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WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
SOLID AND HAZARDOUS WASTE DIVISION

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**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. 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. 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 problems for Wyoming. These problems have been varied and include complaints about the unsightly appearance of tire piles, potentially uncontrollable tire fires, and the spread of West Nile virus from the mosquito habitat accumulated tires provide. An example would be an accumulation of tires with claims or plans for use on a large scale for wind breaks and fences. **After the date of this 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 permitting 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 and/or which in some cases has been managed in such a manner that it can not be used for any other 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.

**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. Such violation is subject to a penalty not to exceed \$10,000 per day for each day during which violation continues as specified under 35-11-901 of the EQA.**

#### **4.0 Permit Requirements**

Scrap tires are considered a “solid waste” in Wyoming. Further, language in Chapter 1, Section 1 (l) (ii) of the Solid Waste Rules and Regulations (SWRR) indicates that tires at auto salvage and similar operations, even if on a vehicle, are considered scrap tires. 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. 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.

##### **4.1. 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, depending on the quality of the

application. 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.;
- 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 low-hazard/low-volume 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.

#### **4.2 Standard Transfer, Treatment and Storage Facility Permits**

If the proposed waste management activity does not qualify for a LH/LV permit, 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. Depending on the quality of the application and the complexity of the facility, 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.

#### **4.3 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 subsection (l) of this section. Chapter 1, Section 1(l) of the SWRR 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:

In short, a permit is generally not required for the practices in Section (I). However, 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.

### 5.1 General Exemption Standards

The following exemptions related to scrap tires are described in Chapter 1 Section 1 (I) 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.

## 5.2 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 beneficial use of scrap tires when the proposed use is technically sound. 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, information to demonstrate that the use meets commonly accepted technical standards 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.

### 5.2.1 Whole Passenger and Truck Tires

The Department will consider engineered uses of whole tires on a case-by-case basis. **After the date 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.**

### 5.2.2 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 date 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.

### **5.2.3 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.

### **5.2.4 Large Heavy Equipment and Off-Road Tires**

**After the date of this guideline, 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.

### **5.2.5 Other Uses for Scrap Tires**

Other potential uses for scrap tires are too numerous to mention in this document. Permitting and exemption standards will 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. In general, this would limit the size of a pile of shredded tires to approximately 50 cubic yards; roughly 12 feet wide, 12 feet long and 10 feet high. 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.

### **6.1 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 standards above apply to large scrap tires however; due to the large size of these tires, somewhat different management standards are warranted. Prior to processing for beneficial use, no more than ten (10) large scrap tires may be stored if the tires are stored in a manner that does not create a health hazard, public or private nuisance, or detriment to the environment. Tires may not be transported to the proposed use site without prior Department approval.

### **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:	Maggie McKenzie	(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

  
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LeRoy C. Feusner, P.E., BCEE  
Administrator  
Solid and Hazardous Waste Division

12 Sept 08  
Date

## Guideline History

July 11, 2008: Original version  
September 12, 2008: First 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](http://www.epa.gov/epaoswer/non-hw/muncpl/tires/civil_eng.htm)