

# **WEST VIRGINIA LEGISLATURE**

## **2022 REGULAR SESSION**

### **Committee Substitute**

**for**

### **House Bill 4084**

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[Originating in the Committee on Energy and  
Manufacturing, February 1, 2022.]



1 A BILL to amend and reenact §22-15-2 of the Code of West Virginia, 1931, as amended, relating  
2 to advanced recycling of solid waste under the Solid Waste Management Act; adding  
3 definitions of advanced recycling, advanced recycling facility, catalytic cracking,  
4 depolymerization, gasification, hydrogenation, post-use polymer, pyrolysis, recovered  
5 feedstock, and solvolysis; amending the definition of solid waste to except out post-use  
6 polymers and recovered feedstocks which are converted or held for conversion at an  
7 advanced recycling facility; amending the definition of solid waste facility to except out  
8 advanced recycling facilities; and facilitating the conversion and use of plastics and other  
9 recovered materials through advanced recycling processes.

*Be it enacted by the Legislature of West Virginia:*

**ARTICLE 15. SOLID WASTE MANAGEMENT ACT.**

**§22-15-2. Definitions.**

1 Unless the context clearly requires a different meaning, as used in this article the terms:

2 (1) "Advanced recycling" means a manufacturing process for the conversion of post-use  
3 polymers and recovered feedstocks into basic hydrocarbon raw materials, feedstocks, chemicals,  
4 and other products like waxes and lubricants through processes that include pyrolysis,  
5 gasification, depolymerization, catalytic cracking, hydrogenation, solvolysis, and other similar  
6 technologies. The recycled products produced at advanced recycling facilities include, but are  
7 not limited to, monomers, oligomers, plastics, plastics and chemical feedstocks, basic and  
8 unfinished chemicals, waxes, lubricants, coatings, and other basic hydrocarbons. Advanced  
9 recycling shall not be considered solid waste management or solid waste disposal.

10 (2) "Advanced recycling facility" means a facility that receives, stores and converts post-  
11 use polymers and recovered feedstocks it receives using advanced recycling. An advanced  
12 recycling facility is a manufacturing facility subject to applicable department manufacturing

13 regulations for air, water, and land use. Advanced recycling facilities shall not be considered solid  
14 waste facilities.

15 ~~(4)~~ (3) "Agronomic rate" means the whole sewage sludge application rate, by dry weight,  
16 designed:

17 (A) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover  
18 crop or vegetation on the land; and

19 (B) To minimize the amount of nitrogen in the sewage sludge that passes below the root  
20 zone of the crop or vegetation grown on the land to the groundwater.

21 ~~(2)~~ (4) "Applicant" means the person applying for a commercial solid waste facility permit  
22 or similar renewal permit and any person related to such person by virtue of common ownership,  
23 common management or family relationships as the director may specify, including the following:  
24 Spouses, parents and children and siblings.

25 ~~(3)~~ (5) "Approved solid waste facility" means a solid waste facility or practice which has a  
26 valid permit under this article.

27 ~~(4)~~ (6) "Back hauling" means the practice of using the same container to transport solid  
28 waste and to transport any substance or material used as food by humans, animals raised for  
29 human consumption or reusable item which may be refilled with any substance or material used  
30 as food by humans.

31 ~~(5)~~ (7) "Bulking agent" means any material mixed and composted with sewage sludge.

32 (8) "Catalytic cracking" is a manufacturing process through which post-use polymers are  
33 heated and melted in the absence of oxygen and then processed in the presence of a catalyst to  
34 produce valuable raw materials and intermediate and final products, including, but not limited to,  
35 plastic monomers, chemicals, waxes, lubricants, plastic and chemical feedstocks, and other basic  
36 hydrocarbons.

37 ~~(6)~~ (9) "Class A facility" means a commercial solid waste facility which handles an  
38 aggregate of between ten thousand and thirty thousand tons of solid waste per month. Class A

39 facility includes two or more Class B solid waste landfills owned or operated by the same person  
40 in the same county, if the aggregate tons of solid waste handled per month by such landfills  
41 exceeds nine thousand nine hundred ninety-nine tons of solid waste per month.

42 ~~(7)~~ (10) "Commercial recycler" means any person, corporation or business entity whose  
43 operation involves the mechanical separation of materials for the purpose of reselling or recycling  
44 at least seventy percent by weight of the materials coming into the commercial recycling facility.

45 ~~(8)~~ (11) "Commercial solid waste facility" means any solid waste facility which accepts  
46 solid waste generated by sources other than the owner or operator of the facility and does not  
47 include an approved solid waste facility owned and operated by a person for the sole purpose of  
48 the disposal, processing or composting of solid wastes created by that person or such person and  
49 other persons on a cost-sharing or nonprofit basis and does not include land upon which reused  
50 or recycled materials are legitimately applied for structural fill, road base, mine reclamation and  
51 similar applications.

52 ~~(9)~~ (12) "Compost" means a humus-like material resulting from aerobic, microbial,  
53 thermophilic decomposition of organic materials.

54 ~~(10)~~ (13) "Composting" means the aerobic, microbial, thermophilic decomposition of  
55 natural constituents of solid waste to produce a stable, humus-like material.

56 ~~(11)~~ (14) "Commercial composting facility" means any solid waste facility processing solid  
57 waste by composting, including sludge composting, organic waste or yard waste composting, but  
58 does not include a composting facility owned and operated by a person for the sole purpose of  
59 composting waste created by that person or such person and other persons on a cost-sharing or  
60 nonprofit basis and shall not include land upon which finished or matured compost is applied for  
61 use as a soil amendment or conditioner.

62 ~~(12)~~ (15) "Cured compost" or "finished compost" means compost which has a very low  
63 microbial or decomposition rate which will not reheat or cause odors when put into storage and  
64 that has been put through a separate aerated curing cycle stage of thirty to sixty days after an

65 initial composting cycle or compost which meets all regulatory requirements after the initial  
66 composting cycle.

67 ~~(13)~~ (16) “Department” means the Department of Environmental Protection.

68 (17) “Depolymerization” means a manufacturing process where post-use polymers are  
69 broken into smaller molecules such as monomers and oligomers or raw, intermediate, or final  
70 products, plastics and chemical feedstocks, basic and unfinished chemicals, waxes, lubricants,  
71 coatings, and other basic hydrocarbons.

72 ~~(14)~~ (18) “Energy recovery incinerator” means any solid waste facility at which solid wastes  
73 are incinerated with the intention of using the resulting energy for the generation of steam,  
74 electricity or any other use not specified herein.

75 (19) “Gasification” means a manufacturing process through which recovered feedstocks  
76 are heated and converted into a fuel and gas mixture in an oxygen-deficient atmosphere and the  
77 mixture is converted into valuable raw materials and intermediate and final products, including,  
78 but not limited to, plastic monomers, chemicals, waxes, lubricants, plastic and chemical  
79 feedstocks, and other basic hydrocarbons that are returned to economic utility in the form of raw  
80 materials and products.

81 (20) “Hydrogenation” is a manufacturing process through which hydrogen is used to  
82 remove impurities from post-use polymers or recovered feedstock to enable further processing  
83 into valuable raw materials and intermediate and final products, including, but not limited to,  
84 plastic monomers, chemicals, waxes, lubricants, plastic and chemical feedstocks, and other basic  
85 hydrocarbons.

86 ~~(15)~~ (21) “Incineration technologies” means any technology that uses controlled flame  
87 combustion to thermally break down solid waste, including refuse-derived fuel, to an ash residue  
88 that contains little or no combustible materials, regardless of whether the purpose is processing,  
89 disposal, electric or steam generation or any other method by which solid waste is incinerated.

90           ~~(16)~~ (22) “Incinerator” means an enclosed device using controlled flame combustion to  
91 thermally break down solid waste, including refuse-derived fuel, to an ash residue that contains  
92 little or no combustible materials.

93           ~~(17)~~ (23) “Landfill” means any solid waste facility for the disposal of solid waste on or in  
94 the land for the purpose of permanent disposal. Such facility is situated, for purposes of this article,  
95 in the county where the majority of the spatial area of such facility is located.

96           ~~(18)~~ (24) “Materials recovery facility” means any solid waste facility at which source-  
97 separated materials or materials recovered through a mixed waste processing facility are  
98 manually or mechanically shredded or separated for purposes of reuse and recycling, but does  
99 not include a composting facility.

100           ~~(19)~~ (25) “Mature compost” means compost which has been produced in an aerobic,  
101 microbial, thermophilic manner and does not exhibit phytotoxic effects.

102           ~~(20)~~ (26) “Mixed solid waste” means solid waste from which materials sought to be reused  
103 or recycled have not been source-separated from general solid waste.

104           ~~(21)~~ (27) “Mixed waste processing facility” means any solid waste facility at which  
105 materials are recovered from mixed solid waste through manual or mechanical means for  
106 purposes of reuse, recycling or composting.

107           ~~(22)~~ (28) “Municipal solid waste incineration” means the burning of any solid waste  
108 collected by any municipal or residential solid waste disposal company.

109           ~~(23)~~ (29) “Open dump” means any solid waste disposal which does not have a permit  
110 under this article, or is in violation of state law, or where solid waste is disposed in a manner that  
111 does not protect the environment.

112           ~~(24)~~ (30) “Person” or “persons” means any industrial user, public or private corporation,  
113 institution, association, firm or company organized or existing under the laws of this or any other  
114 state or country; State of West Virginia; governmental agency, including federal facilities; political  
115 subdivision; county commission; municipal corporation; industry; sanitary district; public service

116 district; drainage district; soil conservation district; watershed improvement district; partnership;  
117 trust; estate; person or individual; group of persons or individuals acting individually or as a group;  
118 or any legal entity whatever.

119 (31) “Post-use polymer” means a plastic to which all of the following apply:

120 (A) The plastic is derived from any industrial, commercial, agricultural, or domestic  
121 activities;

122 (B) It is not mixed with solid waste or hazardous waste onsite or during processing at the  
123 advanced recycling facility;

124 (C) The plastic’s use or intended use is as a feedstock for the manufacturing of plastic and  
125 chemical feedstocks, other basic hydrocarbons, raw materials, or other intermediate products or  
126 final products using advanced recycling;

127 (D) The plastic has been sorted from solid waste and other regulated waste but may  
128 contain residual amounts of solid waste such as organic material and incidental contaminants or  
129 impurities (e.g., paper labels and metal rings); and,

130 (E) The plastic is processed at an advanced recycling facility or held at such facility prior  
131 to processing.

132 ~~(25)~~ (32) “Publicly owned treatment works” means any treatment works owned by the state  
133 or any political subdivision thereof, any municipality or any other public entity which processes  
134 raw domestic, industrial or municipal sewage by any artificial or natural processes in order to  
135 remove or so alter constituents as to render the waste less offensive or dangerous to the public  
136 health, comfort or property of any of the inhabitants of this state before the discharge of the plant  
137 effluent into any of the waters of this state, and which produces sewage sludge.

138 (33) “Pyrolysis” means a manufacturing process through which post-use polymers are  
139 heated in the absence of oxygen until melted and thermally decomposed and are then cooled,  
140 condensed, and converted into valuable raw materials and intermediate and final products,  
141 including, but not limited to, plastic monomers, chemicals, waxes, lubricants, plastic and chemical



142 feedstocks, and other basic hydrocarbons, that are returned to economic utility in the form of raw  
143 materials or products.

144 (34) "Recovered feedstock" means one or more of the following materials that has been  
145 processed so that it may be used as feedstock in an advanced recycling facility:

146 (A) Post-use polymers;

147 (B) Materials for which the United States Environmental Protection Agency has made a  
148 nonwaste determination pursuant to 40 C.F.R. 241.3(c), or has otherwise determined are  
149 feedstocks and not solid waste;

150 (C) Recovered feedstock does not include unprocessed municipal solid waste;

151 (D) Recovered feedstock is not mixed with solid waste or hazardous waste onsite or  
152 during processing at an advanced recycling facility.

153 ~~(26)~~ (35) "Recycling facility" means any solid waste facility for the purpose of recycling at  
154 which neither land disposal nor biological, chemical or thermal transformation of solid waste  
155 occurs: *Provided*, That mixed waste recovery facilities, sludge processing facilities and  
156 composting facilities are not considered recycling facilities nor considered to be reusing or  
157 recycling solid waste within the meaning of this article, article fifteen-a of this chapter and article  
158 four, chapter twenty-two-c of this code.

159 ~~(27)~~ (36) "Sewage sludge" means solid, semisolid or liquid residue generated during the  
160 treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited  
161 to, domestic septage, scum or solids removed in primary, secondary or advanced wastewater  
162 treatment processes and a material derived from sewage sludge. "Sewage sludge" does not  
163 include ash generated during the firing of sewage sludge in a sewage sludge incinerator.

164 ~~(28)~~ (37) "Secretary" means the Secretary of the Department of Environmental Protection  
165 or such other person to whom the Secretary has delegated authority or duties pursuant to article  
166 one of this chapter.

167           ~~(29)~~ (38) “Sewage sludge processing facility” is a solid waste facility that processes  
168 sewage sludge for: (A) Land application; (B) incineration; or (C) disposal at an approved landfill.  
169 Such processes include, but are not limited to, composting, lime stabilization, thermophilic,  
170 microbial and anaerobic digestion.

171           ~~(30)~~ (39) “Sludge” means any solid, semisolid, residue or precipitate, separated from or  
172 created by a municipal, commercial or industrial waste treatment plant, water supply treatment  
173 plant or air pollution control facility or any other such waste having similar origin.

174           ~~(34)~~ (40) “Solid waste” means any garbage, paper, litter, refuse, cans, bottles, waste  
175 processed for the express purpose of incineration; sludge from a waste treatment plant; water  
176 supply treatment plant or air pollution control facility; and other discarded materials, including  
177 offensive or unsightly matter, solid, liquid, semisolid or contained liquid or gaseous material  
178 resulting from industrial, commercial, mining or community activities but does not include solid or  
179 dissolved material in sewage or solid or dissolved materials in irrigation return flows or industrial  
180 discharges which are point sources and have permits under article five-a of this chapter, or  
181 source, special nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as  
182 amended, including any nuclear or byproduct material considered by federal standards to be  
183 below regulatory concern, or a hazardous waste either identified or listed under article five-e of  
184 this chapter or refuse, slurry, overburden or other wastes or material resulting from coal-fired  
185 electric power or steam generation, the exploration, development, production, storage and  
186 recovery of coal, oil and gas and other mineral resources placed or disposed of at a facility which  
187 is regulated under chapter twenty-two, twenty-two-a or twenty-two-b of this code, so long as  
188 placement or disposal is in conformance with a permit issued pursuant to such chapters, or post-  
189 use polymers and recovered feedstocks converted at an advanced recycling facility or held at  
190 such facility prior to conversion.

191           ~~(32)~~ (41) “Solid waste disposal” means the practice of disposing of solid waste including  
192 placing, depositing, dumping or throwing or causing any solid waste to be placed, deposited,  
193 dumped or thrown.

194           ~~(33)~~ (42) “Solid waste disposal shed” means the geographical area which the solid waste  
195 management board designates and files in the state register pursuant to section eight, article  
196 twenty-six, chapter sixteen of this code.

197           ~~(34)~~ (43) “Solid waste facility” means any system, facility, land, contiguous land,  
198 improvements on the land, structures or other appurtenances or methods used for processing,  
199 recycling or disposing of solid waste, including landfills, transfer stations, materials recovery  
200 facilities, mixed waste processing facilities, sewage sludge processing facilities, commercial  
201 composting facilities and other such facilities not herein specified, but not including land upon  
202 which sewage sludge is applied in accordance with section twenty of this article. Such facility shall  
203 be deemed to be situated, for purposes of this article, in the county where the majority of the  
204 spatial area of such facility is located: *Provided*, That a salvage yard, licensed and regulated  
205 pursuant to the terms of article twenty-three, chapter seventeen of this code, is not a solid waste  
206 facility and an advanced recycling facility is not a solid waste facility.

207           ~~(35)~~ (44) “Solid waste facility operator” means any person or persons possessing or  
208 exercising operational, managerial or financial control over a commercial solid waste facility,  
209 whether or not such person holds a certificate of convenience and necessity or a permit for such  
210 facility.

211           (45) “Solvolysis” means a manufacturing process through which post-use polymers are  
212 purified with the aid of solvents, while heated at low temperatures and/or pressurized to make  
213 useful products, allowing additives and contaminants to be separated. The products of solvolysis  
214 include monomers, intermediates, and valuable chemicals and raw materials. The process  
215 includes, but is not limited to, hydrolysis, aminolysis, ammonolysis, methanolysis and glycolysis.

216           ~~(36)~~ (46) “Source-separated materials” means materials separated from general solid  
217 waste at the point of origin for the purpose of reuse and recycling but does not mean sewage  
218 sludge.

NOTE: The purpose of this bill is to allow advanced recycling facilities in the state and to facilitate the conversion of plastics and other recovered materials through advanced recycling processes.

Strike-throughs indicate language that would be stricken from a heading or the present law and underscoring indicates new language that would be added.