

Status of the Waste Tire Program in Colorado

2019 Waste Tire Report	Generation, management and flow	By the numbers	Summary and outlook	Illegal Waste Tire Cleanup Grants	Local Public Health inspections
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Executive summary

Calendar year 2019 marks the sixteenth year the Colorado Department of Public Health and Environment has compiled data related to waste tire recycling, waste tire funds and the status of Colorado's Waste Tire Program.

This 2019 annual report includes the following: information on the waste tire fee, the status of a priority abatement list for illegal waste tire disposal sites and an update of the waste tire grant fund programs. The total number of waste tires recycled in the state is also included to gauge the generation, management, flow and end use markets. The regulated community submits this information to the department pursuant to the Regulations Pertaining to Solid Waste Sites and Facilities (6 CCR 1007-2, Section 10).

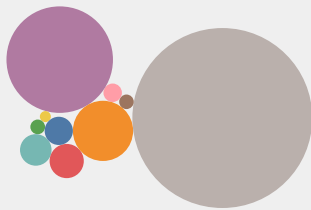
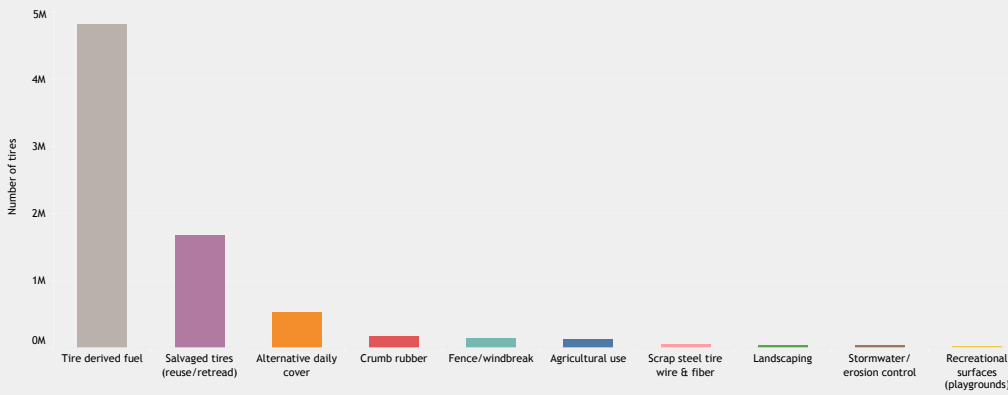
Annual reporting forms are submitted to the department from waste tire processors, waste tire collection facilities, waste tire monofills, waste tire haulers, mobile waste tire processors, and end users of tire derived products. Report information is also gathered from new tire fee return forms, registration forms, and waste tire inspection and cleanup data. For mathematical uniformity and to allow comparison of tire data that was reported in tons, the department uses a nationally recognized standard to convert tons into passenger tire equivalents (PTE's). This report uses the U.S. Tire Manufacturers Association's nationally recognized standard of 22.5 pound per PTE conversion, which is the appropriate average weight of a passenger automotive tire.

2019 Legislation

The waste tire program was subject to numerous administrative changes in 2019. With the 2018 conclusion of the Waste Tire End User Fund and end user rebates for tire-derived products, the end use of waste tires in Colorado significantly declined.

To increase the end use of waste tires and reduce storage inventories, the 2019 Colorado General Assembly enacted legislation that will bring back the End User Fund in 2020 by providing rebates for in-state end users and retailers of tire-derived products. Due to the economic downturn because of COVID-19, the 2020 legislature transferred End User funds to balance the state budget. End User funds may not be issued until later in 2020. This legislation also brings back funding for market development so the department can assist in developing sustainable markets for the end use of waste tires and tire-derived products within Colorado. To fund these programs, the waste tire fee on the sale of new motor vehicles and new trailer tires increased from \$0.55 to \$1.25 starting on January 1, 2020.

Top 10 recycled waste tire uses



The report presents the 2019 Top 10 uses of recycled waste tires. Though tire-derived fuel end usage and salvage tires use was higher than 2018 numbers, other 2018 Top 10 end use markets decreased. For instance, alternate daily cover use dropped by over 317,000 tires, tire bale fence/windbreaks decreased by almost 118,000 tires, and crumb rubber end use decreased by almost 29,000 tires. Agricultural use did increase by almost 86,000 tires.

Hover over the circles to the left to explore the top 10 recycled waste tire uses.

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Waste tire generation, management and flow:

Colorado continues to generate more waste tires than the national industry average standard of one waste tire per person per year. According to data submitted to the department through annual reporting forms and using the nationally recognized standard to convert to PTE's, the waste tire generation rate in Colorado was **1.31 passenger tire equivalents per person per year in 2019**. This corresponds to a total generation of **6,794,691 new waste tires in Colorado during 2019**.

Waste tires continue to be received from and sent to neighboring states. Colorado received 672,738 from eight states, with Wyoming (321,717), Nebraska (215,294) and New Mexico (101,314) sending 638,325 waste tires into the state. Colorado-generated waste tires were also sent to four states, with the majority (128,694) going to Utah for recycling.

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By the numbers

In 2019, the total number of newly generated waste tires generated in Colorado and imported from surrounding states was **8,198,494**. A small number of these waste tires were sent out of state to be recycled. However, 83 percent of the new tires generated/imported were recycled or salvaged. Figure 1 provides an annual comparison of waste tire recycling and salvaging rates of Colorado-generated and imported waste tires. This drop in the recycling/salvaging rate directly corresponds with the drop of end uses of waste tires (see "Top 10 recycled waste tire uses" graphs on the "2019 Waste Tire Report" tab).

Figure 2 reflects the number of waste tires recycled/salvaged versus the generation rate in Colorado. Up until 2018, the amount of waste tires recycled or salvaged has equaled or outpaced the waste tire generation rate in the state. It is also important to note that the End User Fund was also in existence during these years until it ended in 2018. This has resulted in an increase as almost 600,000 waste tires were added to storage inventories (Figure 3).

Figure 1: Percent of waste tires recycled and salvaged

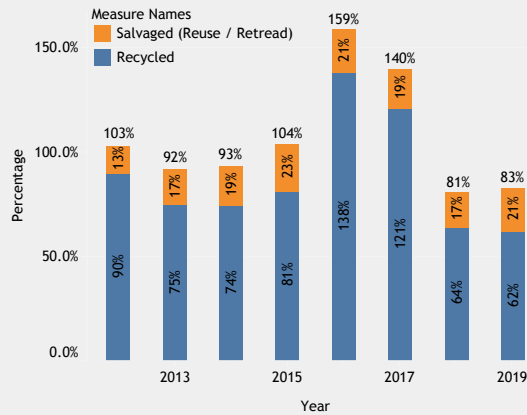


Figure 2: Waste tires recycled/salvaged vs. Colorado-generated waste tires

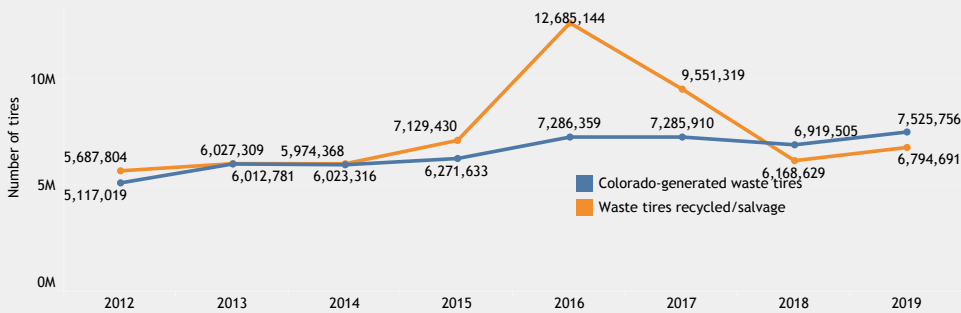
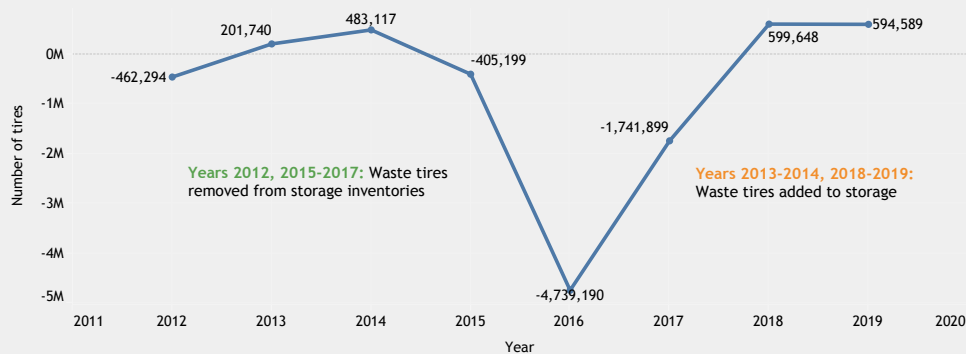


Figure 3: Change in storage inventories



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Waste tires summary and outlook

With the sunset of the End User Fund in 2018 and the end-use rebates that the fund provided, the department believed that the end use of waste tires in Colorado would significantly decline. This is what happened in 2019. To increase the end use of waste tires and reduce storage inventories, the 2019 Colorado General Assembly enacted legislation intended to bring back the End User Fund in 2020 to provide rebates to in-state end users of tire-derived products and retailers that sell tire-derived products. This legislation also brings back market development so the department can assist in developing sustainable markets for the end use of waste tires and tire-derived products to Colorado. Unfortunately, the impacts of the COVID-19 pandemic resulted in a revenue shortfall and unbalanced state budget. To address the general fund revenue shortfall, end user rebates were not available for the first round in 2020.

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Illegal waste tire cleanup grants

The Illegal Waste Tire Cleanup Grant program provides funding for the cleanup of illegal or abandoned waste tire sites. The department is notified of illegal waste tire sites by the public, local governmental agencies, other state agencies and by our Waste Tire Inspectors. The "Illegal Waste Tire Stockpile Identification Form" (<https://www.colorado.gov/pacific/cdphe/illegal-waste-tire-cleanup-grants>) is available online for local governmental agencies to report potential illegal waste tire sites. A general complaint form is also available online for the public to report potential illegal waste tire sites.

Waste Tire Inspectors in the department inspect potential waste tire cleanup sites to assess the size of the pile, the physical lay-out of the site, if the site is an active or abandoned site and the risk to public safety and the environment in the immediate area. The department also determines if enforcement action against a liable party is appropriate for site cleanup.

To prioritize the order of abatement, sites are ranked. The site is assigned a ranking that is calculated on a point system based on several factors, such as the number of waste tires; nearby population; topography and infrastructure near the site; and stockpile characteristics. Illegal sites ranked "High" and "Medium" are considered priority abatement projects for the department. Table 1 lists the number of "High", "Medium" and "Low" sites that were cleaned up in 2019.

Currently the department has identified an additional 60 potential illegal waste tire sites in the state. Waste tire inspectors are working towards inspecting these sites in the coming months to determine eligibility for cleanup funds.

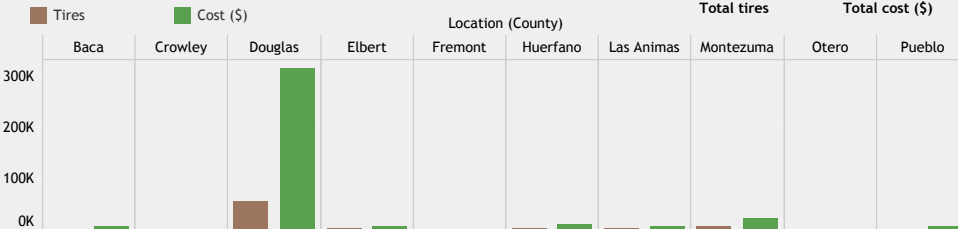
The department completed 24 illegal waste tire cleanups in 2019 in ten counties (see "2019 cleanups by county" graph).

Table 1: Abatement list ranking

Rank	Number of waste tires removed	Number of sites
HIGH	55,982	1
MEDIUM	5,328	13
LOW	8,316	10

An estimated total of 69,626 waste tires have been removed across 24 Colorado counties. Number of waste tires removed and Number of sites broken down by Rank.

2019 Cleanups by county



The department completed 24 illegal waste tire cleanups in 2019. The total tires removed and cost per county are shown here. Tires and Cost for each Location (County). Color shows details about Tires and Cost.

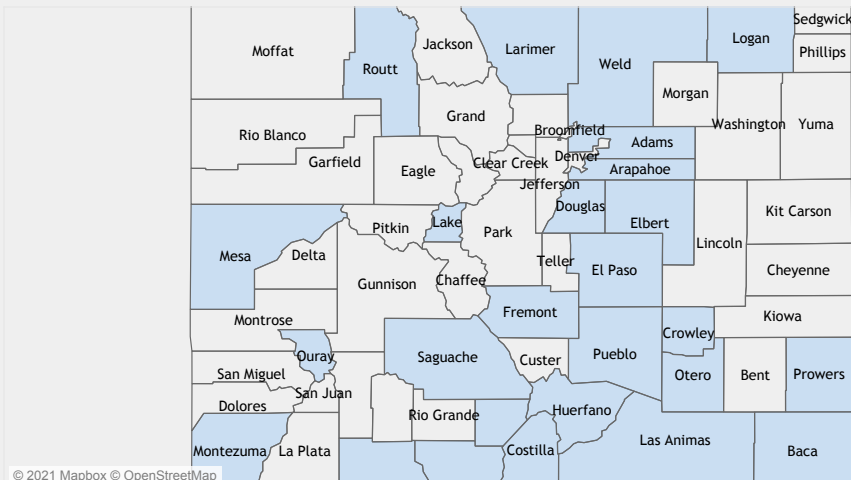
Collection events

In 2019, the department funded 4 collection events for counties and municipalities. These events allow the public to drop off unwanted tires at little or no cost. Table 2 shows a list of department-funded collection events, funds spent and waste tires collected. Due to continued interest from counties and municipalities, the department will continue to fund waste tire collection events in 2020. The request form is available at www.colorado.gov/cdphe/illegal-waste-tire-cleanup-grants.

Table 2: 2019 collection event details

Collection event location	Total cost	Waste tires collected
Dolores County	\$4,943.50	1,145
La Veta	\$1,626.00	393
Montezuma County Public Health	\$4,000.00	2,550
Town of Aguilar	\$3,624.00	906

Illegal waste tires by county



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By the numbers	Summary and outlook	Illegal Waste Tire Cleanup Grants	Local Public Health inspections	Registrants and fees	Local Technical Assistance Program
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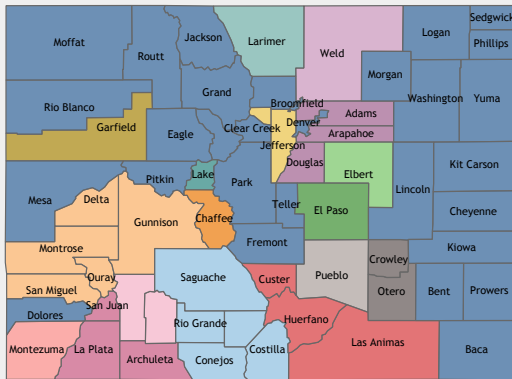
Waste tire inspection grants

waste tire inspections on behalf of the department. Local partners conducted 991 inspections and technical assistance visits in 2019. The majority of these inspections and visits were of waste tire generators (e.g., retail tire shops), but many waste tire haulers and illegal waste tire sites were also evaluated.

Common issues identified by the local health agencies included a) facilities unregistered with the department, b) failure to submit the waste tire fee, c) generators not using a registered waste tire hauler, d) incomplete or no manifests kept on site, e) violating waste tire storage limits, f) litter and vegetation control and g) decals not being posted onsite. The total amount reimbursed to local agencies in 2019 was \$120,676.

The department's goal is to have partnerships with local governmental agencies in every county to conduct these inspections. These inspections help ensure that waste tires are properly managed in the state. The department conducted outreach in 2019 to promote this grant opportunity to local governmental agencies by presenting at the Colorado Environmental Health Association Annual Education Conference and presenting at the Local Environmental Health Directors Quarterly Meeting. The department will continue to conduct outreach to local health and other governmental agencies to expand the program statewide.

Inspection grants map



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* Lake County PH ended on 6/30/19 (no activity Jan - June 2019) ** Silver Thread & Alamosa moved to Limited PO for July-Dec 2019 *** Weld County & Elbert County started 7/1/19

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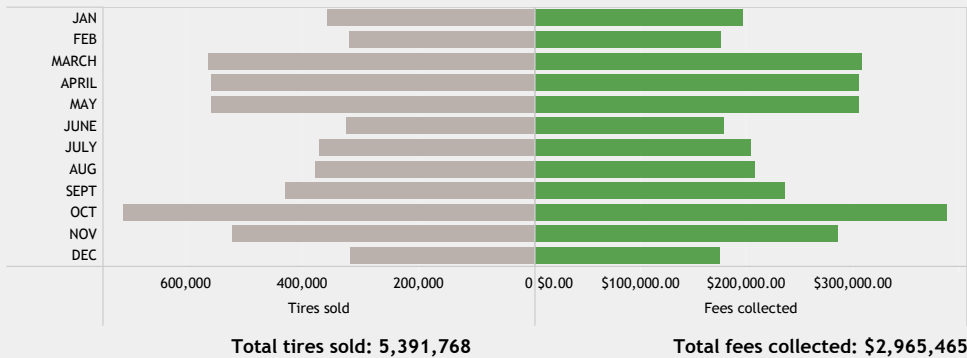
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Registrants and fees

Waste tire fee

In 2019, the program collected a \$0.55 waste tire fee on the sale of each new motor vehicle tire and new trailer tire. In 2019, there were 1,721 active accounts for retailers who collect the waste tire fee. Twenty-seven of these accounts were on-line retailers. Additionally, the program added 60 new waste tire fee accounts. The graphic below shows the total number of new tires sold in the state and the total waste tire fees collected.

Tires sold and fees collected per month, 2019



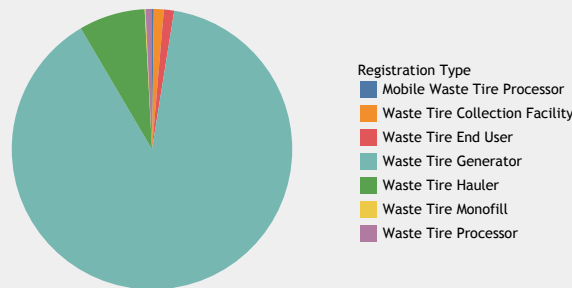
Inspections

Program staff conducted 75 waste tire inspections and compliance assistance visits in 2019. Of these 75 visits, 19 waste tire generator facilities selling new tires were evaluated for compliance with the requirements for submittal of the waste tire fee. Because of these inspections, new tire fee accounts were established for those facilities who had not previously submitted the waste tire fee. Additionally, the program issued 43 compliance advisories (informal enforcement actions) and 11 compliance orders (formal enforcement actions for non-compliance with waste tire laws and regulations). Of the 43 compliance advisories and 11 compliance orders issued, 31 of the compliance advisories and 11 of the compliance orders were issued to waste tire haulers who did not submit the 2018 Commercial Waste Tire Hauler Annual Report (Form WT-4) to the Department by April 1, 2019.

Program staff continued to process and issue waste tire registrations. The program issued 472 waste tire registrations in 2019. In addition, 2,844 businesses were registered with the waste tire program in 2019, ranging from waste tire generators to waste tire collection facilities.

Waste tire registrants by type

2844 Total waste tire registrants **472** Total waste tire registrations processed and issued



*One registrant can be registered in multiple categories.

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Road applications of rubber asphalt pavements & tire derived aggregate

The department hosted two Federal Highway Administration - Local Technical Assistance Program Trainings in October of 2019. The first training was in Castle Rock (~30 attendees) and second training was in Grand Junction (~15 attendees). This training was focused on the uses of waste tire rubberized asphalt and tire-derived aggregate in road and highway construction projects. Attendees were mostly local governmental road & bridge departments. Discussion focused on the many benefits of using both products, focusing on the environmental benefits and long term cost savings. Several speakers provided insight from their experiences using these products in their own projects and studies.