

# *Waste Tire Report*

## *A.R.S. §49-1306.B*

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The purpose of the Waste Tire Program is to ensure that waste tires are disposed of properly. A waste tire fee that is imposed on the sale of each new tire or motor vehicle funds the Waste Tire Program. The retail tire dealers collect a fee of 2 percent of the purchase price for each tire, with a maximum fee of \$2 per tire. When a new motor vehicle is purchased and the tire cost is not listed separately, a fee of not more than \$1 per tire is collected. The fees are collected by the tire retailer or motor vehicle dealer and remitted to the Department of Revenue (ADOR) quarterly for placement into the Waste Tire Fund. ADOR distributes the monies in the fund to the Arizona Department of Environmental Quality (ADEQ) and the counties quarterly. ADEQ receives 3.5 percent of the monies in the Waste Tire Fund, and the remainder is distributed to each county in proportion to the number of motor vehicles registered in that county.

The retail tire dealer must accept a waste tire from a customer for each sale of a new motor vehicle tire. The retail tire dealer may dispose of the waste tire free at a county waste tire collection site (WTCS) if two conditions are met. The conditions are:

1. The tire dealer must manifest the waste tire to the WTCS,
2. The waste tire must be a trade-in on a new tire for which the waste tire fee was paid.

Each county must establish at least one WTCS within the county for retail tire dealers and residents to dispose waste tires. The counties are also responsible for ensuring that the tires are properly disposed, and each individual county determines its own best methods of collection and disposal.

ADEQ routinely inspects WTCS and other tire storage sites for compliance with the statutory storage requirements, and investigates illegal dumping complaints. When ADEQ staff finds a violation of the storage requirements, ADEQ issues a notice of opportunity to correct or a notice of violation, depending on the severity of the violation, which tells the site owner or operator how to correct the violation. In FY 2002, the Solid Waste Section issued seven notices of opportunity to correct and four notices of violation for various violations of the waste tire requirements.

For this program, waste tires are categorized into three groups:

1. Passenger and light truck tires
2. Semi-truck tires
3. Off-the-road motor vehicle tires

Passenger and light truck motor vehicle tires are those used on automobiles,

motorcycles, light trucks and trailers. Semi-truck motor vehicle tires include semitrailer, truck tractor and semitrailer combination and other similar motor vehicles that are driven on the state's highways. Off-the-road motor vehicle tires are those used on farm vehicles, airplanes, mining vehicles and other types of motor vehicles that are not operated on the state's highways. While the waste tire fee is paid only on the sale of passenger, light truck and semi-truck motor vehicle tires, waste tires from all three groups are subject to the statutory disposal prohibitions and storage requirements. Table 1 summarizes the types of tires collected by each county.

<i>Table 1: Number of Tires Collected by County and Type of Tire in FY 2002</i>					
County	Registered Tire Dealers	Type of Tire			Totals
		Passenger and Light Truck	Semi-Truck	Off Road	
Apache	5	4,079	22	0	4,101
Cochise	41	36,710	824	34	37,568
Coconino <sup>1</sup>	61	57,300	7,821	367	65,488
Gila	42	46,586	2,367	456	49,409
Graham	13	30,314	958	1,309	32,581
Greenlee	5	3,729	58	37	3,824
La Paz	12	8,072	3,930	587	12,589
Maricopa	522	2,764,826	170,750	15,301	2,950,877
Mohave	29	202,301	9,350	1,113	212,764
Navajo	36	70,648	6,484	642	77,774
Pima	183	622,089	33,092	7,663	662,844
Pinal	26	70,886	6,244	1,040	78,170
Santa Cruz	20	59,822	356	NA	60,178
Yavapai	68	136,912	4,051	3,545	144,508
Yuma	37	79,163	9,259	2,938	91,360
Total	1,122				
Percent		90.47	8.46	1.06	

The statute contains a provision to clean up tire fire sites. This provision allows ADEQ to request 5 percent, not to exceed \$250,000, of the Waste Tire Fund on a quarterly basis, before the funds are distributed to the counties. To date, ADEQ has not requested funds for waste tire fire clean ups. ADEQ drafted a position paper outlining the criteria that must be submitted with a request for tire fire clean up funds and to make the demonstration that no other funds are available.

ADOR reported the following figures for the FY 2002 Waste Tire Fund. The fund received \$6,392,636.81 on the sale of approximately 5,760,315 new motor vehicle tires. ADEQ received 3.5 percent of the fund (\$223,742.29). The remaining \$6,168,894.52 in the Waste Tire Fund were distributed to the counties as depicted in Table 2.

County	Funding by Quarter				Total
	1st	2nd	3rd	4th	
Apache	\$20,855.87	\$22,502.85	\$17,872.29	\$17,461.53	\$78,692.54
Cochise	\$47,158.81	\$47,666.04	\$40,412.42	\$39,483.62	\$174,720.89
Coconino	\$44,247.57	\$42,125.65	\$37,917.65	\$37,046.19	\$161,337.06
Gila	\$24,420.47	\$22,241.67	\$20,926.95	\$20,445.99	\$88,035.08
Graham	\$10,559.88	\$9,849.97	\$9,049.22	\$8,841.24	\$38,300.31
Greenlee	\$3,716.57	\$4,008.19	\$3,184.89	\$3,111.69	\$14,021.34
La Paz	\$9,778.01	\$9,985.39	\$8,379.20	\$8,186.62	\$36,329.22
Maricopa	\$956,055.23	\$950,089.43	\$819,285.07	\$800,455.29	\$3,525,885.02
Mohave	\$73,171.88	\$74,688.45	\$62,704.15	\$61,263.01	\$271,827.49
Navajo	\$34,224.82	\$35,274.13	\$29,328.73	\$28,654.66	\$127,482.34
Pima	\$247,047.68	\$239,224.60	\$211,705.84	\$206,840.17	\$904,818.29
Pinal	\$57,360.96	\$52,670.08	\$49,155.09	\$48,025.35	\$207,211.48
Santa Cruz	\$17,176.12	\$18,944.10	\$14,718.96	\$14,380.67	\$65,219.85
Yavapai	\$78,120.08	\$80,113.20	\$66,944.47	\$65,405.88	\$290,583.63
Yuma	\$50,800.65	\$47,563.30	\$43,533.28	\$42,532.75	\$184,429.98
ADEQ	\$60,740.22	\$60,096.52	\$52,050.92	\$50,854.63	\$223,742.29
Total					\$6,392,636.81

In FY 2002, more than 4.3 million waste tires entered the counties' waste tire management programs, and more than 2.6 million waste tires were disposed, leaving just over 2.3 million waste tires total in all of the county WTCSs as of June 30, 2002. The previous year the counties reported more than 1.1 million waste tires remaining in their WTCSs at the end of the fiscal year. The number of waste tires collected and disposed by each county is presented in Table 3.

*Table 3: Waste Tires Collected and Disposed by County in FY 2002*

County	Number of Tires				Cost per Tire
	Tires Remaining <sup>1</sup> (June 30, 2001)	Waste Tires Collected	Waste Tires Recycled/ Disposed	Tires Remaining (June 30, 2002)	
Apache	1,791	4,101	4,031	1,861	\$19.52
Cochise	10,643	37,568	42,578	5,633	\$4.10
Coconino	8,683	101,589	103,281	6,991	\$1.56
Gila <sup>2</sup>	7,387	49,409	43,931	5,478	\$2.00
Graham <sup>2</sup>	11,343	32,581	39,636	4,288	\$0.97
Greenlee <sup>2</sup>	4,668	3,824	9,410	1,207	\$1.49
La Paz <sup>2</sup>	40,300	12,589	12,772	60,000	\$2.84
Maricopa <sup>2</sup>	253,011	2,764,826	1,431,028	1,661,360	\$2.12
Mohave <sup>2</sup>	184,441	212,764	305,992	100,266	\$0.89
Navajo <sup>2</sup>	26,300	77,774	66,922	37,096	\$1.90
Pima <sup>2</sup>	131,556	662,844	278,400	384,444	\$3.25
Pinal	7,620	78,170	85,940	1,890	\$2.41
Santa Cruz	3,821	60,178	55,709	4,469	\$1.17
Yavapai <sup>2</sup>	14,974	144,508	139,794	4,714	\$2.08
Yuma <sup>2</sup>	4,930	79,163	24,405	71,885	\$7.56
<b>Total</b>	<b>711,468</b>	<b>4,321,888</b>	<b>2,643,829</b>	<b>2,351,582</b>	

<sup>1</sup> All figures given for tires remaining as of June 30, 2001 were taken from waste tire annual reports submitted by the counties for FY 2001. These figures appear in [ADEQ's FY 01 Waste Tire Report](#).

<sup>2</sup> The figures given for tires remaining in 2001, waste tires collected, waste tires disposed and tires remaining in 2002 are not consistent for all the counties except Apache, Cochise, Coconino and Santa Cruz. This results

*from collected tires being counted by number while tires being transported for disposal are measured by weight. The conversion factors between weight and number are not precise.*

The counties currently operate 20 WTCSs. A listing of each WTCS by county, with the name and address of the operator and directions to the WTCS, is available at ADEQ. No new waste tire collection sites opened during FY 2002.

The 15 main destinations to which the counties transported their waste tires are described below in alphabetical order.

American Tire Disposal, Inc. (ATD), located in Colton, Calif., shreds the tires it receives and ships them to Mitsubishi Cement in Ontario, Calif. Mitsubishi Cement uses the shredded tires as fuel for their cement operation.

The Azusa Land Reclamation Site, located in Azusa, Calif., contains a monofill where waste tires are buried for disposal.

BAS Recycling, Inc., located in San Bernardino, Calif., processes the tires it accepts cryogenically, producing crumb rubber for rubberized asphalt, new tires and athletic fields and playground surfaces formed of tiles and mats. The company also sells crumb rubber to other manufacturers.

Cactus Tire in Casa Grande, Ariz., receives passenger tires and semi-truck tires only. The company buffs and re-caps the tires. The re-capped tires are sold for use on vehicles, while the buffings (rubber shavings from the tires) are sold to crumb rubber recyclers.

CRM Company LLC, located in Compton, Calif., produces crumb rubber which is used in rubberized asphalt in California and Arizona. The crumb rubber is also used as a material to produce artificial turf athletic fields and to mold consumer products, such as welcome mats.

Envirotech Industries International, Inc., located in Phoenix, Ariz., peels and shreds 45 percent of the tires it receives to produce tire derived fuel. Another 30 percent of the shredded rubber is gleaned and colored for use as landscaping material. Crumb rubber is produced from 20 percent of the tires. The crumb is used for rubberized asphalt and as a raw material in the manufacturing of consumer products. The remaining 5 percent of the waste tires, specifically passenger tires, were used in engineering projects. The engineering projects included using baled tires to prevent lakeshore erosion, constructing small dams along desert washes to inhibit erosion, and using halved tires as substratum below golf course surfaces to enhance water conservation.

First Nation Recovery, Inc. (FNRI), a wholly owned venture of the Cabazon Band of Mission Indians in Mecca, Calif., crumb the tires it receives for recycling. The crumb rubber is used for a variety of products including EnviroTurf, a playground surface used for cushioning, and EnvirTurf EQ, which serves the same purpose for equestrian centers. EcoPave TP is a mixture of crumb rubber for rubberized asphalt and has been used to pave sections of highway back in Arizona.

Glen Weinberger Landfill, located in Mobile, Ariz., is a construction and demolition debris landfill. The landfill uses shredded tires collected from the sides of highways in Arizona as alternative daily cover.

GreenMan Technologies has just begun operations at their new manufacturing plant in Azusa, Calif. The Massachusetts based company is the sole producer of FlexShake roofing shingles. The shingles are stamped from waste passenger and light truck tires. The manufacturing process creates a product that appears similar to classic slate shingles, while their rubber content provides durability during extreme weather conditions, specifically hail.

LandStar Polymer Recovery, Inc. in Queen Creek, Ariz. processes the passenger tires it accepts into crumb rubber. The crumb rubber is used to manufacture athletic field surfaces, playground cushioning, equestrian center surfaces, new tires, rubberized asphalt and molded rubber products, such as soaker hoses and auto parts.

Mitsubishi Cement, located in Ontario, Calif., accepts all three types of tires and burns them for energy that is used in the production of cement.

Rainbow Valley Landfill is a construction and demolition debris landfill operated by Weinberger Waste Disposal. It is located in southwest Phoenix. The landfill uses tire shreds collected from the side of Arizona highways for alternative daily cover.

Recovery Technologies Group (RTG), located in Los Angeles, Calif., is the largest processor of scrap tires in the United States. The crumb rubber they produce is used in rubberized asphalt, sports surfaces, molded rubber products, new tires and rubberized plastics. The company is planning to site a new processing facility in the west valley of Phoenix, Ariz.

Unlimited Tire Technologies (UTT) located in Azusa, Calif., processes the tires it receives into crumb rubber. The material is used in the molded rubber products industries to manufacture products such as playground surfaces, floor and wall mats and traffic cones. The UTT facility was recently purchased by GreenMan Technologies. GreenMan produces recycled rubber products and

tire derived fuel.

Utah Tire Recyclers, located in West Valley City, Utah accepts semi-truck and off-road tires. The company chips at least 99 percent of these tires for tire derived fuel, while less than 1 percent are used as leachate layers in landfills and septic systems. The company is currently constructing in a million dollar crumb rubber facility to recycle waste tires in the future.

Major waste tire transporters that deliver tires to their final destination are as follows:

Lakin Tires West, Inc. hauls all the waste tires in Arizona generated at Firestone, Goodyear, Pep Boys, Costco and Sears retail stores. This totals about 600,000 tires, all of which are passenger and light truck. 16.5 percent are taken to California Portland Cement, which has plants in Colton and Mohave, Calif. and Rillito, Ariz., where they are burned for energy. 33.5 percent are recycled as crumb rubber in California at CRM and RTG. 25 percent are resold to used tire dealers and reused. The final 25 percent are taken to the Azusa Land Reclamation Site where they are monofilled.

Specialty Loaders of Tempe, Ariz. is a transportation company that hauls all three types of tires from Maricopa County and the county consortium, which includes Cochise, Gila, Graham, Greenlee and Santa Cruz counties. Many counties that had contracts with LandStar also have their tires transported by Specialty Loaders. These include Coconino, Mohave, Navajo, Pima, Pinal and Yavapai counties. Tires are transported to LandStar, GreenMan Industries, UTT, BAS Recycling and FNRI to be recycled as crumb rubber. Others are delivered to Cactus Tire where they are retreaded. Additional tires are taken to ADT and Mitsubishi Cement and used as tire derived fuel. Tire shreds collected from Arizona Highways are delivered to landfills to be used as alternative daily cover. Finally, the Azusu Land Reclamation Site accepts tires from Specialty Loaders to be monofilled.

Table 5 is a five-year summary of the amount of monies collected by the Waste Tire Fund, the number of new tires sold, and the total number of waste tires collected and disposed by the counties, through FY 2002. Table 6 summarizes some observations and general statistics for the waste tire program.

*Table 4: Counties' General Financial Reports*

County	Waste Tire Fund	Tipping Fees and Other Revenue	Total Revenue	Operating Expenses	Operating Balance
Apache	\$78,692.54	\$218.00	\$78,910.54	\$43,024.00	\$35,886.54
Cochise	\$174,720.89	\$1,990.83	\$176,711.72	\$253,496.82	(\$76,785.10)
Coconino	\$161,337.06	\$8,890.00	\$170,227.06	\$175,901.68	(\$5,674.62)
Gila	\$88,035.08	\$3,760.00	\$91,795.08	\$96,360.96	(\$4,565.88)
Graham	\$38,300.31	\$0.00	\$38,300.31	\$46,300.00	(\$7,999.69)
Greenlee	\$14,021.34	\$0.00	\$14,021.34	\$15,350.86	(\$1,329.52)
La Paz	\$36,329.22	\$4,700.00	\$41,029.22	\$43,763.89	(\$2,734.67)
Maricopa	\$3,525,885.02	\$211,181.00	\$3,737,066.02	\$23,498.62	\$3,713,567.40
Mohave	\$271,827.49	\$17,363.74	\$289,191.23	\$69,286.19	\$219,905.04
Navajo	\$127,482.34	\$1,729.31	\$129,211.65	\$119,589.70	\$9,621.95
Pima	\$904,818.29	\$77,637.00	\$982,455.29	\$558,696.00	\$423,759.29
Pinal	\$207,211.48	\$15,760.48	\$222,971.96	\$258,324.51	(\$35,352.55)
Santa Cruz	\$65,219.85	\$2,274.50	\$67,494.35	\$10,555.30	\$56,939.05
Yavapai	\$290,583.63	\$32,575.00	\$323,158.63	\$331,365.00	(\$8,206.37)
Yuma	\$184,429.98	\$28,899.50	\$213,329.48	\$261,034.40	(\$47,704.92)
<b>Total</b>	<b>\$6,168,894.52</b>				

*Table 5: Five-year Summary of Fees Collected and the Number of Tires Sold, Collected and Disposed*

Fiscal Year	Waste Tire Fees Collected	Number of New Tires Sold	Number of Waste Tires Collected	Number of Waste Tires Recycled/Disposed
1997	\$5,075,119.84	4,567,426	3,440,771	4,621,377
1998	\$5,125,561.09	4,650,729	3,433,903 <sup>1</sup>	4,740,175 <sup>1</sup>
1999	\$5,476,881.00	5,064,460	3,803,673	4,354,382
2000	\$5,674,451.55	5,309,534	3,725,875 <sup>2</sup>	4,093,931 <sup>2,3</sup>

2001	\$6,364,629.00	5,665,453	4,194,847	4,062,927
2002	\$6,392,636.81	5,760,315	4,321,888	2,643,829 <sup>4</sup>

<sup>1</sup> The 1998 figures were amended and include waste tires collected and disposed by Apache, La Paz and Santa Cruz Counties, which were reported late in 1998.

<sup>2</sup> The 2000 figures have been amended to include tires collected and disposed in Apache County. Apache County had not submitted an annual report for FY 2000 by the appropriate deadline.

<sup>3</sup> The number of tires disposed in FY 2000 does not include La Paz County as the county did not identify whether any tires were disposed during that fiscal year.

<sup>4</sup> The large reduction in the amount of waste tires recycled/disposed is a result of Maricopa County not being able to recycle or dispose of their tires through their contract at the time. Maricopa County is presently looking for a new contractor to recycle/dispose of their tires.

Table 6: Waste Tire Program General Statistics

	FY 1997 to FY 2002	FY 2001 to FY 2002
Change in waste tire fund	+ 26.0%	+ 0.4%
Change in number of motor vehicle tires sold	+ 26.1%	+ 1.7%
Change in number of waste tires collected	+ 25.6%	+ 3.0%
Change in number of waste tires disposed <sup>1</sup>	- 42.8%	-34.9%

<sup>1</sup> The large reduction in the amount of waste tires recycled/disposed is a result of Maricopa County not being able to recycle or dispose of their tires through their contract at the time. Maricopa County is presently looking for a new contractor to recycle/dispose of their tires.