
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID AND HAZARDOUS WASTE DIVISION**

SOLID WASTE GUIDELINE #21

**Standards for
Scrap Tire Management**

1.0 Introduction

This document provides guidance for the management of scrap tires in Wyoming. It summarizes current Wyoming Department of Environmental Quality (Department) permitting requirements and provides examples of management activities for which a permit may not be required. The Solid Waste Rules and Regulations do not address all potential scrap tire management alternatives, but instead allow for reasonable, situational flexibility. This Guideline is primarily intended to address scrap tire management after July 2008; however, if complaints are received or environmental problems arise, responsible parties may be required to address conditions existing prior to July 2008. This guidance defines the leading practices of scrap tire management necessary to protect human health and the environment. Inappropriate management of scrap tires may result in enforcement actions for non-compliance with applicable regulatory and statutory requirements. This guideline may be revised periodically.

Scrap tire generators, such as mines, heavy equipment companies, and retail tire businesses, are responsible for the proper management of the tires they generate and must ensure that their tires are managed or disposed at a site permitted or otherwise authorized by the Department. Lands and facilities subject to the permitting requirements of the Land Quality Division (LQD) and used solely for the management of scrap tires generated within the boundary of the permitted mine operation by the mine owner or operator are not regulated by the Solid Waste Division. (Environmental Quality Act, § 35-11-103 (d)(ii)(D).) Mine operators need to consult with the LQD to determine appropriate scrap tire management practices at facilities permitted by the LQD.

Scrap tire generators should contact the Department for information about facilities currently permitted to receive scrap tires or companies permitted to process scrap tires at the site where they are generated. Generators who do not manage their scrap tires properly are subject to enforcement action and potential penalties. Persons who accept scrap tires from other generators without prior Department authorization may also be subject to enforcement action and penalties.

The Department has concerns with whole scrap tires, and tire bales that are allowed to remain exposed to the weather, as they are when used as wind breaks or fencing. Accumulations of tires have

been a source of historic public complaints, and health and environment issues for Wyoming. These problems have included, potentially uncontrollable tire fires, the spread of West Nile virus from the mosquito habitat accumulated tires provide, and complaints about the unsightly appearance of tire piles. An example would be an accumulation of tires with claims or plans for use on a large scale for wind breaks and fences. After July 11, 2008 (the original date of the guideline), the Department will not approve whole scrap tires, tire shreds, or tire bales for use in windbreaks, fences or other exposed applications.

Before addressing more details later in this guideline, it may help to keep in mind the distinction between beneficial re-use of a reasonable number of scrap tires vs. unacceptable accumulation of scrap tires. Generally speaking, permits are not required when tires are beneficially re-used by their original owners on their own property for small scale farm/ranch or personal use without any accumulation beyond the reasonable, anticipated use. An example would be tractor tires cut in half for stock watering, with customary spacing for the acreage involved. An example of larger scale re-use would be the Wyoming Highway Department (WYDOT) having a Department-approved staging area for larger quantities of scrap tires to be re-used as construction material for an imminent, approved road project.

Conversely, permits are often required when scrap tires are accumulated in any significant manner without imminent, on-going and approved re-use or when accumulated tires were not generated by the owner of the storage site. There may be exceptions to the general theme of the examples mentioned above, but they serve as a guide for some of the simpler, more straightforward cases.

This guideline may not include all the factors needed to determine whether a solid waste permit or exemption is required for a particular scrap tire management activity. The Department will need to review a written beneficial use proposal and onsite visits and/or inspections may be necessary before beneficial use determinations are made. Scrap tire generators should contact the Department at the numbers listed at the end of this document for further information.

2.0 General Information

A waste or scrap tire is generally defined as a tire which is no longer capable of being used for its original purpose. A used tire is one that cannot be legally described as new, but which is structurally intact and has a tread depth greater than the legal limit. A used tire can be mounted on a vehicle's rim without repair.

Tires vary in size, but for management purposes are often placed into three groups by the Department; passenger and light truck tires, truck tires, and large heavy equipment and off-road tires. Passenger tires are those commonly used on passenger cars and light trucks with a rim diameter of 19.5 inches or less. Truck tires are generally tires with a rim diameter of 20 inches or larger. Large heavy equipment and off-road tires are those used on tractors, excavators, loaders, mine equipment, and similar equipment, which exceed approximately six (6) feet in diameter.

A passenger tire equivalent (PTE) is a measurement of mixed passenger and truck tires or parts thereof which are equivalent to the average weight of one waste passenger tire; approximately 20 pounds.

In general, one truck tire is considered to be equal to five passenger tires.

3.0 Prohibited Activities

Chapter 1, Section 1(h), Prohibited acts, states the following acts are prohibited:

- (i) Open dumping;
- (vi) No solid wastes shall be speculatively accumulated at a facility intended for use as a solid waste management facility without a permit.

Chapter 1, Section 1(e)(i) defines “open dump” as an uncontrolled solid waste management facility at which solid wastes are placed on the land in such a manner that they present a real or potential hazard to public health and the environment. Open dump includes any solid waste management facility subject to the permitting requirements of the SWRR that does not have a current, valid permit.

§35-11-502(a) of the Environmental Quality Act (EQA) states that no person, except when authorized under the permit system established pursuant to this act, shall:

- (vi) Locate, construct, operate or close a solid waste management facility; or
- (vii) Modify the design, construction or operation of a solid waste management facility.

§35-11-502(d) No person shall accumulate solid waste at a permitted solid waste management facility in excess of a quantity which can be transferred, treated, processed, stored or disposed of within ninety (90) days however, if the solid waste must be transferred more than two hundred (200) miles, then one hundred eighty (180) days.

It is a violation of the SWRR and the EQA to operate a scrap tire transfer, treatment, storage, or disposal facility without a valid permit. As specified under 35-11-901 of the EQA, such violation is subject to a penalty not to exceed \$10,000 per day for each day during which the violation occurs.

4.0 Permit Requirements

Scrap tires are considered a “solid waste” in Wyoming. A “solid waste management facility” is any facility for the transfer, treatment, storage or disposal of solid waste. Chapter 1, Section 1(e) of the SWRR defines solid waste “treatment facility” as any facility that treats solid waste. Treatment includes, but is not limited to tire shredding/chipping, baling, incineration, and pyrolysis. A “storage facility” is any facility that stores solid waste for a temporary period, at the end of which time the solid waste is treated, and/or transported elsewhere for further treatment or disposal.

Chapter 1, Section 1(f)(i) of the SWRR, states that a permit or a one-time or emergency disposal authorization is required for the location, construction, operation or closure of any new or existing solid

waste management facility as specified by Chapter 1, Section 5, or by the applicable chapter(s) of the SWRR. Scrap tire management standards are contained in Chapter 8, Section 2, of the SWRR.

Permit requirements differ depending upon the specifics of a proposed operation or facility. In order for the Department to determine permitting requirements, facility operators may be required to provide detailed information regarding proposed activities and the Department may need to visit the proposed waste management site. Note that if scrap tire processing is conducted at a permitted facility such as a landfill or mine facility, an outside firm hired to conduct the processing would generally not need to obtain their own Solid Waste permit rather, the activity can be authorized under the facility's existing permit. If the Department determines that a solid waste permit is necessary, the permit requirements of the Solid Waste Rules and Regulations, summarized below, are applicable.

4.0.1 Low Hazard/Low Volume Transfer, Treatment and Storage Facility Permits

Under certain circumstances Low Hazard/Low Volume (LH/LV) permits may be issued under Chapter 6 of the SWRR. LH/LV permits use an abbreviated permit process which in some cases may be completed in approximately seven months. Chapter 1, Section 1(e)(i) defines "low hazard and low volume treatment, processing, storage, and transfer facility" as a solid waste management facility which accepts only solid wastes as described in this section, and which are:

- Mobile transfer, treatment and storage facilities. A tire processing unit (i.e., shredding or baling) that travels to sites where scrap tires are generated to process tires would be classified as a mobile treatment facility. However, if scrap tire processing is conducted at a permitted facility such as a landfill or mine facility, an outside firm hired to conduct the processing would generally not need to obtain their own Solid Waste permit rather, the activity can be authorized under the facility's existing permit.;
- Transfer, treatment, storage and processing facilities managing less than 5000 scrap tires, if the scrap tires are being stored to be recycled, reclaimed, or reused.

A mobile treatment facility is a special type of LH/LV facility (see Solid Waste Chapter 1, Section 1(e).) The permit application process for LH/LV facilities is outlined in Solid Waste Chapter 1, Section 2(j). Please contact the Solid Waste Permitting and Corrective Action Program staff for additional information.

4.0.2 Standard Transfer, Treatment and Storage Facility Permits

If the proposed waste management activity does not qualify for a LH/LV permit or permit exemption, including a beneficial use exemption, a standard Chapter 6 application will need to be submitted. The permit application process is outlined in Chapter 1, Section 2(c) of the SWRR. Twelve to eighteen months may be needed to obtain a standard permit. Please contact the Solid Waste Permitting and Corrective Action Program staff for additional information.

4.0.3 Disposal Permits

Scrap tires may be disposed in permitted municipal and industrial landfills. Scrap tire generators need to contact landfill operators before delivering tires for disposal to see if the facility has any special conditions or restrictions. Anyone considering an application for a tire disposal facility should contact the Department for detailed permitting information.

5.0 Permit Exemptions

Certain activities related to management of scrap tires may be eligible for an exemption from the need for a solid waste permit. Chapter 1 Section 1 (f)(ii) of the SWRR states that a permit or disposal authorization is not required for the facilities or activities specified in Chapter 1, Section 1(l) of the SWRR. Chapter 1, Section 1(l) states in part:

Exemptions: The administrator may exempt the following from a permit or any requirement to obtain a waste management authorization under these regulations, provided that person engaged in activities which are otherwise exempted may be required to supply information to the administrator which demonstrates that the act, practice, or facility is exempt, and shall allow entry of Department inspectors for purposes of verification of such information:

Note that under this provision, the Administrator may exempt certain activities. A permit or permit exemption may be required, depending on site-specific conditions. Please contact the Solid Waste Permitting and Corrective Action Program staff noted near the end of this document.

5.0.1 General Exemption Standards

The following exemptions related to scrap tires are described in Chapter 1 Section 1 (l) of the SWRR:

(ii) Baling of used motor vehicles or scrap metals, and operation of metal smelters regulated by the Air Quality Division and storage for sale or reuse of used motor vehicles, motor vehicle parts, or scrap metals at auto salvage yards or scrap metal dealers as authorized under W.S. 31-13-112(a), provided that for used oil, used antifreeze, tires, and lead acid batteries the following storage accumulation limits are not exceeded:

(A) 1,000 scrap tires, excluding any scrap tires remaining on wheels attached to vehicles.

(iv) The collection, storage and disposal of household wastes generated by a single family unit or household on their own property in such a manner that does not create a health hazard, public or private nuisance, or detriment to the environment

(viii) The management of solid wastes, which in the judgment of the administrator constitute de minimis quantities which are managed in a manner that does not create a health hazard, public or private nuisance, or detriment to the environment

(xi) Lands and facilities owned by a person engaged in farming or ranching and used to dispose of solid waste generated incidental to his or her farming and ranching operation

(xiii) Scrap tire storage units at permitted landfills which, in the ordinary course of operation, have fewer than 5,000 scrap tires in aboveground storage at any one time. Such landfills are subject to applicable landfill rules.

(xiv) Retail business facilities which have fewer than 1,000 scrap tires on the premises at any one time.

(xxi) The reuse of wastes in a manner which is both beneficial and protective of human health and the environment, as approved by the administrator.

5.1 Exemptions for Specific Scrap Tire Management Activities

As noted above, the Department may exempt the beneficial use of wastes from the need to obtain a permit. The beneficial use of scrap tires in a variety of applications has become a fairly common practice. The Department has not conducted an engineering analysis to evaluate the use of scrap tires. Additional information about the use of scrap tires may be obtained from the EPA, the Rubber Manufacturers' Association, the Scrap Tire Management Council, and other sources.

The Department encourages the appropriate beneficial use of scrap tires. Beneficial use will not be approved if there is a potential to create a public or private nuisance, odor, dust, litter, insect, or noise problem or if the use has the potential to have a detrimental effect on human health and the environment.

Department authorization must be obtained before beginning any beneficial use project. Scrap tire generators and others considering the beneficial use of scrap tires need to contact the Department to discuss the details of any proposed beneficial use project before tires are transported to the work site and any work begins on the project. Persons seeking a beneficial use or other exemption will generally be required to submit a detailed, written proposal to the Department. The proposal should describe the location of the proposed use, how waste will be stored and managed at the site, the quantity of waste to be used, how the use meets commonly accepted technical standards, how the reuse is both beneficial and protective of human health and the environment, and any other information considered necessary by the Department. If the person applying for a beneficial use exemption is not the property owner, documentation of landowner approval must also be submitted.

Note that if the approved beneficial use is changed or terminated, the user of the scrap tires and/or the property owner is responsible for the proper management of the waste. For example, if shredded scrap tires are used as structural fill under a roadway, the entity responsible for the road will need to manage the tires properly if the road is later excavated and the shredded tires are not reused for the same purpose.

5.1.1 Whole Passenger and Truck Tires

The Department will consider engineered uses of whole tires on a case-by-case basis. After the original date (July 11, 2008) of this guideline, the Department will not approve the use of whole tires for use in windbreaks, fences or other exposed applications. Scrap tire generators are responsible and accountable for the waste they generate. Scrap tire generators such as tire dealers, heavy and off-road equipment operators, may not transport or give away whole tires for unapproved uses to persons or facilities that have not been authorized by the Department to take the scrap tires.

5.1.2 Tire Bales

Tire bale quality is often inconsistent and bales routinely fail to remain bound when used in uncontained applications such as windbreaks and fences. Therefore, after the original date (July 11, 2008) of this guideline, the Department will not approve tire bales for use in windbreaks, fences or other exposed applications. However, the Department believes that tire bales may be beneficially used in properly engineered applications such as structural fill in highway and other embankments where bales are contained and covered with soil and will not be in direct contact with surface water or groundwater. The Department will consider engineered uses of tire bales on a case-by-case basis.

5.1.3 Shredded Tires

Shredded tires may be considered for use as subgrade fill and embankments, backfill for wall and bridge abutments, subgrade insulation for roads, landfill and septic system drain fields, etc. Guidelines published by the Scrap Tire Management Council may be used to assist with the design of projects utilizing shredded scrap tires as fill. Tire shreds may not be placed in direct contact with surface water or groundwater. The Department will consider engineered uses of shredded tires on a case-by-case basis.

5.1.4 Large Heavy Equipment and Off-Road Tires

After the original date of this guideline (July 11, 2008), the Department will not approve the use of whole large tires for wind breaks, fences or other exposed applications. Generators of large scrap tires are responsible and accountable for the waste they generate. Scrap tire generators such as tire dealers, mine operators, heavy and off-road equipment operators, may not transport or give away whole tires for unapproved uses to persons or facilities that have not been authorized by the Department to take the scrap tires.

The Department will consider common uses for large heavy equipment and off-road tires including stock tanks, feed bunks, and rubber scrapers. Rubber from these tires is often of a higher quality than passenger tires; therefore, these tires are often reduced to

various sizes for crumb rubber applications such as playground fall protection and running tracks. The Department will consider beneficial use proposals for large tires and tire derived materials on a case-by-case basis.

5.1.5 Other Uses for Scrap Tires

Other potential uses for scrap tires are too numerous to mention in this document. Permitting and exemption considerations may differ depending upon the specifics of a proposed use, operation or facility. The Department will consider other uses of scrap tires on a case-by-case basis.

6.0 Temporary Scrap Tire Storage

Storage requirements for scrap tires are contained in Chapter 8, Section 2 of the SWRR. In general, a 50-foot fire lane/buffer zone should be maintained around all temporary storage piles to ensure separation from ignition sources, structures and property boundaries. Measures must be taken to prevent surface water run on and runoff. Scrap tire piles may not exceed twenty (20) feet in height, fifty (50) feet in width and have a base surface area greater than ten-thousand (10,000) square feet.

Speculative accumulation of scrap tires will not be authorized. Department authorization must be received before scrap tire storage and other management activities begin. The Department believes that, prior to beneficial use, the temporary storage of scrap tires or tire shreds from the equivalent of 1,000 whole passenger tire equivalents (PTEs), should not create a health hazard, public or private nuisance, or detriment to the environment. Temporary storage of scrap tires prior to beneficial use should be addressed in a beneficial use proposal and may result in conditions to the Department's beneficial use determination. The Department will consider proposals for the temporary storage of greater quantities of tires on a case-by-case basis, depending on site specific conditions and the nature of the project. In general, storage will be limited to the time and volume reasonably needed to put the scrap tires to use. A permit may be required for large quantity and/or long-term storage.

6.0.1 Large Scrap Tire Storage

The Department considers large scrap tires to be those which exceed approximately six (6) feet in diameter. In general, the temporary storage considerations above apply to large scrap tires; however, due to the large size of these tires, alternative management considerations may be warranted. As appropriate, these considerations should be addressed in a beneficial use proposal and may result in conditions to the Department's beneficial use determination.

7.0 Further Information

Copies of the rules, review forms and guidelines identified above can be obtained from the Department web page at <http://deq.state.wy.us/shwd/>, or in paper or electronic format by calling the following Solid and Hazardous Waste Division offices.

Casper: Dale Anderson (307) 473-3450
Cheyenne: Rebecca Dietrich (307) 777-7752
Lander: Patrick Troxel (307) 332-6924

Web sites maintained by the EPA, the Rubber Manufacturers' Association, the Scrap Tire Management Council, and others may be helpful sources of additional information.

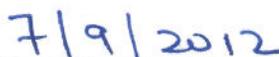
8.0 Guideline Approval

I have reviewed and approved the policies and procedures described in this guidance document.

Signed



Carl Anderson, Ph.D.
Administrator
Solid and Hazardous Waste Division



Date

Guideline History

July 11, 2008: Original version
September 12, 2008: First Revision
July 9, 2012: Second Revision

References

ASTM Standards: (D6270-98(2004)) Standard Practice for Use of Scrap Tires in Civil Engineering Applications

Civil Engineering Applications of Chipped Tires (1995) by Dana N. Humphrey, Department of Civil and Environmental Engineering, University of Maine.

Design Guidelines to Minimize Internal Heating of Tire Shred Fills (undated), Scrap Tire Management Council, Washington D.C.

Rubberized Asphalt Concrete Technology Center (RACTC) <http://www.rubberizedasphalt.org>

Rubber Pavements Association Library (for information on Rubber Modified Asphalt)
<http://www.rubberpavements.org/library/index.asp>

University of Maine <http://www.umaine.edu/research/UMTRoadAgain.htm>

USEPA Office of Solid Waste, Used Tires
http://www.epa.gov/epaoswer/non-hw/muncpl/tires/civil_eng.htm