



Department of
**Environment &
Conservation**

Waste Tire Management Workshop

September 8 & 10, 2020

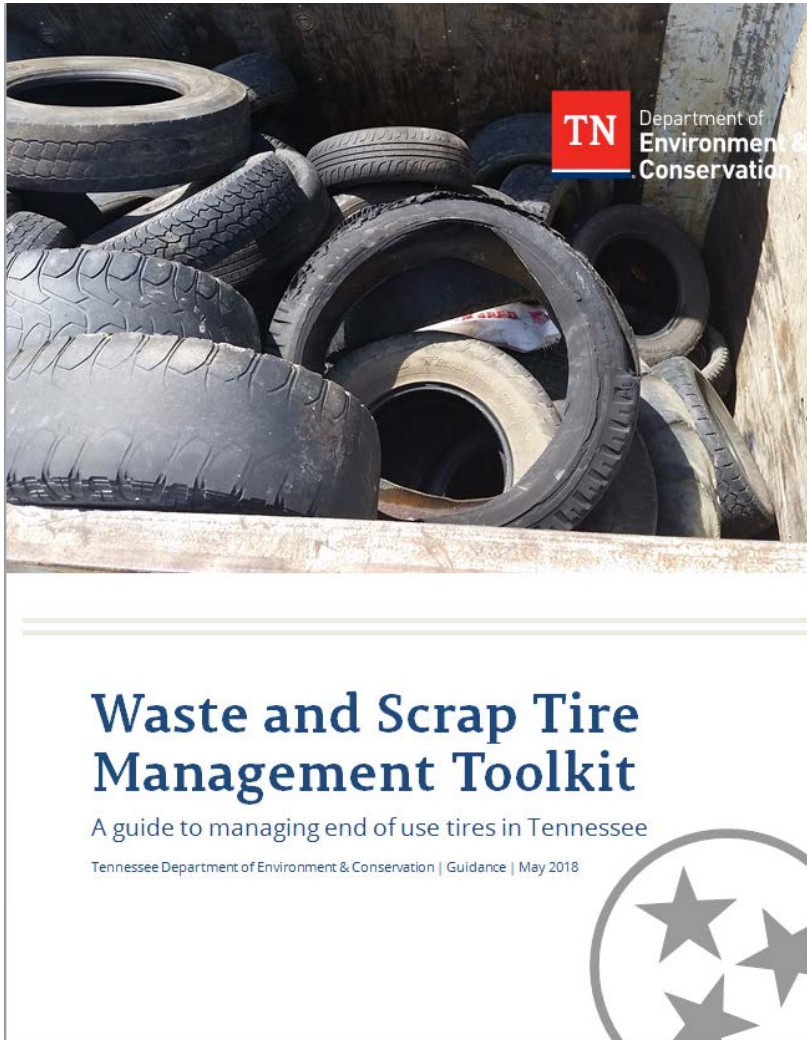
9-10:30 Central Time

Webinar

Eye on the Tire!



Workshop Overview



- Tire Site Permitting
- Waste Tire Process
 - New Tire Dealer
 - Department of Revenue
 - County Financial
 - County Trustee
 - County Budget
 - County Waste Operations
 - Tire Receiving Point
 - Waste Tire Disposal
- Illegal Tire Dump Sites

FEEDBACK

Question 1

Do you have problems with tire dumps in your county?

- On Public Property
- On Road Right of Way
- On Abandoned property
- On Private Property
- Not Applicable

Waste Tires and the Law

- TN General Assembly : Solid Waste Management Act of 1991
 - Created the Waste Tire Program
 - Whole tires banned from disposal in landfills
 - Each county must establish one location to receive tires
 - Public Chapter No. 457 (Effective July 1, 2014)
 - Current tire pre-disposal fee process established

Permitting: Permit-by-Rule

- Different from landfill permits
- Based on regulations, not facility specific documents
- Processors
- Transfer Stations
- Convenience Centers
- Tire Storage Facilities

Getting a Permit-by-Rule

- Notification to EFO: Form CN-1035
- Fee
- Topo Map
- Narrative of compliance
- Financial assurance?

Regulations

- (i) The county legislative body, of a county that does not own or operate a permitted Class I, Class III or Class IV facility which is accepting waste tires, complies with the notification requirement of part 2 of this subparagraph; and
- (ii) The facility is constructed, operated, maintained and closed in a manner consistent with items (2)(k)3(i)(I) and (II) of Rule 0400-11-01-.04 and subparts 1(iii), (iv), (v), (vi), (vii), (x), (xi), (xiii), (xiv), (xvi), (xvii), (xviii), (xix), (xx) and (xxi) of this subparagraph.
- (iii) Contracts for disposal or recycling of the shredded tires have been established.

Tire Storage Facility

- Stored and managed in a manner that does not give the impression of disposal. Means of moving product off site for beneficial use.
- Stored off the ground to avoid storm water contamination.
- Stored in a manner that water will not accumulate inside the tires or in a manner that attracts vermin or mosquitos.
- Demonstrate proof of vector control if storing in an open top trailer or equivalent storage method which does not have a roof/cover structure.
- Typical storage units consist of an enclosed roll-off container, storage sheds, Quanset huts, carports, and tarping.

Tire Storage/Management

- Requirement for site to meet all local zoning, permitting and land use applications
- Stormwater permitting and site requirements in accordance with local requirements
- Sufficient space for customers
- Method to weigh the tires or have appropriate conversion tables to count and track the tires
- EFO will interact with CO for any required permitting or permit by rule requirement
- EFO will have the site listed in WasteBin for tracking and accountability (http://environment-online.tn.gov:8080/pls/enf_reports/f?p=19035:34001:::::)

End Use?

- Landfill
 - Quartered or Shredded
 - Does not meet beneficial use definition
- Beneficial reuse
 - Reprocessed for multiple reuse
 - Tire Derived Fuel (TDF)
 - Competes with cost of other fuels, natural gas, cross ties
 - Crumb Rubber for multiple reuse materials
 - Tire Derived Aggregate (TDA) Asphalt mixtures
 - Storm water retention booms
 - Wastewater drain fields (septic)

FEEDBACK

Question 2

What Tennessee State agencies are involved with the Waste Tire management process?

- Department of Transportation
- Department of Commerce and Insurance
- Department of Environment and Conservation
- Department of Health
- Department of Revenue

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New Tire Dealer

- Registers business with Department of Revenue in the county where each business is located
 - Receive Waste Tire Registration Number from TNTAP
 - https://tntap.tn.gov/eservices/_/
 - Taxpayer Services Division at (800) 342-1003 for assistance
- Report tire sales every quarter (Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec)
- New Tire Dealer give the county permission by the Tire Fee Disposal Report Authorization
- Tire Fee Breakdown
 - Pre-disposal fee
 - \$0.10 – Dealer
 - \$0.25 – TDEC
 - \$1.00 – County of origin

FEEDBACK

Question 3

Which County offices may be involved with Waste Tire Management?

- Trustee
- Solid Waste
- Emergency Management
- County Mayor
- Finance Office
- Others

FEEDBACK

- Question 3
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DOR Payment to County

- DOR will make payment to county quarterly by EDISON
 - Payment goes to County Trustee quarterly 15-30 days after the end of quarter
 - Payment will show on the Trustee report as waste tire tax
- DOR will give county access to Tire Fee Disposal Report
 - New tire dealer account will be provided
 - Amount the tire dealer has paid in the last quarter
 - Tire Fee is not a running report
 - Financial Control Division at 615-532-8944 (Tracey Shadix will assist) General office number is 615-741-2632
 - Dave Johnston, Dave.Johnston@tn.gov, assist the counties for gaining accessing.
 - Counties receive a username and password to a secure area

DOR Payments to Counties: 2019

COUNTY	FY19	COUNTY	FY19	COUNTY	FY19
Anderson	\$63,101.24	Hamilton	\$288,591.92	Morgan	\$4,051.06
Bedford	\$32,284.01	Hancock	\$2,174.71	Obion	\$22,120.95
Benton	\$15,479.87	Hardeman	\$10,489.13	Overton	\$17,433.71
Bledsoe	\$702.03	Hardin	\$34,224.73	Perry	\$1,614.34
Blount	\$105,118.01	Hawkins	\$35,768.31	Pickett	\$924.23
Bradley	\$97,162.63	Haywood	\$17,448.66	Polk	\$5,722.73
Campbell	\$24,870.12	Henderson	\$25,460.62	Putnam	\$89,724.91
Cannon	\$2,628.39	Henry	\$27,816.34	Rhea	\$17,396.68
Carroll	\$14,784.16	Hickman	\$11,124.93	Roane	\$41,839.17
Carter	\$28,330.44	Houston	\$5,767.32	Robertson	\$50,497.09
Cheatham	\$14,184.93	Humphreys	\$9,700.15	Rutherford	\$325,405.84
Chester	\$7,933.42	Jackson	\$3,158.59	Scott	\$13,460.62
Claiborne	\$14,826.21	Jefferson	\$23,241.11	Sequatchie	\$3,530.27
Clay	\$1,493.06	Johnson	\$9,703.85	Sevier	\$67,031.55
Cocke	\$25,683.10	Knox	\$470,843.29	Shelby	\$590,573.35
Coffee	\$55,014.49	Lake	\$935.93	Smith	\$4,509.08
Crockett	\$2,277.62	Lauderdale	\$12,227.40	Stewart	\$7,580.18
Cumberland	\$58,967.85	Lawrence	\$45,787.99	Sullivan	\$130,284.69
Davidson	\$584,095.75	Lewis	\$7,777.61	Sumner	\$145,345.48
Decatur	\$8,207.91	Lincoln	\$36,158.71	Tipton	\$46,494.66
Dekalb	\$11,235.58	Loudon	\$30,465.96	Trousdale	\$6,402.29
Dickson	\$63,814.60	McMinn	\$46,998.43	Unicoi	\$4,398.01
Dyer	\$40,619.68	McNairy	\$15,342.54	Union	\$5,109.88
Fayette	\$22,718.01	Macon	\$23,983.62	Van Buren	\$27.37
Fentress	\$20,456.69	Madison	\$136,934.26	Warren	\$34,225.47
Franklin	\$24,937.16	Marion	\$27,201.56	Washington	\$104,679.24
Gibson	\$49,194.98	Marshall	\$24,601.62	Wayne	\$3,689.46
Giles	\$28,881.48	Mauzy	\$73,418.45	Weakley	\$23,896.59
Grainger	\$5,416.94	Meigs	\$996.72	White	\$24,281.68
Greene	\$53,455.99	Monroe	\$29,567.51	Williamson	\$278,845.66
Grundy	\$2,770.52	Montgomery	\$167,368.09	Wilson	\$112,358.51
Hamblen	\$80,515.60	Moore	\$1,229.67		

FEEDBACK

Question 4

Do you have access to your Tire Fee Disposal Report?

- Yes
- No
- Not Applicable

Uses of Waste Tire Pre Disposal Fees in the county

- Costs associated with waste tire disposal:
 - Cost of collection of waste tires
 - Transportation associated with waste tire management
 - Oversight/staffing
 - Required Equipment
 - Collection containers
 - Local site clean up (Illegal dumps) and disposal
 - Facility related costs
 - Space associated with waste tire program
 - Electricity
 - Costs related to operating tire program

Waste & Scrap Tire Management Tool



- https://www.tn.gov/content/dam/tn/environment/solid-waste/documents/materials-management/sw_mm-waste-tire-toolkit.pdf

Waste Tire Self Analysis

Appendix II

Waste Tire Collection Self-Analysis

- The table provided below is a financial self-analysis to get a general understanding of your tire management costs. For additional resources and sources of funding, please refer to the Resources section of this toolkit. Digital copies please double click to access the file.

Waste Tire Management Self Analysis		
This tool is designed to provide collection operations a look into the finances of managing tires.		
REVENUE	Example Only Year 2017	Enter Time Period
(A) New Tire Dealer Sales Fee (\$1 per tire sold in County)	\$15,478	Time period subject to local budget/revenue information time period
(B) New Car Sales Tire Fee (\$5 per new car sold in County)	\$25	This information is obtained from Department of Revenue or County Clerk
(C) Tire Disposal Fee charged at drop off site	\$15	Optional fees you can charge to cover disposal costs (see Tire Fees Table)
(D) Net Revenue	\$15,518	Add lines A+B+C for total revenue generated from managing tires
(E) Local Dealer Disposal Agreement	\$500	Fees levied to local dealer by acting as disposal outlet for waste tires
(F) Total Potential Tire Management Revenue	\$16,018	Add Lines D + E
Tire Disposal Fees		
(G) Total Tons of Tires Disposed	50	Total tons of tires collected for established time period.
Waste Tire Tipping Charges		
(H) Per Ton Disposal Fee (Ex. \$80/Ton)	\$30	Established disposal rate with tire recycler.
(I) Disposal Total	\$1,750	Line H times Line G
(J) Trailer Rental Fee - Monthly (x12)	\$250	Fee for utilizing processor trailer for storage
(K) Transportation Fee	\$400	Fee for transporting trailer to processor
(L) Additional Fees (Demerage)	\$15	Fee for not meeting "generation rates" of tires for processor or trailer delivery
(M) Fuel surcharge - **\$.30per Mile assumption x miles driven	\$125	Fuel Surcharge will generally be on the processor invoice. Subject to frequent changes
(N) Total Tire Disposal Expenses	\$5,150	Add lines I-M.
General/Administrative Expenses directly related to Waste Tire Management		
(O) Salaries and wages	\$2,000	Obtained from approved budget
(P) Facility Rent	150	Obtained from approved budget
(Q) Utilities (Electric, Water, Gas, Phone, etc.)	50	Obtained from approved budget
(R) Office supplies	10	Obtained from approved budget
(S) Equipment maintenance & rental (Loader, Grapple Hook, Canopy, etc.)	1,500	Budget and Rental Invoices
(T) Total General/Administrative Expenses	\$3,720	Add lines O-S.
(U) Total Operating Expenses	\$8,870	Total of Tire Disposal Fees and General Admin. Add line N and line T.
(V) NET INCOME (LOSS)	\$7,138	Subtract line F from line U.
(W) Annual Tire Disposal Budget	\$12,000	Obtained from approved budget
(X) Budget Balance	\$4,850	Subtract line W from line V

Typical Revenue Fees

Figure 2 - Example Tire Fees for Additional Revenue

Suggested Tire Fees charged at tire collection site	Off Rim	Mounted on Rim
	Up to 4 per month = Free	
Passenger Tires (less than 19 inch rim size)	\$2.00 each add'l	\$5.00 Each
Truck tires (19 to 24.5 inch rim size)	\$5.00 Each	\$10.00 Each
Super Singles Tractor Trailer tire	\$7.00 Each	\$14.00 Each
ATV, Lawn Mower, Small Aircraft, Motorcycle	\$2.00 Each	\$4.00 Each
Oversized Tires (larger than 24.5 inch rim)		
Skid Steer, Small Tractor, Large Aircraft	\$10.00 each	\$20.00 each
Medium Tractor, Road Grader	\$25.00 each	\$50.00 each

Estimating Tires in Piles

Figure 3 - Estimating Number of tires at an unpermitted tire disposal site

APPROXIMATIONS FOR MEASURING LOOSE PILES

Average weight of one whole passenger tire = 20 lbs. = 1 PTE (Passenger Tire Equivalent)
 Average weight of one whole semi-truck tire = 100 lbs. = 5 PTEs

Whole passenger tires 10 PTEs/yd²
 Whole "semi" truck tires 3 semi-truck tires/yd²
 Single pass/rough shreds 27-30 PTEs/yd² (550-600 lbs/yd²)
 2-inch shreds 42-47 PTEs/yd² (850-950 lbs/yd²)

APPROXIMATE RANGE OF NUMBERS OF PTEs

	Whole passenger tires	Single pass rough shreds	2-inch shreds
one 2500 ft ² pile (50' X 50' X 14')	12,963	34,992 - 38,880 (36,936 average)	54,432 - 60,912 (57,672 average)
one 2500 ft ² pile (50' X 50' X 8')	7,410	20,007 - 22,230 (21,118 average)	31,122 - 34,827 (32,974 average)
10,000 ft ² (4 - 2500 ft ² piles)	51,852	140,000 - 155,520 (147,760 average)	217,728 - 243,648 (230,688 average)

APPROXIMATE NUMBER OF WHOLE PTEs IN EACH PILE

PILE SIZE (in feet)	10 FT HIGH	11 FT HIGH	12 FT HIGH	13 FT HIGH	14 FT HIGH	20 FT HIGH	CONSTANT for one foot height increase or decrease
50'X50'	9,259	10,185	11,111	12,037	12,963	18,519	928
100'X50'	18,519	20,370	22,222	24,074	25,926	37,037	1,852
100'X100'	37,037	40,741	44,444	48,148	51,852	74,074	3,704
150'X100'	55,556	61,111	66,667	72,222	77,778	111,111	5,556
200'X200'	148,148	162,963	177,778	192,593	207,407	296,296	14,815
1 ACRE	161,333	177,467	193,600	209,733	225,867	322,667	16,133
2 ACRE	322,667	354,933	387,200	419,467	451,733	645,333	32,267
3 ACRE	484,000	532,400	580,800	629,200	677,600	968,000	48,400

(Based on 10 whole PTEs/yd² & 43,560 square feet per acre)

COMPACTION WILL INFLUENCE THE TOTAL. COMPACTION IS INFLUENCED BY
 OVERALL HEIGHT OF PILE AND LENGTH OF STORAGE TIME IN PILE.

Unpermitted Tire Sites

- Unpermitted Waste Tire Disposal Site Problems
 - Lowered property value
 - Complaints related to tire sites
 - Storm water issues
 - Environmental issues (e.g., habitat degradation)
 - Health Issues (TN Dept of Health has responsibilities)
 - Human and animal impact
 - Mosquito breeding ground
 - Zika virus
 - Other insect borne diseases
 - Public vs Private Property

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EFO Contact Listing

Environmental Field Offices

tn.gov/environment/contacts/about-field-offices

Have a question about Tennessee's Environment?
Call 1-888-891-TDEC (8332)
ask.tdec@tn.gov
tn.gov/environment/contacts/about-field-offices

Nashville

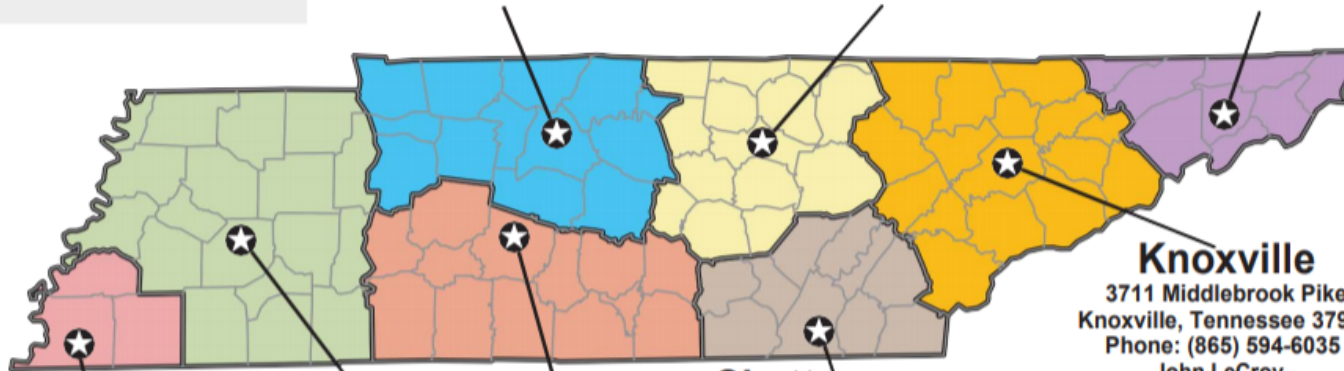
711 R.S. Gass Boulevard
Nashville, Tennessee 37243
Phone: (615) 687-7000
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Jan Compton,
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1421 Hampshire Pike
Columbia, Tennessee 38401
Phone: (931) 380-3371



Brooke Barrett, Director
Office of External Affairs
Desk: (615) 741-8962
Brooke.Barrett@tn.gov

FEEDBACK

Question 5

Does your web site, Face Book, Twitter, Insta Gram, App, other social media have any information about waste tires?

- Yes
- No
- Not Applicable

Contact Information

[Tennessee County Tire Collection Locations](#)

- <https://www.tn.gov/environment/program-areas/sw-mm-waste-tire-program/sw-mm-waste-tire-collection-sites.html>

[Tennessee Department of Revenue](#)

- New Businesses: New tire businesses are required to register and receive an Account Number in each county that the business has a location. This will be a different number from the sales tax registration number.
- <https://www.tn.gov/revenue/taxpayer-education/new-businesses.html>

[Revenue Help](#)

- <https://revenue.support.tn.gov/hc/en-us>

[DOR Departmental Contact Info:](#)

- <https://www.tn.gov/revenue/about-us/contact-us/departmental-contact-information.html>

[DOR Office Locations:](#)

- <https://www.tn.gov/revenue/about-us/contact-us/office-locations.html>

[Oil and Tire Fees:](#)

- <https://www.tn.gov/revenue/taxes/oil-and-tire-fees.html>

Contact Information

[Liberty Tire Recycling](#)

<http://libertytire.com/>

Corporate Office

Pittsburgh, PA

Phone: (412) 562-1700

Email: Corporate@libertytire.com

Nashville, TN

Phone: (615) 727-5776

Email: Tennessee@libertytire.com

[Patriot Recycling Inc](#)

247 North Industrial Dr.

Bristol, TN 37620

Phone: (423) 573-1205

Email: office@patriotrecycling.co

www.patriotrecycling.com

[Rockwood Recycling](#)

<http://www.rockwoodrecycling.com/>

Phone: (615) 293-2997

Email: recycle@rockwoodrecycling.com

510 Hartmann Drive

Lebanon, TN 37087

[Cemex](#)

Cement manufacture

www.cemex.com/

6212 Cement Plant Road, Knoxville, TN 37924

Phone: (865) 541-5500

Fight for the Tire Continues!





Department of
**Environment &
Conservation**

QUESTIONS??

OPEN MICROPHONES & PHONE ACCESS



Department of
**Environment &
Conservation**

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