

Status of the Waste Tire Program in Colorado

2020 Waste Tire Report	By the numbers	Generation, management and flow	Summary and outlook	Illegal Waste Tire Cleanup Grants	Waste tire inspection grants
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Executive summary

Calendar year 2020 marks the 17th year the Colorado Department of Public Health and Environment (CDPHE, the department) has compiled data related to waste tire recycling, waste tire funds and the status of Colorado's Waste Tire Program.

This 2020 annual report includes the following: waste tire generation, recycling/salvaging, storage inventory numbers, the status of a priority abatement list for illegal waste tire disposal sites, an update of waste tire grant fund programs, inspections conducted and information on the waste tire fee and waste tire registrants. The total number of waste tires recycled in the state is also included to gauge the generation, management, and flow of waste tires and to what 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).

Waste tire collection facilities, waste tire monofills, waste tire haulers, mobile waste tire processors, and end users of tire derived products submit annual reporting forms to the department. The department also collects report information from new tire fee return forms, registration forms, and waste tire inspection and waste tire 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 pounds per passenger tire equivalent (PTE) conversion, which is the appropriate average weight of a passenger automotive and truck tires.[1]

2020 in review

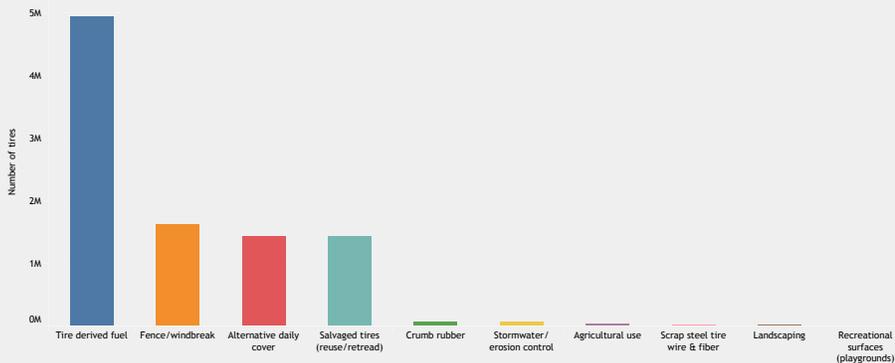
To increase the end use of waste tires and reduce storage inventories, the 2019 Colorado General Assembly enacted legislation that brought back the Waste Tires End User Fund in 2020, by providing rebates for in-state end users and retailers of tire-derived products. However, due to the economic downturn because of the COVID-19 pandemic, the 2020 legislature transferred End User funds to balance the state budget. This resulted in End User funds not being issued until the fourth quarter of 2020. The 2019 legislation also brought 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.

The COVID-19 pandemic also affected waste tire generation and reuse rates, new tire sales, and the number of inspections conducted by the department and county contract inspection partners.

The report presents the top 10 uses of recycled waste tires in 2020. Tire-derived fuel end usage remained the top recycled waste tire end use in 2020. For the first time in three years, salvaged tires (reuse/retread) was not the number two use. The COVID-19 pandemic appeared to affect the salvage tire market the most. The biggest increase from 2019 was the increase of fence/windbreaks and alternate daily cover. Fence/windbreak use increased by almost 1.5 million tires and alternate daily cover increased by over 900,000 tires. The increase of fence/windbreaks can be attributed to a waste tire processor that sold fence/windbreaks to various agricultural clients. Additionally, two waste tire processors increased their production of alternate daily cover that went to various Front Range landfills.

[1] In May 2021, the Environmental Advisory Council of the Tire Industry Association updated the average waste tire passenger and light truck weight to 25 pounds. The 25 PTE conversion was calculated for comparison, resulting in an approximately 9% decrease in the 2020 numbers. The department will look at using the 25 PTE for the 2021 Status of the Waste Tire Program in Colorado Report.

Top 10 recycled waste tire direct use and end use



This report presents the 2020 Top 10 uses of recycled waste tires. Tire-derived fuel end usage remained the top recycled waste tire end use in 2020. For the first time in three years, salvaged tires (reuse/retread) was not the number two use, as this usage slipped to the top four use. The COVID-19 pandemic appeared to affect the salvage tire market the most. The biggest increase from 2019 was the increase of fence/windbreaks and alternate daily cover. Fence/windbreak use increased by almost 1.5 million tires and alternate daily cover increased by over 900,000 tires. The increase of fence/windbreaks can be attributed to a waste tire processor that sold fence/windbreaks to various agricultural clients. Additionally, two waste tire processors increased their production of alternate daily cover that went to various Front Range landfills.

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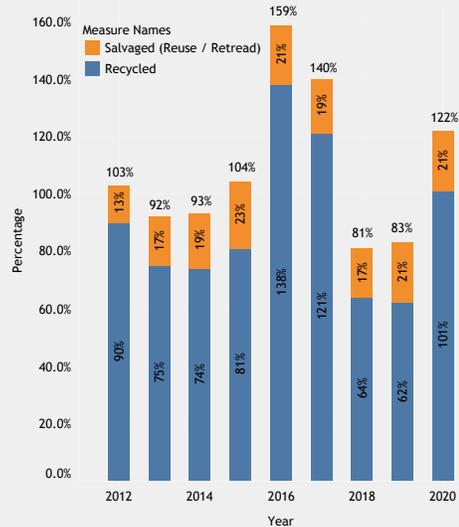
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By the numbers

In 2020, the total number of newly generated waste tires in Colorado and imported from surrounding states was 6,297,229. Colorado sent one percent of these waste tires to Utah to be recycled. However, the remaining tires, and others from storage inventories, were recycled or salvaged in the state. This equates to a 122 percent recycling/salvage of new tires generated/imported. Figure 1 provides an annual comparison of waste recycling and salvage rates from 2012 to 2020. The increase in waste tire recycling/salvage in 2020 directly corresponds with the increase of end uses of waste tires (see 2020 top 10 recycled waste tire direct use and end use graph).

Figure 2 reflects the number of waste tires recycled/salvaged versus the generation rate in Colorado since 2010. Up until 2018, the amount of waste tires recycled or salvaged has equaled or outpaced the waste tire generation rate in the state. The recycling/salvage rate decreased calendar years 2018 and 2019, which could be attributed to the End User Fund ending in 2018. The recycling/salvage rate strongly rebounded in 2020, as over 8 million waste tires were recycled/salvaged. There were almost 1.16 million less waste tires generated in Colorado in 2020 compared to 2019. With the decreased waste tire generation and the reduction of storage inventories at one of the waste tire monofills and at two waste tire processors, there was a decrease of almost 2.8 million waste tires from storage inventories (Figure 3). At the end of 2020, the three waste tire monofills combined had approximately 52.3 million waste tires.

Figure 1: Percent of waste tires recycled and salvaged



Includes waste tire monofills, waste tire processors and waste tire collection facilities.

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

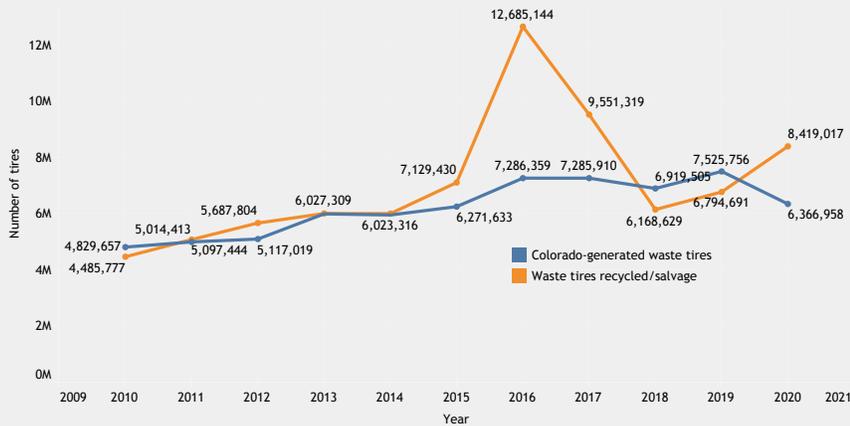
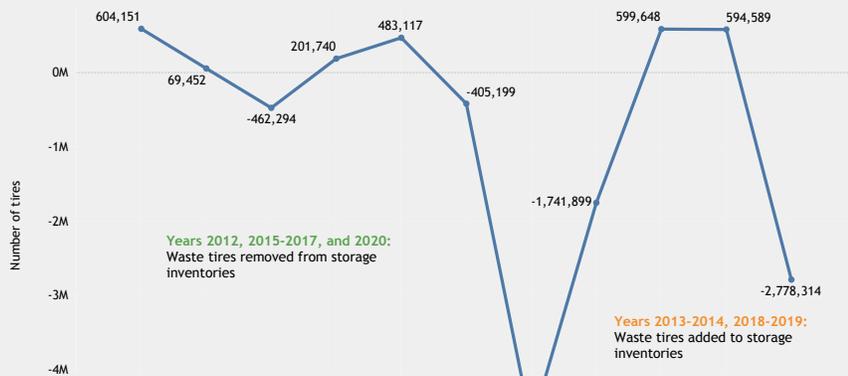


Figure 3: Change in storage inventories



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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 a nationally recognized standard to convert tons to PTE's, the waste tire generation rate in Colorado was 1.10 passenger tire equivalents per person per year in 2020. This corresponds to a total generation of 6,366,958 newly generated waste tires in Colorado during 2020. The amount of newly generated waste tires in Colorado decreased from 2019 by 15%.

We continue to receive and send waste tires to neighboring states. Colorado received 560,271 from five states, with Wyoming (266,721), Nebraska (217,432) and New Mexico (61,831) and sent 545,984 waste tires to processors and monofills in Colorado. Less than three percent of waste tires were imported from Kansas and Texas. Colorado-generated waste tires were also sent to two states (total of 90,288), with the over ninety-nine percent (89,529) going to Utah for recycling.

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Waste tires summary and outlook

2020 resulted in a decrease of waste tire generation, mostly due to the COVID-19 pandemic. Colorado processors were able to recycle the equivalent of all of the waste tires generated in the state and all the waste tires brought in from other states. Even with the COVID-19 pandemic, waste tires continued to be processed and end used, resulting in a steep decline in waste tire storage inventories. To further increase the end use of waste tires and reduce storage inventories, the department reinstated Waste Tire End Users Fund, which will offer rebates in 2021 to incentivize end users and retailers to use and sell tire-derived products.

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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.

The division assigns a score for illegal waste tire sites based on the number of tires, proximity to receptors, and topography of the site. These scores are used to prioritize sites for cleanup. 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 the department cleaned up in 2020.

Table 1: Abatement list ranking

Rank	Number of waste tires removed	Number of sites
HIGH	0	0
MEDIUM	19,876	8
LOW	3,464	2

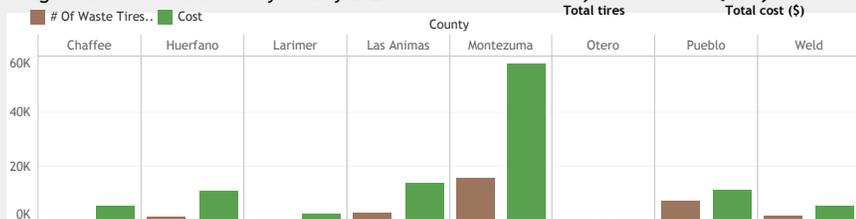
An estimated total of 23,340 waste tires have been removed across 7 Colorado counties.

Currently the department has identified 74 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 10 illegal waste tire cleanups in 2020 in seven counties (see "2020 cleanups by county" graph).

Illegal waste tire removals by county 2020

23,340 Total tires
\$78,660 Total cost (\$)



Of Waste Tires Removed and Cost for each County. Color shows details about # Of Waste Tires Removed and Cost.

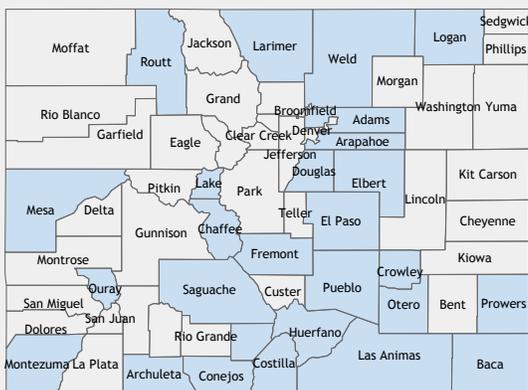
Collection events

Table 2: 2020 collection event details

In 2020, the department funded three 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 2021. The request form is available at www.colorado.gov/cdphe/illegal-waste-tire-cleanup-grants.

Collection Event Location	Final Cost	Number of tires collected
Kiowa County (Eads Landfill)	\$4,995.00	709
Rifle	\$2,511.00	837
Walsenburg	\$1,884.00	471

Illegal waste tire removals by county, 2010 to 2020



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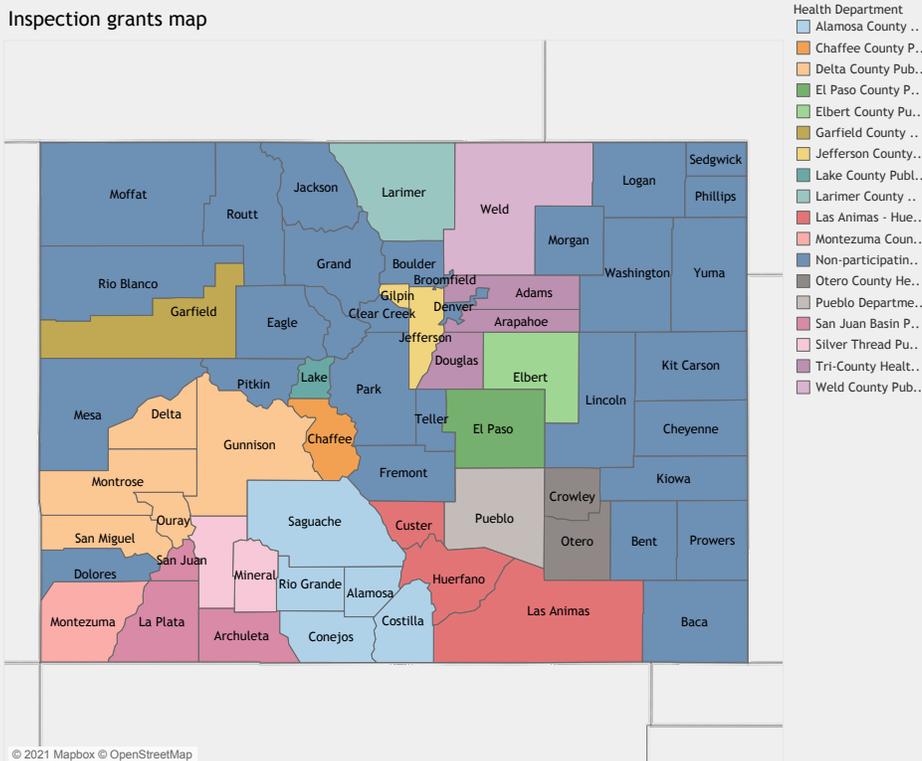
Waste tire inspection grants

In 2020, 16 local health agencies participated in the Waste Tire Inspection grant program, in which local governments conducted waste tire inspections on behalf of the department. Local partners conducted 404 inspections and technical assistance visits in 2020. 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. Local health agencies completed less inspections in 2020 than in 2019 because most local health agencies had to focus their attention on responding to the COVID-19 pandemic.

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, g) decals not being posted onsite, h) failure to secure waste tires and j) facilities not including the required language on a receipt or invoice for the sale of new tires. **The total amount reimbursed to local agencies in 2020 was \$62,562.**

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 was unable to conduct outreach in 2020 to promote this grant opportunity to local governmental agencies because of the COVID-19 pandemic.

Inspection grants map



* Alamosa County Public Health and San Juan Basin Public Health contracts ended June 2020 ** Silver Thread moved to limited Purchase Order for 2020

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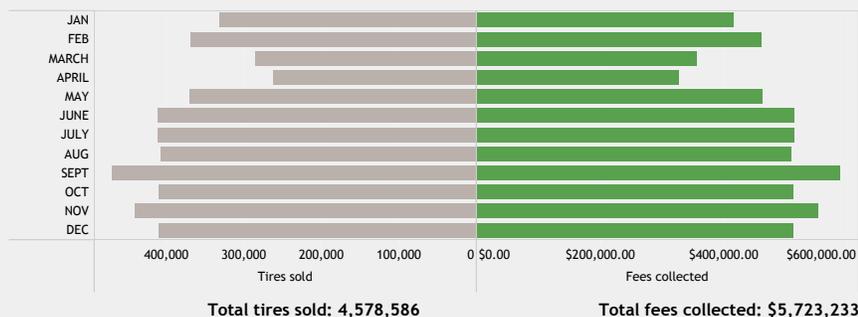
Fees and registrants

Waste tire fee

On January 1, 2020, the waste tire fee the program collects on the sale of each new motor vehicle tire and new trailer tire was increased to \$1.25. The Solid and Hazardous Waste Commission increased the Waste Tire Fee from \$0.55 to \$1.25 to fund the Waste Tire Administration, Enforcement and Cleanup Fund and the End Users and Market Development Funds that returned in 2020. Waste tire staff sent out postcards and emails at the end of 2019 to notify retailers about the fee increase. The division's waste tire webpage (<https://cdphe.colorado.gov/wastetires>) continues to provide information on the fee increase. Program staff and county contract inspection partners also notified retailers about the fee change throughout 2020.

In 2020, there were 2,266 active accounts for retailers who collect the waste tire fee, and 38 of these accounts were on-line retailers or retailers that do not generate waste tires as part of their business. Additionally, the program added 91 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, 2020



Inspections

Even with the COVID-19 pandemic prohibiting program staff from entering facilities to conduct inspections during part of the inspection season and program staff refocusing their inspection focus on waste tire processing facilities and monofills (as there had been a large uptick of non-compliance at waste tire processors and monofills over the last two years), program staff conducted 107 waste tire routine, complaint, and follow-up inspections and compliance assistance visits in 2020. The 107 inspections included evaluating the facility based on their registrant types, as a waste tire registrant can be registered in multiple registration categories. Of these 107 visits, 46 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 33 compliance advisories (informal enforcement actions) and two compliance orders (formal enforcement actions for non-compliance with waste tire laws and regulations). Of the 33 compliance advisories, the program issued 18 of them to waste tire haulers who did not submit the 2019 Commercial Waste Tire Hauler Annual Report.

In the past the program issued unilateral compliance orders, with an accompanying financial penalty, to those haulers that failed to submit Form WT-4. To improve proactive compliance and decrease administrative burden, a new provision in the solid waste regulations that would allow the program to withhold the annual hauler registration for those haulers that do not submit annual reports, was adopted by the Solid and Hazardous Waste Commission in February of 2020. In 2020, over half of the haulers who received a compliance advisory for failing to submit the Form WT-4 to the Department by April 1, 2020 had their registration as a waste tire hauler inactivated.

Program staff continued to process and issue waste tire registrations. In February 2020, the Solid and Hazardous Waste Commission adopted a provision that allows the division to withhold hauler registrations if they fail to submit their annual reporting form. The new provision has helped reduce the administrative burden of drafting compliance orders to gain compliance. Of the 370 waste tire registrations issued, 188 of the issued registrations were waste tire hauler renewals. In addition, 2,904 businesses were registered with the waste tire program in 2020, ranging from waste tire generators to waste tire collection facilities.

Waste tire registrants by type



*One registrant can be registered in multiple categories.