

1 DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

2 Solid and Hazardous Waste Commission/Hazardous Materials and  
3 Waste Management Division

4 6 CCR 1007-2

5 PART 1 - REGULATIONS PERTAINING TO SOLID WASTE SITES AND FACILITIES

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8 Amendment of Section 1.2 Definitions

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10  
11 1) Section 1.2 is being amended by revising the definitions of “Agricultural  
12 wastes”, and “Composting”, and “Environmental Media” to read as follows:

13  
14 1.2 Definitions

15 \*\*\*\*\*

16  
17  
18 ~~“Agricultural wastes” means all discarded plant or animal materials that directly result from the raising~~  
19 ~~of crops or livestock. Agricultural waste also includes manure, irrigation water and irrigation run-off and~~  
20 ~~return flows. Agricultural waste becomes a solid waste if it is a) mixed with one or more solid wastes, b)~~  
21 ~~managed, treated, or disposed at a solid waste disposal site and facility, or c) disposed of in or on the~~  
22 ~~land and not as a fertilizer, soil conditioner, or compost. Solid wastes resulting from the raising of crops or~~  
23 ~~animals on land-zoned agricultural by local requirements, including animal manures, that are returned to~~  
24 ~~the soils as fertilizer, soil conditioners or compost or are composted to return to the soils. In addition,~~  
25 ~~Agricultural waste means includes all carcasses and carcass by-products resulting from any mass~~  
26 ~~livestock mortality that is the result of an all-hazards event or depopulation ordered by the state~~  
27 ~~veterinarian or other appropriately designated authority. Such carcasses and carcass by-products remain~~  
28 ~~agricultural wastes even if they are disposed of in or on the land and are not used as a fertilizer, soil~~  
29 ~~conditioner, or compost.~~

30  
31  
32 “Agricultural wastes” means all solid wastes resulting from the raising of crops or animals on land  
33 zoned agricultural by local requirements, including animal manures, that are returned to the soils as  
34 fertilizer, soil conditioners or compost or are composted to return to the soils. In addition, agricultural  
35 waste means all carcasses and carcass by-products resulting from any mass livestock mortality that is the  
36 result of an all-hazards event or depopulation ordered by the state veterinarian or other appropriately  
37 designated authority. {This definition is effective through December 31, 2018}

38  
39  
40 “Agricultural wastes” means all discarded or residual plant materials or animal materials that directly  
41 resultsolid wastes resulting from the raising of crops or animals on land-zoned agricultural by local  
42 requirements, including animal manures, that are 1) returned to the soils as fertilizer, soil conditioners or  
43 compost or 2) are composted to return to the soils, or 3) are used for other agricultural purposes. In  
44 addition, agricultural waste means all carcasses and carcass by-products resulting from any mass  
45 livestock mortality that is the result of an all-hazards event or depopulation ordered by the state  
46 veterinarian or other appropriately designated authority. {This definition becomes effective on January 1,  
47 2019}

50 \*\*\*\*\*

51  
52 **“Composting”** means the biological process of degrading organic materials that is facilitated and  
53 controlled through intentional and active manipulation, ~~of piles and windrows.~~ These manipulations may  
54 include but are not limited to grinding, mixing of feed stocks and bulking materials, addition of liquids,  
55 turning of piles, vermicomposting, or mechanical manipulation.

56

57 \*\*\*\*\*

58  
59 ~~**“Environmental Media”** means 1) earth materials including soil, sand, silt, gravel, rock, stone, sediment,  
60 and other naturally occurring solids, and 2) surface water and ground water. Environmental media  
61 become solid wastes when they are a) mixed with one or more solid wastes, or b) managed, treated or  
62 disposed at a solid waste disposal site and facility. Environmental media mixed with one or more solid  
63 wastes includes environmental media contaminated by anthropogenic sources.~~

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65 \*\*\*\*\*

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67

68 **2) Section 1.2 is being amended by adding the definition of “Anaerobic digestion”**  
69 **in alphabetical order to read as follows:**

70

71 \*\*\*\*\*

72 **“Anaerobic digestion”** means a series of biological processes in which microorganisms break down  
73 biodegradable materials in the absence of oxygen. Anaerobic digestion of biodegradable materials  
74 creates biogas. Anaerobic digestion of materials that are solid wastes also creates liquid, semi-solid and  
75 solid digestates which remain solid wastes until the Department determines such wastes meet applicable  
76 fertilizer, soil amendment, compost, or beneficial use criteria.

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81 **3) Section 1.2 is being amended by deleting the definition of “Custom mill” to**  
82 **read as follows:**

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84

85

~~**“Custom mill”** means an operation or facility for the extraction of metals or minerals from ores. Such a  
84 facility receives its raw materials from one or more sources off-site of the mill property.~~

85

1 DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

2  
3 Solid and Hazardous Waste Commission

4 Hazardous Materials and Waste Management Division (HMWMD)

5 6 CCR 1007-2

6  
7  
8 STATEMENT OF BASIS AND PURPOSE  
9 AND SPECIFIC STATUTORY AUTHORITY FOR

10 Amendment of Regulations Pertaining to Solid Waste Sites and Facilities (6 CCR 1007-2 Part 1) –  
11 Section 1.2 Definitions – Revision of the definitions of “Agricultural wastes”, and “Composting”,  
12 and “Environmental Media”; Addition of the definition of “Anaerobic digestion”; and deletion of  
13 definition of “Custom mill”  
14

15  
16 Statement of Basis and Purpose:

17  
18 ~~Note: The Department will be convening at least one stakeholder meeting to discuss these~~  
19 ~~proposed changes. As such, work on the regulatory language may continue up to the rulemaking~~  
20 ~~hearing date. It remains the Department’s goal to resolve all stakeholder concerns by the hearing~~  
21 ~~date.~~  
22

23  
24 Statutory Authority

25  
26 These amendments to 6 CCR 1007-2, Part 1 are made pursuant to the authority granted to the Solid and  
27 Hazardous Waste Commission in § 30-20-109, C.R.S.  
28

29  
30 Discussion of Regulatory Proposal

31  
32 I. Changes to the definition of “Agricultural Wastes”  
33

34 In Colorado law, “agricultural wastes” are specifically exempted from those materials that are  
35 solid waste. The statute, in § 30-20-101(6)(b)(II), C.R.S., states that ““Solid Waste” does not  
36 include: . . . Agricultural wastes.” However, the term “agricultural wastes” is not defined in statute.  
37 ~~The Division is proposing the following changes to the definition of “Agricultural Wastes” in the~~  
38 ~~regulations.~~  
39

40 ~~The Division is proposing~~ To clarify and improve the definition, it is necessary to delete the words  
41 “solid wastes” in the first phrase of the definition and replace it with the phrase “discarded or  
42 residual plant materials or animal materials.” Using the term “solid waste” in the definition of a  
43 term that describes a material that is not “solid waste” creates confusion.  
44

45 ~~The Division is also proposing to strike~~ The the phrase “~~resulting from the raising of crops or~~  
46 ~~animals on land zoned agricultural by local requirements.~~” is being stricken. Agricultural wastes  
47 can be generated on land that is not necessarily zoned “agricultural.” Wastes such as manures  
48 and crop residues can be generated on residentially, commercially, and even industrially zoned  
49 land. ~~The Division proposes replacing this deleted language with,~~ phrase “that directly result

50 ~~(from the raising of crops or livestock ) has been added for emphasis and clarity. Agricultural~~  
51 ~~waste also includes manure, irrigation water and irrigation run-off and return flows.” This~~  
52 ~~language succinctly describes the materials we believe were intended to be included in the~~  
53 ~~agricultural waste universe. Additionally, agricultural wastes may be used for other purposes such~~  
54 ~~as animal feed or animal bedding. Therefore, the phrase “or are used for other agricultural~~  
55 ~~purposes” has been added.~~

56  
57 The Division further recommends that the phrase ~~“that are returned to the soils as fertilizer, soil~~  
58 ~~conditioner or compost, or are composted to return to the soils” be stricken from the definition.~~  
59 ~~The first part of this phrase has been moved to the end of the first paragraph of the definition.~~  
60 ~~This second part of this phrase was added to allow agricultural waste to be composted at a facility~~  
61 ~~that was not the original site of generation so long as the composted agricultural waste was~~  
62 ~~eventually returned to the soil. With the addition of the change explained in the following~~  
63 ~~paragraph, this phrase is no longer necessary.~~

64  
65 The Division believes clarification is needed to explain the limited circumstances in which  
66 agricultural wastes lose the exemption and become solid wastes. The Division believes there are  
67 three such situations. First, if agricultural wastes are mixed with other solid wastes, then the  
68 resulting mixture becomes a solid waste. This is consistent with how other mixtures of regulated  
69 and non-regulated materials are handled—the more stringent requirements apply. The second  
70 situation occurs when agricultural wastes are disposed of at a permitted solid waste disposal site  
71 and facility. In this case, the agricultural wastes are not being utilized for their fertilizer, soil  
72 conditioning or compost properties and must be managed by the receiving facility in the same  
73 way other solid wastes are managed. The third situation occurs when agricultural wastes are  
74 placed in or on the land in quantities that overwhelm the fertilization, soil conditioning, or  
75 composting values of the materials or in placement geometries where the value of the material to  
76 the soil or growing crops cannot be realized. The Division believes these situations are either  
77 improper disposal, “use constituting disposal,” or landfarming, all of which would require  
78 permitting through the local governing authority and the Department.

79  
80 Generally speaking, the Division believes that agricultural wastes should remain exempt  
81 Agricultural wastes are excluded from regulation as solid waste even if they undergo processing  
82 or treatment. ~~So long as the material was agricultural waste going in to the process or treatment,~~  
83 ~~so long as the agricultural waste is not mixed with solid waste, and so long as the processing or~~  
84 ~~treatment residues are returned to the soils for fertilizer, soil conditioners, or compost then the~~  
85 ~~wastes from the process remain agricultural wastes.~~ This means, for instance, that anaerobic  
86 digestion using only agricultural wastes as inputs would generate only agricultural wastes along  
87 with the methane gas that is used on-site or sold. On the other hand, F food processing generally  
88 starts with agricultural products, not agricultural wastes. Therefore, food processing wastes  
89 would be solid wastes even if they are ~~subsequently composted or~~ applied to soils for fertilizer,  
90 soil conditioners, or compost.

91  
92 ~~The last change is a conforming change driven by other changes proposed herein.~~ In all-hazard  
93 events or depopulation events caused by such things as blizzards, or diseases such as bird flu,  
94 burial pits are sometimes necessary to deal with the large numbers of animal carcasses. The  
95 Colorado Department of Agriculture (CDA) is the lead regulatory agency overseeing the response  
96 to these events. By policy and per a Department memorandum of understanding with CDA, such  
97 carcasses and carcass by-products remain agricultural wastes even if they are disposed of in or  
98 on the land and are not used as a fertilizer, soil conditioner, or compost. ~~The Division believes~~  
99 flexibility to use burial pits as part of the response to such events needs to be preserved.

100  
101 II. Changes to the definition of “Composting”

102  
103 ~~We are recommending that the~~ The definition of “composting” is being changed in two places.  
104 First, ~~we are recommending that~~ vermicomposting is being added as an additional type of  
105 composting. Vermicomposting is a method of using worms to transform organic waste into a

106 nutrient-rich fertilizer. Though a small niche in the composting industry, vermicomposting is a  
107 well-established and traditional composting method. Second, ~~we are recommending that~~ the  
108 phrase “of piles and windrows” is being removed from the definition because not all composting  
109 utilizes piles and/or windrows.

110  
111 III. Addition of a definition for “Anaerobic Digestion”

112  
113 As anaerobic digestion becomes an increasingly common treatment for organic waste streams,  
114 the Department is getting many inquiries about how and when the process will be regulated.  
115 While the term “anaerobic digestion” does not currently appear in the Solid Waste regulations,  
116 anaerobic digestion of solid waste, for the intended purpose of biogas creation, could be  
117 regulated by various combinations of Section 2 (minimum standards), Section 8 (beneficial use),  
118 Section 9 (surface impoundments), Section 14 (composting), and Section 18 (waste grease),  
119 depending on the design and operation of the facility. Anaerobic digestion of materials that are  
120 solid wastes also creates liquid, semi-solid and solid digestates which remain solid wastes until  
121 the Department determines such wastes meet applicable fertilizer, soil amendment, compost, or  
122 beneficial use criteria. Anaerobic digestion at domestic wastewater treatment works will remain  
123 regulated by the Water Quality Control Division because domestic sewage is excluded from  
124 regulation as solid waste. Therefore, the Department feels it is time to develop a definition for the  
125 term.—The first part of the proposed definition comes from the American Biogas Council’s  
126 definition of anaerobic digestion. ~~The second part of the proposed definition provides context for~~  
127 ~~its application.~~

128  
129 IV. Deletion of the definition of “Custom Mill”

130  
131 The definition of Custom Mill is being deleted from Section 1.2 of the Solid Waste regulations  
132 because the term is never used within the regulations and because Custom Mills are not  
133 regulated by the CDPHE, but are instead regulated by the Department of Natural Resources in  
134 their Division of Mine Reclamation and Safety.

135  
136 ~~V. Changes to the definition of “Environmental Media”~~

137  
138 ~~The Division recommends that two changes be made to the definition of “Environmental Media.”~~  
139 ~~First, we recommend that surface water and ground water be added as an additional category of~~  
140 ~~environmental media. Surface water and ground water are considered environmental media in~~  
141 ~~the hazardous waste program, and the Solid Waste Program has operated as if they were non-~~  
142 ~~regulated materials. It is therefore time to officially add them to this definition.~~

143  
144 ~~The second addition to the definition of “Environmental Media” is to add clarification for the limited~~  
145 ~~circumstances in which environmental media could become solid wastes. The Division believes~~  
146 ~~there are two such situations:~~

- 147 ~~1. If environmental media are mixed with other solid wastes, then the resulting mixture becomes~~  
148 ~~a solid waste. As explained previously, this is consistent with how other mixtures of regulated~~  
149 ~~and non-regulated materials are handled—the more stringent requirements apply. This is~~  
150 ~~clear when soil or other earthen environmental media are visibly mixed with a solid waste~~  
151 ~~such as construction and demolition debris. It would also be true, however, when~~  
152 ~~environmental media are mixed with unseen contamination—for instance, asbestos fibers in~~  
153 ~~soil, or dissolved contamination in surface or ground water. When environmental media,~~  
154 ~~either soil or groundwater becomes contaminated, such as with a petroleum spill to soil or a~~  
155 ~~leachate release to groundwater, and such media is then removed as part of a cleanup or~~  
156 ~~generated as investigation derived waste as with purge water from a groundwater sampling~~  
157 ~~event, the resultant material is no longer environmental media, but rather, a solid waste.~~
- 158 ~~2. When environmental media are disposed of at a permitted solid waste disposal site and~~  
159 ~~facility. In this case, the environmental media must be managed by the receiving facility in~~  
160 ~~the same way other solid wastes are managed.~~

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|165

Cost/Benefit Analysis

A cost-benefit analysis will be performed if requested by the Colorado Department of Regulatory Agencies ~~Services~~.