

RULE 489 – GREENWASTE COMPOSTING OPERATIONS**Adopted 10-24-24**

[This rule will be effective on the effective date of an EPA final rulemaking that conditions described in Clean Air Act Sections 172(c)(9) and 182(c)(9) have occurred in the District regarding the 2008 or 2015 8-Hour Ozone National Ambient Air Quality Standards.]

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100 GENERAL

- 101 **PURPOSE:** To limit the emission of volatile organic compounds (VOC) occurring during greenwaste composting operations.
- 102 **APPLICABILITY:** Except as provided in Sections 110 and 111, this rule applies to the owner/operator of any greenwaste composting operation that produces active or finished compost from greenwaste by itself or greenwaste in combination with manure.
- 103 **SEVERABILITY:** If any section, subsection, sentence, clause, phrase, or portion of this rule is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion is deemed as a separate, distinct, and independent provision, and such holding does not affect the validity of the remaining portions thereof.
- 110 **EXEMPTION – MINOR COMPOSTING FACILITIES:** This rule does not apply to the following composting facilities, provided that the operation is not subject to the Local Enforcement Agency notification or permit regulations pursuant to Title 14 Division 7, Chapter 3.1, Section 17857.1 of the California Code of Regulations:
110.1 Community composting;
110.2 Nursery composting;
110.3 Backyard composting; and
110.4 Recreational facility composting.
- 111 **EXEMPTION – OPERATIONS SUBJECT TO OTHER DISTRICT RULES:** The requirements of this rule do not apply to any composting facility subject to the requirements of Rule 496 – LARGE CONFINED ANIMAL FACILITIES.

200 DEFINITIONS

- 201 **ACTIVE COMPOST :** Any material that is in the process of being rapidly decomposed and is biologically unstable. Active compost generates temperature of at least 122 degrees Fahrenheit during decomposition. Active compost includes, but is not limited to, pathogen-reduced mulch.
- 202 **ACTIVE PHASE:** The phase of the greenwaste composting process that begins when organic waste materials are mixed together for composting and lasts a minimum of 22 days under uncontrolled conditions or until the compost has a Solvita® Maturity Index of five or greater measured pursuant to Section 501.2.a.
- 203 **BACKYARD COMPOSTING:** Any composting conducted by a household including, but not limited to, single family residences, condominiums, duplexes, or apartment buildings.
- 204 **COMPOSTING FACILITY:** A source that is required to obtain a District permit for composting operations in pursuant to District Rule 201, General Permit Requirements.
- 205 **COMMUNITY COMPOSTING:** Any composting conducted by a residential neighborhood association using feedstock generated within the residential neighborhood to produce compost for the neighborhood's use.
- 206 **COMPOSTING:** A process in which solid organic waste materials are decomposed in the presence of oxygen through the action of bacteria and other microorganisms.
- 207 **COMPOSTING OVERS:** The oversized woody materials that do not decompose in a typical composting cycle and are screened out of finished product at the end of composting. Composting overs have been through a pathogen reduction process outlined in Title 14, Section 17868.3 of the California Code of Regulations.

- 208 **CURING PHASE:** The phase of the greenwaste composting process that begins immediately after the end of the active phase of composting and lasts a minimum of 40 days or until the compost has a Solvita® Maturity Index of seven or the product respiration rate is below ten milligrams of oxygen consumed per gram of volatile solids per day as measured by direct respirometry, pursuant to Section 501.2.b.
- 209 **FINISHED COMPOST:** A humus-like material and/or compost overs that result from the controlled biological decomposition of organic waste materials and is biologically stable. Both the active and curing phases of the greenwaste composting are required to achieve this product.
- 210 **GREENWASTE:** Any organic waste material generated from gardening, agriculture, or commercial or municipal landscaping activities including, but not limited to, grass clippings, leaves, tree and shrub trimmings, and plant remains.
- 211 **GREENWASTE COMPOSTING:** Any composting of greenwaste by itself or with a mixture with up to 20 percent manure, per pile volume basis.
- 212 **LOCAL ENFORCEMENT AGENCY:** The local agency with authority to enforce state laws pertaining to the storage, processing and disposal of solid waste, including permitting and enforcement for composting facilities.
- 213 **NURSERY COMPOSTING:** Any composting conducted at a nursery to produce compost for on-site use.
- 214 **ORGANIC WASTE:** Any organic waste material that includes greenwaste, woodwaste, or manure, or a mixture thereof.
- 215 **OWNER/OPERATOR:** Any person who owns, leases, or operates a greenwaste composting operation.
- 216 **PILE:** Any composting material that is heaped together.
- 217 **RECREATIONAL FACILITY COMPOSTING:** Any composting conducted at parks, arboretums and other recreational facilities using feedstock generated on-site to produce compost for on-site use
- 218 **SOLVITA® MATURITY INDEX:** An index that defines the stage where compost exhibits resistance to further decompositions, as tested by the Solvita® Maturity Test pursuant to Section 501.2.a.
- 219 **TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST (TMECC):** The test methods published by the U.S. Composting Council Research and Education Foundation.
- 220 **THROUGHPUT:** The weight of organic waste material to be processed, as it is received by a facility, prior to treatment at the receiving location. Throughput includes the weight of moisture present in the organic waste material at the time it is received at a facility.
- 221 **VOLATILE ORGANIC COMPOUND (VOC):** For the purposes of this rule, “volatile organic compound” has the same meaning as in Rule 101 – GENERAL PROVISIONS AND DEFINITIONS.
- 222 **WINDROW:** Any organic waste material that is placed in an elongated pile for composting.
- 223 **WOODWASTE:** Any lumber and the woody material portion of mixed demolition and mixed construction wastes. Woodwaste also includes the large wood materials of curbside

greenwaste or mixed greenwaste that is screened or unscreened, such as tree trimmings, branches, tree trunks, stumps, and limbs exceeding two inches in any dimension.

300 STANDARDS

301 OPERATION REQUIREMENTS – GREENWASTE COMPOSTING OPERATIONS:

Effective one year after the effective date of this rule, an owner/operator of a composting facility must comply with the following requirements:

- 301.1 Chip or grind, as necessary, and use greenwaste for on-site composting as allowed by the Local Enforcement Agency or within 10 days, whichever is earlier.
- 301.2 Cover each active phase pile with screened or unscreened finished compost within 24 hours of initial pile formation such that the top is at least six inches thick, and the pile must not be turned for the first seven days of the active phase of composting, unless Section 301.5 applies.
- 301.3 For the first 15 days after initial pile formation for the active phase period of composting, within six hours before turning, apply water as necessary to the surface area of each active phase pile such that the top one half of the pile is wet at a depth of at least three inches. Alternatively, the owner/operator may apply water during turning using a windrow turner which is equipped with an operating water spraying technology during the entire windrow turning process.
 - a. “Wet” must be determined using a squeeze ball test pursuant to Section 501.1.
- 301.4 If a rain event occurs prior to watering the pile within 6 hours before turning and the pile is wet to a depth of three inches, the owner/operator may turn the pile without adding additional water. If the top half of the pile is dry to a three-inch depth, apply additional water pursuant to Section 301.3.
- 301.5 If the pile needs to be turned within the first seven days for managing temperature or pathogen reduction pursuant to Title 14 Division 7, Chapter 3.1 Section 17868.3 of the California Code of Regulations, the owner/operator does not need to re-apply the screened or unscreened finished compost cover and will apply water pursuant to Section 301.3 for the first 15 days of the active phase.

400 ADMINISTRATIVE REQUIREMENTS (NOT APPLICABLE)

500 MONITORING AND RECORDKEEPING

501 TESTING PROCEDURES:

- 501.1 **SQUEEZE BALL TEST:** The squeeze ball test must be conducted by taking a sample of the compostable material from the top half of the pile, at least 3 inches below the outer surface. The material must be squeezed into a ball using hand pressure and wearing a protective glove. There should be at least enough water to form a ball when compressed, but the ball may break when tapped. If the ball crumbles upon release of the hand pressure, additional water must be applied to the windrow prior to turning until the material passes the ball squeeze ball test.
- 501.2 **COMPOST MATURITY:** The following test methods are incorporated herein by reference and will be used to test composting phase subject to provisions of this rule:
 - a. TMECC 05.08-E – Solvita® Maturity Index (April 7, 2002)
 - b. TMECC 05.08-A – Specific Oxygen Update Rate (April 7, 2002)

502 RECORDKEEPING: The owner/operator of a composting facility subject to this rule, must maintain the following records:

- 502.1 Watering requirements:
 - a. Date and time the waste organic material from the windrow was tested for compliance.
 - b. Windrow squeeze ball test result and, if applicable, all corrective action taken.
 - c. Date and time the windrow was turned.

- 502.2 Active composting cover:
 - a. Date and time each windrow was initially formed for the active phase and the time when finished compost cover was applied to each windrow.
 - b. Date and time each windrow was turned during the active phase and the time when finished compost cover was applied to each windrow.
- 502.3 Throughput records:
 - a. Date the organic waste material arrives on site.
 - b. Type of organic waste material received on site.
 - c. Weight (in wet tons) of each type of organic waste material received on site.
- 502.4 Records must be maintained on site for a continuous 5-year period and submitted to the Air Pollution Control Officer by March 15 of each year for the previous calendar year. The submittal must be in electronic format.