team remains committed to a thorough public outreach program above and beyond what is required, including frequent email and phone conversations with concerned neighbors.
- It's important to note that outreach, including communications with the Boulder County Commissioners, during the CP&P process has been constrained since we are in the Land Use Review Process and the application will be decided by the BOCC in a quasi-judicial hearing.

WHY PURSUE A LOCAL COMPOST FACILITY?

In addition to supporting the commissioners' stated zero waste and land and water stewardship goals, a locally operated compost facility provides broad community benefits:

- 1) **USDA Conservation Practice.** Compost is now recognized by the USDA Natural Resources Conservation Service Conservation Practice Standard. This status confirms that it has no negative impacts on other natural resources of concern that the NRCS is tasked with protecting and that it has a positive impact for producers and the environment.
- 2) **Avoided emissions from the landfilling of organic materials.** Boulder County sends 38,000 tons of compost to A1 Organics annually. Locating a facility in Boulder County would incentivize increased diversion of organics and divert enough organic material from the landfill to cover 623 homes' energy use for one year.
- 3) **Carbon sequestration and soil enrichment from agricultural use of compost.** With an estimated application rate of 8.5 tons of compost per acre, and 35,000 tons of compost available annually, the total technical potential for carbon sequestration on irrigated lands is approximately **6,176 mtCO₂e/yr** or the equivalent of taking 1,160 passenger vehicles off the road for a year.
- 4) **Reduction of synthetic fertilizers and chemical inputs.** The application of synthetic N fertilizers is recognized as the most important factor contributing to direct N₂O emissions from agricultural soils globally. Furthermore, by diverting food waste, yard waste, and other compostable materials into composting operations, one can recycle the plant nutrients (nitrogen, phosphorus, potassium, and other nutrients) present in that waste back into the food production cycle. Not only does this reduce reliance on the synthetic fertilizers, but if less fertilizer is produced, huge energy savings occur, further reducing global GHG emissions. Compost's nutrients are very stable. For this reason, compost is recommended as a remediation practice for watersheds and stream banks. Compost supports natural fertility without the risks

to water quality or the GHG's associated with synthetic nutrients or raw manures. BCPOS regularly uses compost in our open space restoration projects.

- 5) **Increased water holding capacity.** Adding compost to soil builds soil organic matter which in turn improves soil structure and reduces erosion, leading to improved water quality in groundwater and surface waters. Soil organic matter also has benefits for water infiltration and retention. This reduces soil surface temperatures and decreases evapotranspiration, increasing local plant communities' and crops' resilience in the face of hot, dry weather.
- 6) **Increased soil microbiome, plant, and human health.** There is increasing evidence of the relationship between soil, food, and human health. The use of compost and reduction in synthetic fertilizer on cropland increases the health of the soil microbiome. This in turn also increases plant health and their resistance to pests and disease which further helps reduce the farmers' need for synthetic and chemical inputs.

CONCLUSION

To conclude, this project is currently on hold in the land use review process. Staff is requesting that the Board of County Commissioners (BOCC) accept the staff recommendation to withdraw the application from the Special Use Review process in order to take updated cost estimates into consideration and determine the next steps for moving forward with finding a suitable composting solution. By withdrawing this application, staff would be able to have a more open discussion with the BOCC and the public about the future of composting within Boulder County.