

CHAPTER 117
WASTE TIRE MANAGEMENT

[Prior to 5/15/02, see also 567—Chapter 219]

567—117.1(455B,455D) Purpose. The purpose of this chapter is to establish guidelines for the proper management of waste tires, including disposal, collection, storage, processing, and beneficial reuse of waste tires and processed waste tire materials. The chapter shall not be construed to exempt a waste tire storage site or processing site from compliance with more stringent local ordinances, fire codes, or other applicable statutes.

567—117.2(455B,455D) Definitions. As used in this chapter:

“*Bagel cut*” means to cut a tire in half along its circumference.

“*Baled tire*” means a method of volume reduction of waste tires, whereby whole or cut tires are compacted into a bundle and then banded together to form a tire bale. Baled tires shall not be considered processed tires and shall be defined as solid waste, unless they are incorporated into an approved beneficial use project.

“*Beneficial use*” means the use or application of waste tires or processed tires in a manner that provides a benefit to an end user and that does not pose a threat to the environment or to public health and safety. Use of waste tires or processed tires primarily as a means for land disposal shall not be considered a beneficial use.

“*Civil engineering application*” means a form of reusing waste tires, either whole or processed, in place of naturally occurring materials in construction, so long as the waste tires provide a defined engineering benefit.

“*Crumb rubber*” means a material derived by reducing waste tires or other rubber into uniform granules of 3/8 inch or less, with the inherent reinforcing materials such as steel and fiber removed along with other contaminants.

“*Cut tire*” means a waste tire from which the tire face, tread, or sidewall has been cut or removed for beneficial use. A cut tire shall consist of pieces greater than 18 inches on any one side.

“*Department*” means Iowa department of natural resources.

“*End user*” means an industry, utility, business, entity, or individual that receives whole waste tires or processed tires and uses them for a raw material in a manufactured product, for energy recovery, or other beneficial use. A tire processor shall not be considered an end user.

“*Energy recovery*” means the extraction of the fuel or heat value from whole or processed tires through their controlled combustion at a permitted utility or industry.

“*Operator*” means the individual, corporation, or party that manages the daily work activities related to the collection, storage, and processing of waste tires and processed tire materials at a waste tire stockpile site or processing facility.

“*Owner*” means the individual, corporation, or party that is the legal owner of the real estate where a waste tire stockpile site or processing facility exists.

“*Passenger tire equivalent*” means a conversion measurement that is used to estimate waste tire weights and volume amounts and in which one passenger car tire with a rim diameter of 17 inches or less is equal to 20 pounds. One cubic yard of volume shall contain 15 passenger tire equivalents. Tires larger than a passenger car tire shall be evaluated for volume using this conversion measurement.

“*Permit*” means a permit issued by the department to establish, construct, modify, own, or operate a waste tire storage or processing site.

“*Processed tire*” means a tire that has been processed through grinding, shredding, or other means, thereby producing a material that is readily suitable for marketing into product manufacturing, energy recovery, or other beneficial reuse markets. Waste tires that have been compacted, baled, cut, or shredded without a suitable market shall not be considered processed tires and shall be regulated as solid waste.

“*Processing*” means producing or manufacturing usable materials from waste tires.

“*Processing site*” means a site which is used for the processing of waste tires and which is owned or operated by a tire processor who has a permit for the site.

“*Site*” includes all contiguous parcels of land under the ownership, management, or financial interest of an owner or operator receiving a permit through this chapter. Public rights-of-way and their easements shall not affect the continuity of a site for the purposes of this chapter.

“*Site of end use*” means a site where processed waste tires are recycled or reused in a beneficial manner authorized by the department.

“*Tire bale.*” See “*baled tire.*”

“*Tire casing*” means a used and worn tire that is suitable for the process of recapping. A tire casing stored for more than one year without being recapped shall be considered a waste tire.

“*Tire collector*” means a permitted person or business that owns or operates a site used for the storage, collection, or deposit of more than 500 waste tires or an authorized vehicle recycler who is licensed by the department of transportation pursuant to Iowa Code section 321H.4 and who owns or operates a site used for the storage, collection, or deposit of more than 3,500 waste tires.

“*Tire processor*” means a permitted individual or business that processes tires through grinding, shredding, or other means, thereby producing a material that is readily suitable for marketing into product manufacturing, energy recovery, or other beneficial reuse markets. “Tire processor” does not mean a person who retreads tire casings or who collects and stores tires.

“*Used tire*” means a tire that previously has been on a vehicle but that retains suitable tread depth and is free of damage or defects so that it may be safely returned to its original purpose.

“*Waste tire,*” as defined in Iowa Code section 455D.11, means a tire that is no longer suitable for its originally intended purpose due to wear, damage, or defect. This definition shall include a tire mounted on a rim, but not on a vehicle. “Waste tire” does not include a nonpneumatic tire.

“*Waste tire hauler*” means an individual or business providing waste tire hauling and disposal services, in accordance with Iowa Code section 9B.1.

“*Waste tire stockpile*” means a site that is used for the storage, collection, or deposit of waste tires or tire bales, including indoor, outdoor, and underground storage.

567—117.3(455B,455D) Waste tire disposal.

117.3(1) *Land disposal prohibited.* Land disposal of waste tires, in whole, cut, or shredded form, is prohibited. Waste tires shall be accepted at a permitted sanitary landfill for final disposal if the tires have first been cut into pieces that are not more than 18 inches on any one side.

117.3(2) *Transport to permitted facilities.* A person who transports waste tires for final disposal is required to dispose of the tires only at a permitted facility.

117.3(3) *Registered waste tire hauler.* A person who contracts with another person to transport more than 40 waste tires in a single load is required to contract only with a person registered as a waste tire hauler, pursuant to Iowa Code section 455D.11I.

567—117.4(455B,455D) Waste tire storage permits and requirements.**117.4(1) Storage quantity limitations.**

a. No business or individual shall store more than 500 passenger tire equivalents without obtaining a permit for a waste tire stockpile pursuant to 117.4(2).

b. Businesses or individuals may temporarily store up to 1,500 passenger tire equivalents without obtaining a waste tire stockpile permit, subject to the following requirements:

(1) The waste tires are stored only in a mobile container, truck, or trailer, provided or serviced by a registered waste tire hauler.

(2) The waste tires are removed by the waste tire hauler or delivered to a waste tire processor at least every 60 days.

(3) The waste tire generator has a written copy of a contract or service agreement for waste tire disposal services from a registered waste tire hauler.

c. A permitted municipal landfill or solid waste transfer station shall be allowed the storage of up to 1,500 passenger tire equivalents without a permit if the waste tires are removed at least every 120 days and are stored in a manner to minimize the collection of water.

d. Persons who use waste tires for an approved beneficial use shall not be required to obtain a waste tire stockpile permit, subject to their compliance with the provisions of rule 117.8(455B,455D).

117.4(2) Waste tire stockpile permit.

a. Any tire collector, business or individual storing more than 500 passenger tire equivalents on any one site must obtain a waste tire stockpile permit. An authorized vehicle recycler, as licensed by the Iowa department of transportation, may store up to 3,500 passenger tire equivalents without a waste tire stockpile permit; any storage beyond this amount shall require full compliance with this subrule. This subrule is applicable to the indoor, outdoor, and underground storage of waste tires. If the site cannot meet the conditions to obtain a waste tire stockpile permit, the waste tires must be removed from the site and properly disposed of within 30 days.

b. Any tire collector, business, individual, owner or operator of a site seeking to construct a waste tire stockpile must obtain the permit from the department before initiating such operations. The permit shall be issued directly to the owner of the site and the designated tire collector that will be operating the stockpile.

c. Permits shall have an annual fee of \$850, payable to the department upon the application for a permit, and due annually beginning each July 1 thereafter at the rate of \$850. Permit fees shall not be prorated. The permit shall be valid for a period of three years from date of issuance. Failure to remit the annual renewal fee shall be cause for the department to revoke the permit.

d. Application for a permit must be made on a form provided by the department and must include, at a minimum, the following:

(1) The name, address, and telephone number of the individual who directly owns the stockpile site.

(2) The name, address, and telephone number of the tire collector at the stockpile site, if different from the owner.

(3) A scaled map showing the areas proposed to be used for the storage of the waste tires, all property boundaries of the site, and the location of all buildings and major improvements on the site and within 300 feet of the property boundary.

(4) A vector control plan to prevent infestations of mosquitoes and rodents for aboveground storage in an open area. The plan shall be prepared by a firm that provides professional vector management services, or by the permittee, if properly trained and certified in vector control procedures. The permittee must provide documentation to show adequate implementation and monitoring of the vector control plan.

(5) A site closure plan. The plan shall describe the actions that would be taken to properly dispose of waste tire materials at the site 30 days prior to any intent to discontinue operations at the site so that, upon discontinuance of the operation, no violations of waste tire or solid waste disposal laws and regulations will exist.

(6) An emergency response and remedial action plan, developed and implemented according to applicable provisions of 567—102.16(455B). The plan shall be developed with the input and review of the local fire department and local emergency management coordinator. The applicant shall provide documentation that an opportunity for such input and review has been received by these local authorities.

(7) A financial assurance instrument in compliance with rule 117.7(455B,455D).

(8) A certified check for \$850 made payable to the Department of Natural Resources.

117.4(3) Permitted storage requirements. A permitted waste tire stockpile site shall meet the following minimum permit conditions as set by the department:

a. Aboveground storage, open area.

(1) A waste tire stockpile site shall not contain more than 250,000 passenger tire equivalents.

(2) A single waste tire pile shall not contain more than 50,000 cubic feet of waste tires.

(3) The vertical dimension of a waste tire pile shall not exceed 10 feet.

(4) A single waste tire pile shall not be more than 100 feet in length.

(5) The surface area covered by a waste tire pile shall not exceed 5,000 square feet; the pile may not be constructed upon any waste tire materials or other flammable materials.

(6) A 50-foot fire lane must be maintained between any two tire piles.

(7) Tire bales shall be stored in piles no greater than 10 feet in height, 25 feet in width, or 50 feet in length, with a separation distance of 50 feet between piles of tire bales.

(8) All waste tire piles shall be located at least 50 feet from any building.

(9) Trees and brush shall be cleared within 50 feet of any tire pile.

(10) Combustible materials or volatile chemicals shall not be stored within 50 feet of any tire pile unless stored in approved fire-resistant containers or cabinets.

(11) A 20-pound Class ABC dry chemical fire extinguisher shall be available within 100 feet of any one portion of the tire storage areas.

(12) The site must be graded to prevent any standing pools of water and to limit the runoff and run-off of precipitation.

(13) A waste tire pile must be at least 200 feet from any well, lake, pond, river, stream, sinkhole, or tile line surface intake unless appropriate grading, or the construction of a barrier, dike, or berm, is completed to intercept surface water flows that may impact such interceptors. This distance may then be reduced to 50 feet.

(14) The stockpile site must be secured by a fence or barrier of a minimum of 6 feet in height to impede unauthorized vehicle and personal access. All gates and entry points shall be secured and locked when site personnel are not present.

(15) No open burning of any type shall be allowed at the permitted stockpile site. All fueling of vehicles and equipment and any other work or activity that may release sparks or flame shall be conducted at least 50 feet from any tire storage area.

(16) Signs shall be posted every 100 feet on site, placed for visibility of personnel on site, and state: "Open burning on-site prohibited." The perimeter of the site shall be posted with signs every 100 feet, placed for visibility to those off site, that state: "Highly flammable materials on-site. Burning in area not recommended."

(17) All waste tire piles shall be located at least 300 feet from any property line, street, or public right-of-way.

b. Aboveground storage, enclosed area. Storage of waste tires shall comply with the requirements of 117.4(3) "a," subparagraphs (2) through (7), and the following:

(1) To qualify as an enclosed area, the area must be enclosed in a structure with a permanent roof and lateral protection to prevent precipitation from accumulating within the tires.

- (2) An enclosed storage structure shall not contain more than 50,000 passenger tire equivalents.
- (3) Combustible materials or volatile chemicals shall not be stored in a structure permitted for tire storage unless stored in approved fire-resistant containers or cabinets.
- (4) A 20-pound Class ABC dry chemical fire extinguisher shall be available within 50 feet of any one portion of the tire storage areas.
- (5) The storage structure must be secured from unauthorized access.
- (6) No open burning of any type shall be allowed at the permitted stockpile site. All fueling of vehicles and equipment and any other work or activity that may release sparks or flame shall be conducted at least 50 feet from any tire storage area. The exterior of the enclosed storage area shall be posted with signs, placed every 100 feet, that state: "Highly flammable materials stored inside. Burning on-site prohibited."

c. Underground storage. To qualify as an underground waste tire storage site, the site must meet the following conditions:

- (1) The site must be a licensed grain warehouse.
- (2) All underground storage areas must be dry and not prone to the entry of surface water or groundwater.
- (3) The underground storage areas must be secured from unauthorized access by locking gates, doors, barriers, or other devices.
- (4) The site shall not store any volatile chemicals or other combustible materials within 150 feet of the tire storage area.
- (5) For tires placed for storage after July 1, 2002, all such storage areas shall have access lanes, not less than 50 feet in width, arranged so that no portion of the storage area is more than 150 feet from an access lane.
- (6) For tires placed for storage after July 1, 2002, the tires shall not be buried by debris, rubble, or other cover within the underground storage site.
- (7) The underground storage site shall be limited to a maximum storage capacity of 4 million passenger tire equivalents.

117.4(4) Reporting requirements. The holder of a permit for a waste tire stockpile facility shall make a semiannual report to the department on a form as provided or approved by the department. The report shall state the following:

- a.* Quantity of waste tires stored at the facility at the time of reporting, determined by count or weight and reported in passenger tire equivalents.
- b.* Quantity of waste tires received from in-state sources during the reporting period.
- c.* Quantity of waste tires received from out-of-state sources during the reporting period.
- d.* For any waste tires removed from the permitted stockpile site during the reporting period, the quantity shall be given by equivalent count or weight of such waste tires removed. Documentation shall be provided to denote how the reported quantity of tires were disposed of at a permitted facility, reused, or resold.

567—117.5(455B,455D) Used tire storage.

117.5(1) Acceptable used tire storage. A used tire shall be stored in a manner that provides for the following:

- a.* Prevention of the collection of water, dirt, or debris within the tire.
- b.* Organized storage through stacking, rows, and sorting which provides for accurate descriptions and counts of the types and sizes of tires stored.
- c.* Storage conforms to applicable local and state fire codes.

117.5(2) Inventory resale and reuse. Used tires stored for more than one year without documentation of active resale or reuse of tire inventory in a proportion equal to 75 percent of the amount stored shall be considered waste tires and shall be subject to the applicable waste tire storage and disposal rules of this chapter.

567—117.6(455B,455D) Waste tire processing facility permits and requirements.**117.6(1) Waste tire processing facility permit.**

a. Any business or individual operating a tire processing facility shall obtain a waste tire processing permit prior to commencing such operations. The permit shall be issued directly to the owner and operator of the company that will be operating the tire processing facility.

b. Facilities that accept waste tires to cut, grind, or compact only for final disposal at a permitted sanitary disposal project shall be required to obtain a waste tire processing permit in accordance with these rules. Such facilities shall not store any cut or shredded waste tire materials for more than 30 days.

c. Businesses or individuals operating mobile waste tire processing equipment shall be required to obtain a waste tire processing permit. The permit shall authorize the operator to provide waste tire processing services statewide; however, mobile operations shall not be allowed to store any processed or whole waste tires at any facility or site owned or operated by the permittee unless specifically authorized within the permit.

d. Businesses or individuals who cut, grind, or compact for disposal waste tires generated directly from operations at their own on-site manufacturing operation or service facility shall not be required to obtain a waste tire processing permit provided that all waste tire materials processed on site are disposed of at least every 30 days at a permitted facility and no more than 500 waste tires are processed monthly.

e. Processing permits shall have an annual fee of \$850, payable to the department upon the application for a permit, and due annually beginning each July 1 thereafter at the rate of \$850. Permit fees shall not be prorated. The permit shall be valid for a period of three years from date of issuance. Failure to remit the annual renewal fee shall be cause for the department to revoke the permit.

f. A permitted processing facility shall have a site closure plan. The plan shall describe the actions that would be taken to properly dispose of all waste tire materials, in whole or processed form, at the site 30 days prior to any intent to discontinue operations at the site so that, upon discontinuance of the operation, no violations of waste tire or solid waste disposal laws and regulations will exist.

g. A permitted processing facility shall have an emergency response and remedial action plan, developed and implemented according to applicable provisions of 567—102.16(455B). The plan shall be developed with the input and review of the local fire department and local emergency management coordinator. The applicant shall provide documentation that an opportunity for such input and review has been received by these local authorities.

h. A permitted processing facility shall obtain financial assurance in accordance with rule 117.7(455B,455D), as necessary.

i. Application for a processing permit must be made on a form provided by the department and must include, at a minimum, the following:

(1) The name, address, and telephone number of the individual who directly owns the tire processing facility.

(2) The name, address, and telephone number of the operator of the processing facility, if different from the owner of the tire processing facility.

(3) The type of processing operations to be conducted at the facility, including descriptions of processing equipment and its hourly capacity, operating hours of the facility, and types of processed tire materials to be produced.

(4) A scaled map showing all areas proposed for waste tire storage and processing operations, all property boundaries of the site, and the location of all buildings and major improvements on the site and within 300 feet of the property boundary.

(5) A site closure plan, as referenced in 117.6(1) “f.”

(6) An emergency response and remedial action plan, as referenced in 117.6(1) “g.”

(7) A certified check for \$850 made payable to the Department of Natural Resources.

(8) A financial assurance instrument in compliance with rule 117.7(455B,455D).

117.6(2) Permitted waste tire processing facility permit requirements. A permitted waste tire processing facility shall meet the following minimum permit requirements as set by the department. Nothing in this rule shall limit the permitted tire processing facility from compliance with more stringent local ordinances, fire codes, or other applicable statutes.

a. The site must be graded to prevent any standing pools of water and to limit the run-on of precipitation in all areas where waste tires or processed tire material is stored.

b. The processing facility site must be secured by a fence or barrier of a minimum of 6 feet in height to impede unauthorized vehicle and personal access. All gates and entry points shall be secured and locked when site personnel are not present.

c. No open burning of any type shall be allowed at the permitted stockpile site. All fueling of vehicles and equipment and any other work or activity that may release sparks or flame shall be conducted at least 50 feet from any tire storage area.

d. Signs shall be posted every 100 feet on site, placed for visibility of personnel on site, and state: "Open burning on-site prohibited." The perimeter of the site shall be posted with signs every 100 feet, placed for visibility to those off site, that state: "Highly flammable materials on-site. Burning in area not recommended."

117.6(3) Preprocessed whole waste tire storage.

a. Permitted storage of whole waste tires on site prior to processing shall be limited to the quantity of tires that the facility has the ability to process within a three-day period. This quantity shall be determined by multiplying the actual number of working hours that processing is normally to occur during a typical three-day period by 80 percent of the manufacturer's specifications of hourly capacity of the processing equipment. After one year of the facility's operation, documented actual hourly production shall be used for this permit determination in lieu of the manufacturer's equipment specifications.

b. A tire processor may store an additional three-day capacity of preprocessed waste tires, above the initial three-day capacity, using the same quantity determination as stated in 117.6(3) "a," subject to the tire processor's obtaining and maintaining financial assurance for these additional tires to be stored prior to processing in accordance with rule 117.7(455B,455D).

c. Under no circumstance shall a waste tire processor be allowed the storage of more than 75,000 preprocessed waste tires, measured as passenger tire equivalents, through any combination of processing performance or financial assurance determinations. All waste tires on site, including those stored indoors or outdoors or in trucks, trailers, or mobile cages, shall be counted in determining compliance with this rule.

d. Any single waste tire shall not be stored at the processing facility for more than 30 days before the tire is processed.

e. Any tire bales produced or stored at a tire processing facility shall count toward the maximum allowable quantity of preprocessed waste tire storage.

f. All preprocessed tires stored outdoors shall comply with the following:

- (1) A single waste tire pile shall not contain more than 50,000 cubic feet of waste tires.
- (2) The vertical dimension of a waste tire pile shall not exceed 10 feet.
- (3) A single waste tire pile shall not be more than 100 feet in length.
- (4) The surface area covered by a waste tire pile shall not exceed 5,000 square feet.
- (5) A 50-foot fire lane must be maintained between any two tire piles.
- (6) A waste tire pile shall not be located within 50 feet of any property line, street, public right-of-way, or building.
- (7) A tire pile must be at least 200 feet from any well, lake, pond, river, stream, sinkhole, or tile line surface intake unless appropriate grading, or the construction of a barrier, dike, or berm, is completed to intercept surface water flows that may impact such interceptors. This distance may then be reduced to 50 feet.
- (8) Trees and brush shall be cleared within 50 feet of any tire pile.
- (9) Combustible materials or volatile chemicals shall not be stored within 50 feet of any tire pile unless stored in approved fire-resistant containers or cabinets.

(10) A 20-pound Class ABC dry chemical fire extinguisher shall be available within 100 feet of any one portion of tire storage areas.

(11) Waste tires stored in trucks, trailers, or mobile containers must be at least 10 feet from any property line or building.

(12) Tire bales shall be stored in piles no greater than 10 feet in height, 25 feet in width, or 50 feet in length, with a separation distance of 50 feet between piles of tire bales.

g. Indoor storage of waste tires shall not be allowed within 20 feet of any waste tire processing or handling equipment. All waste tires being actively unloaded and fed into processing equipment, including those being off-loaded from trucks, trailers, or mobile containers, shall be cleared at least 20 feet away from the processing equipment by the end of the last working shift of the day. Any remaining indoor storage shall comply with the requirements of 117.4(3) "b," subparagraphs (3) through (7), and the following:

(1) No more than 25,000 passenger tire equivalents shall be stored indoors.

(2) Combustible materials or volatile chemicals shall not be stored within 25 feet of any waste tire storage area unless they are stored in approved containers pursuant to applicable fire codes.

(3) A 20-pound Class ABC dry chemical fire extinguisher shall be available within 50 feet of any one portion of indoor tire storage areas.

(4) The storage structure must be secured from unauthorized access.

117.6(4) Processed tire storage.

a. Storage of processed tire materials at a tire processing facility shall be limited to the volume of material in aggregate that the processor manufactures within a consecutive 60-day period, using the facility's daily average capacity for processing whole tires as determined in 117.6(3) "a." The department shall have the final authority for determining the allowable quantities of processed tire materials to be stored.

b. Under no circumstances shall the equivalent of more than 500,000 processed tires, or 5,000 tons of material, be stored at the processing site.

c. All processed tire material at the site of processing shall be stored as follows:

(1) Processed tires that have been shredded or ground into pieces that are 9 inches or smaller shall be stored in piles no more than 15 feet in height, 100 feet in length, and 50 feet in width and shall contain no more than 75,000 cubic feet of product by volume.

(2) Processed tires cut into strips, sidewalls, or other pieces larger than 9 inches shall be stored in piles no more than 10 feet in height, 100 feet in length, and 50 feet in width and shall contain no more than 50,000 cubic feet of product by volume.

(3) A 50-foot fire lane must be maintained between piles of processed tire material, with the base of the lane kept free from the accumulation of waste tire-derived residuals or materials or other debris.

(4) All processed tire material shall be stored at least 50 feet from any property line, street, public right-of-way, or building.

(5) Trees and brush shall be cleared within 50 feet of the storage of all processed tire material.

(6) A 20-pound Class ABC dry chemical fire extinguisher shall be available within 100 feet of any one portion of processed tire storage areas.

d. For indoor storage of more than 5,000 cubic feet of processed tire material, the material shall be stored on concrete floors and all retaining walls, bins, barriers, and roofing material for the material storage shall be constructed of nonflammable materials.

e. The processor must demonstrate a reasonable market demand for all types and quantities of processed product stored at the processing site. Market demand for processed waste tire products shall be demonstrated by the processor through at least one of the following criteria:

(1) Active contracts, purchase orders, or supply agreements with an end user, noting quantities of material required by the end user, specifications of the quality of the product required by the end user, and monthly or annual demand of product by the end user from the processor. This information shall be made available for review by the department as required to determine compliance with this rule.

(2) Historic, ongoing demand for product by an end user or type of end user, within the state or surrounding region.

(3) Information and evidence that any proposed new product or use for processed waste tires produced by the tire processor will be marketed in a timely fashion, with sufficient demand and consumption by end user markets.

f. The department shall have the final authority in determining storage limitations, including prohibition, for processed tire products when active markets are not evident from information provided by the tire processor.

117.6(5) Reporting requirements. The holder of a permit for a waste tire processing facility shall make a semiannual report to the department on a form as provided or approved by the department. The report shall state the following:

a. Quantity of waste tires received by the facility during the reporting period.
b. Quantity of waste tires received by the facility from in-state sources.
c. Quantity of waste tires received by the facility from out-of-state sources.
d. Quantity of unprocessed waste tires on hand at the facility at the time of reporting.
e. Quantity of waste tires processed and delivered to end users during the reporting period, by product type, with determinations of quantities of product delivered to identified in-state and out-of-state markets or sites.

f. Quantity of processed tire material currently stored at the facility, by product type.

117.6(6) Disposal of solid wastes from tire processing.

a. All waste materials, residuals, and scraps derived from tire processing operations shall be regulated as solid waste. These materials include, but are not limited to, tire bead rings, metal wire, synthetic fibers, and cording.

b. All of these solid wastes must be disposed of at least every 60 days at a permitted sanitary disposal project, scrap recycler, or location, as approved by the department.

c. Documentation of the disposal of these solid wastes must be kept at the processing facility for a period of three years.

567—117.7(455B,455D) Financial assurance for waste tire sites. Permitted waste tire stockpile sites and waste tire processing facilities must obtain and submit a financial assurance instrument to this department for permitted waste tire storage, in accordance with these rules. The financial assurance instrument shall provide monetary funds to properly dispose of any waste tires that may remain at a waste tire site due to the owner's or operator's failure to properly close the site within 30 days of permit termination, revocation, or expiration. Waste tire storage and processing sites operated by state, county, or city agencies or operated in conjunction with a sanitary landfill shall not be required to obtain financial assurance instruments.

117.7(1) No permit without financial assurance. A permit shall not be issued to the owner and operator of a waste tire processing or storage site until a financial assurance instrument has been submitted to and approved by the department as necessary.

117.7(2) Financial assurance amounts required.

a. Waste tire stockpile sites shall have financial assurance coverage equal to 35 cents per waste tire collected and stored prior to July 1, 1998, and 85 cents per waste tire collected and stored on or after July 1, 1998.

b. If the owner or operator of a waste tire stockpile does not have adequate records to determine the time frame within which waste tire inventories were initially collected, then financial assurance amounts shall be determined by allocating the number of tires stored proportionally between the time period the facility has operated before and after July 1, 1998.

c. Waste tire processing sites shall have financial assurance coverage equal to 85 cents per waste tire stored above the permitted three-day processing capacity, in accordance with 117.6(3) "b."

117.7(3) Acceptable financial assurance instruments. Financial assurance may be provided by cash, surety bond, letter of credit, secured trust fund, or corporate guarantee, as follows:

a. Cash payments shall be provided by a certified check, made payable to the Department of Natural Resources.

b. A surety bond must be written by a company authorized by the commissioner of insurance to do business in the state, and the surety bond shall comply with the following:

(1) The bond shall be in a form approved by the commissioner of insurance and shall be payable to the department of natural resources.

(2) The bond must be continuous until canceled by the surety. Written notice of intent to cancel the bond must be provided to the owner and operator and to the department at least 90 days before the effective date of cancellation.

c. A secured trust fund shall name the department of natural resources as the entity authorized to draw funds from the trust, subject to proper notification to the trust officer of failure by the permittee to comply with proper removal and disposal of waste tires covered by the financial assurance provided by the trust.

d. The department may require, at the expense of the permittee, a financial audit of an individual or firm requesting the use of a letter of credit or corporate guarantee.

117.7(4) Financial assurance cancellation and permit suspension.

a. Within 30 days of receipt of a written notice of cancellation of financial assurance by the surety, the owner or operator must provide the department an alternative financial assurance instrument. If a means of continued financial assurance is not provided within that 30 days, the department shall suspend the permit.

b. The owner or operator shall perform proper closure within 30 days of the permit suspension. For the purpose of this rule, proper closure means removal of all tires and related products from the site or facility through acceptable disposal or processing options.

c. If the owner or operator does not properly close the site within the 30-day period allowed, the department shall file a claim with the surety company, trust, or other financial assurance instrument provider to collect the amount of funds necessary to properly close the site.

d. Any financial assurance instrument provided to the department in compliance with this rule must be payable to the department and must remain in continuous effect until the director of the department gives written notification to the owner, operator, and surety provider that the covered site has been properly closed. An owner or operator who elects to terminate a permitted activity, or whose renewal application has been denied, or whose permit has been suspended or revoked for cause, must submit within 30 days of the termination of the permit a schedule for completing proper closure of the terminated activity. Closure completion cannot exceed 60 days from the date of termination of the permit.

e. The director may request payment from any surety to provide for the purpose of completing closure when one of the following circumstances exists:

(1) The owner or operator is more than 15 days late in providing a schedule for closure or for meeting any date in the schedule for closure.

(2) The owner or operator declares an economic inability to comply with this rule, either by sending written notification to the director or through an action such as, but not limited to, filing for bankruptcy.

567—117.8(455B,455D) Beneficial uses of waste tires.

117.8(1) *Role of the department.* In order to ensure that all approved uses of whole or processed waste tires do not pose a threat to the environment or to the public health, welfare, and safety, the department shall have the authority to determine if a proposed use of waste tires is beneficial and shall have the authority to approve or deny applications if such a benefit is not evident. Proposed beneficial uses in which the primary purpose of the project is as a land disposal mechanism shall not be approved.

117.8(2) *Waste tire products exempted.* The following end uses of materials derived, processed, or recycled from waste tires shall be considered beneficial reuses under this chapter and shall not require individual beneficial use designations from the department for their use at a specific site of end use.

- a. Asphalt rubber, including asphalt cement modified with a crumb rubber modifier;
- b. Buffing rubber, defined as high quality tire rubber, which is a by-product from the conditioning of tire casings in preparation for retreading;
- c. Carbon black derived from the thermal or oxidative decomposition of tires;
- d. Crumb rubber material, including rubber granules used for soil amendments or surfacing materials for playgrounds, equestrian arenas, and athletic fields;
- e. Crumb rubber modifiers used in asphalt paving materials;
- f. Tire-derived fuel (TDF), which is a fuel derived from waste tires, including whole tires, processed into pieces that satisfy the specifications of the end user for use as either a primary or supplemental fuel. Use of TDF requires modification of air source construction and operation permits if such use is not already recognized in the end user's permit.

117.8(3) *Beneficial uses for whole waste tires.* This subrule establishes acceptable beneficial uses for whole waste tires and required notifications and approvals that must be obtained from the department prior to placement of waste tires at the site of end use. The following applications shall be considered acceptable beneficial uses for whole waste tires:

- a. Tire swings, sandboxes, or other equipment for child play areas on residential lots or at schools, care centers, and recreational areas;
- b. Dock bumpers at vehicle loading/unloading docks or marine docks;
- c. Crash barriers at racetracks;
- d. Agricultural uses to hold down covers over hay, silage, and other agricultural commodities. When not in use, the tires should be neatly stacked;
- e. Structures for military and police training at facilities under ownership or management of local, state, or federal agencies;
- f. Artificial fishing reefs and fish habitat structures constructed at facilities under ownership or management of a county conservation board, the department, or a federal agency;
- g. Stream bank erosion control and culvert outlet tire mats, constructed as follows:
 - (1) The tires shall be placed in a single layer and banded together with a noncorrosive strip;
 - (2) All the tires shall be drilled or punctured to allow for outflow of air to prevent their flotation when submerged;
 - (3) The banded mat shall be anchored with cable at least 0.5 inches in diameter;
 - (4) The cables shall then be fastened to buried anchors made of treated timbers or concrete, at least every 50 feet along the top of the mat and intermittently in the middle;
 - (5) The mat shall extend 4 to 6 feet out on the channel bottom;
 - (6) The outermost row on the channel bottom shall be filled with rocks or broken concrete;
 - (7) Vegetation shall be planted in and around the tire mat; rows within the tire mat that are too wet for vegetation establishment shall be filled with rocks or broken concrete; and
 - (8) Any variation from these design standards shall be acceptable only under the direction of an Iowa-licensed professional engineer.

h. Construction of residential dwelling structures or other buildings for which a building permit has been obtained from local government officials;

i. Culvert piping made from waste tires with a rim diameter of 21 inches or greater and subject to the following design criteria:

(1) The maximum depth of water flows within the culvert shall be no greater than 75 percent of the piping diameter;

(2) Sand or similar aggregate material must be installed in the lower portions of the culvert piping to provide ballast and limit mosquito infestations;

(3) The culvert must not be installed below the highest seasonal groundwater elevation;

(4) The maximum depth of earthen or aggregate coverings over the culvert shall not exceed the outside diameter of the whole tires used in the culvert;

(5) Soils used for backfill around and above the culvert shall be compacted so as to provide a culvert deflection of less than 5 percent of the outside diameter; and

(6) Vertical sections of tire culvert piping shall be designed with safety measures to prevent unauthorized access by or hazards to children and animals.

117.8(4) *Required notifications and approval for whole tire uses.* Prior to the installation or placement of waste tires for a beneficial use as approved in subrule 117.8(3), the owner or operator of the site of end use shall properly notify or seek approval from the department for the proposed beneficial use under the following circumstances. These circumstances apply to the total combined amount of tire material that already is, or is intended to be, used at the site:

a. For applications of less than 250 whole waste tires, notification to the department shall not be required, subject to the end user's compliance with all requirements of this chapter.

b. For applications of 250 to 500 whole waste tires, the department shall be notified in writing no less than 30 days prior to the construction or placement of waste tires for a beneficial use, with the following information provided:

(1) The name, address, and telephone number of the owner, operator, or individual responsible for the beneficial use application at the site of end use;

(2) The address of the site of beneficial end use;

(3) The estimated total number of tires to be used;

(4) A description of the beneficial use application;

(5) A project time line, including proposed project start and end dates; and

(6) A statement that explains how the site owner shall properly dispose of such waste tires in the event that the beneficial use is discontinued or dismantled.

c. For applications of more than 500 waste tires, approval by the department shall be obtained prior to any such applications. Approval requests shall be made to the department in writing and shall contain all information as requested in paragraph 117.8(4) "*b*," as well as a scaled plan of the site of end use with areas noted where whole waste tires are to be placed, including locations of the site of end use property lines and the location of any structures within 300 feet of the site of end use.

117.8(5) *Prevention of public health risks for whole tire uses.* All beneficial uses of whole waste tires as approved in this rule shall have incorporated into their design and construction measures to prevent the retention and stagnation of water, in the event that such conditions are likely to exist. These measures shall include, at a minimum, the piercing or drilling of holes in whole waste tires to allow for water drainage. Such measures shall be designed to minimize risks to public health and safety caused by the breeding of disease-carrying insects and rodents.

117.8(6) Beneficial uses for shredded waste tires. This subrule establishes acceptable beneficial uses for shredded waste tires and required design criteria that shall be observed in the placement of shredded tires at the site of end use. The following applications shall be considered acceptable beneficial uses for shredded waste tires:

a. Horizontal drainage structures (French drains) designed to lower the groundwater table and transport excess water to another location or drainage structure and constructed as follows:

- (1) The elevation of the drain outlet must be lower than the average seasonal groundwater table to allow gravity drainage through the drainage structure;
- (2) The drainage structure width shall be no less than 3 feet and no more than 6 feet;
- (3) The minimum depth of shredded tire material in the trench shall be greater than 4 feet;
- (4) The minimum thickness of backfill over the trench shall be 2 feet;
- (5) Headloss of water flowing through the drain shall be due to elevation changes only; and
- (6) Any site of end use to contain drainage structures composed of more than 300 cubic yards of shredded tires shall be constructed under the auspices of an Iowa-licensed professional engineer.

b. On-site wastewater treatment and disposal system construction, to include use of shredded tires in lateral trenches and as fill to cover distribution pipes under the following conditions:

- (1) The on-site wastewater treatment and disposal system is constructed and permitted according to the requirements of 567—Chapter 69;
- (2) Shredded tires used in the system have a minimum dimension of 1 inch on any one side and a maximum dimension of 3 inches on any one side; and
- (3) The administrative authority responsible for issuance of the permit approves the beneficial use. The authority shall have the sole discretion to deny use of shredded tires in system construction based on any engineering or design principle concerns.

c. Lightweight fill in public roads, public road embankment construction, and other public civil engineering applications if all of the following conditions are met:

- (1) The tire shreds are of uniform composition and sizing;
- (2) The tire shreds are not mixed with other solid wastes, vegetation, composted materials, or other processed tire products, including separated tire bead wire, steel cording or nylon fibers;
- (3) The tires are not placed in direct contact with surface water or groundwater;
- (4) The shredded tires are isolated from overburden materials by a protective membrane or liner to prevent intrusion and settling of overburden; and
- (5) An Iowa-licensed professional engineer designs and supervises the incorporation of shredded tires in beneficial uses of this manner.

d. Structural foundation drainage material used in a project as approved through a local building permit;

e. A bulking agent for composting operations at permitted composting facilities, with tire shreds used to be no larger than 3 inches on any one side; and

f. Leachate drainage medium at a permitted municipal landfill, provided that the medium meets engineering and design requirements for the landfill's operating permit, pursuant to 567—Chapter 102.

117.8(7) Beneficial uses for baled tires. This subrule establishes acceptable beneficial uses for baled tires and required notifications and approvals that must be obtained from the department prior to placement of baled tires at the site of end use.

a. Beneficial uses. Civil engineering applications, including stream bank and soil erosion control projects, shall be considered acceptable beneficial use applications for baled tires. Such applications involving the combined use of more than 50 cubic yards of baled tires at any one site of end use must be conducted under the immediate direction of one of the following entities:

- (1) A federal agency including, but not limited to, the Army Corps of Engineers, the Natural Resources Conservation Service, or the Bureau of Land Management;

- (2) A state agency including, but not limited to, the Iowa department of transportation; or
- (3) An Iowa-licensed professional engineer.

b. Required notifications and approval. Prior to the installation or placement of baled tires for beneficial uses as approved in this rule, the owner or operator of the site of end use shall properly notify or seek approval from the department for the proposed beneficial use under the following circumstances. These circumstances apply to the total combined amount of tire material that already is, or is intended to be, used upon the site:

(1) For applications of less than 25 cubic yards of baled tires at a site of end use, notification to the department shall not be required, subject to the end user's compliance with all requirements of this chapter.

(2) For applications of 25 to 50 cubic yards of baled tires, the department shall be notified in writing no less than 30 days prior to the construction or placement of baled tires for a beneficial use, with the following information provided:

1. The name, address, and telephone number of the owner, operator, or individual responsible for the beneficial use application at the site of end use;
2. The address of the site of beneficial end use;
3. The estimated total number of cubic yards of tires to be used;
4. A description of the beneficial use application;
5. A project time line, including proposed project start and end dates; and
6. A statement that explains how the site owner shall properly dispose of such baled tires in the event that the beneficial use is discontinued or dismantled.

(3) For beneficial use applications of more than 50 cubic yards of baled tires, approval by the department shall be obtained prior to any such applications. Approval requests shall be made to the department in writing and shall contain all information as requested in subparagraph 117.8(7) "b"(2), as well as a scaled plan of the site of end use with areas noted where baled tires are to be placed, including locations of the site of end use property lines, and the location of any structures within 300 feet of the site of end use.

117.8(8) Beneficial uses for cut tires. This subrule establishes acceptable beneficial uses for cut tires. Notifications and approvals shall not be required by the department prior to the use or placement of cut tires at a site of end use as approved in this rule, so long as such uses have incorporated into their design and construction measures to prevent the retention and stagnation of surface water, in the event that such conditions are likely to exist. Such measures shall be designed to minimize risks to public health and safety caused by the breeding of disease-carrying insects and rodents. The following applications shall be considered acceptable beneficial uses for cut tires:

- a.* Agricultural uses to hold down covers over hay, silage, and other agricultural commodities;
- b.* Traffic control devices for use in public roadway construction projects;
- c.* Portable surfaces manufactured from tire faces or tread;
- d.* Silt collection fences manufactured from tire faces or tread; and
- e.* Bagel-cut tires used for underturf water conservation and turf growth enhancement systems at golf courses.

117.8(9) Requests for approval of other beneficial use designations. The department shall have the authority to approve or deny requests for beneficial use applications for whole, shredded, baled, or cut waste tires that are not specifically addressed within this chapter. Requests for such use determinations shall be made to the department in writing. The department may request project descriptions and supporting scientific and engineering data to determine if a request for a beneficial use designation is warranted. The department shall approve or deny a request for approval within 30 days of receipt of such a request and supporting data if so required by the department. The department shall have the sole authority to deny a beneficial use request if the department determines that any one of the following conditions exists:

a. The requested beneficial use designation poses a risk to the environment or to the public health, welfare, and safety;

b. The requested beneficial use designation is determined to have the primary purpose as a land disposal mechanism, and any beneficial use would be incidental in nature; or

c. The requested beneficial use designation would not be in accordance with other applicable federal, state, or local laws, regulations, and ordinances.

117.8(10) Compliance with local, state, and federal regulations. Any proposed beneficial use project or application of whole, shredded, baled, or cut waste tires may require approval or permits from federal, state, and local agencies, under other laws, regulations, and ordinances, as applicable, including but not limited to the following:

a. The Army Corps of Engineers, for projects involving navigable waterways and other waterways over which it has jurisdiction;

b. Waste tire beneficial use applications involving placement on or within land or waters contained within a floodplain which require approval from the department's floodplain management program, as specified in 567—Chapters 70 through 75; and

c. Local building codes, zoning and land-use covenants, ordinances, and guidelines.

117.8(11) Storage of waste tires prior to beneficial use application. Whole, shredded, cut, or baled waste tires to be used for a beneficial use application may be stored at the site of end use, subject to the following requirements:

a. Such tire materials shall be stored in piles or bales for no longer than 60 days prior to the date of application, except for whole waste tires for agricultural uses as specified in paragraph 117.8(3) “*d.*”

b. All storage of such waste tire materials shall be conducted in accordance with the uniform fire code and the requirements of 117.4(3) and 117.6(4) “*c.*” as applicable.

c. Any storage of waste tires associated with a proposed beneficial reuse project at a site of end use for longer than 60 days without implementation of completion of a beneficial reuse project shall be subject to the waste tire storage permitting requirements as contained in rule 117.4(455B,455D).

These rules are intended to implement Iowa Code sections 455B.301 to 455B.307 and 455D.11 to 455D.11H.

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