

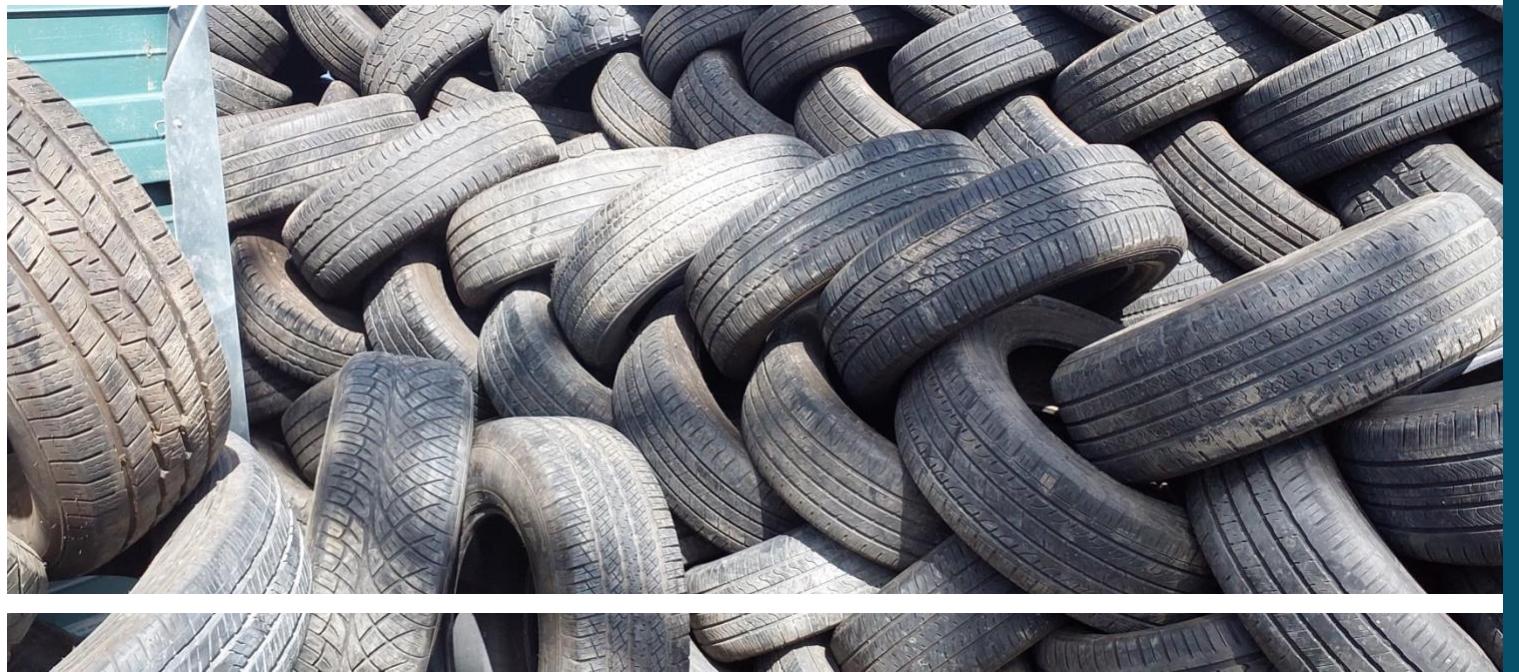


Report to The Legislature

Five-Year Plan for the Waste Tire Recycling Management Program

Thirteenth Edition: Covering Fiscal Years 2025-26 to 2029-30

July 1, 2025



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Publication # DRRR-2025-1752

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Acknowledgments

This report was prepared by CalRecycle staff from the Materials Management and Local Assistance Division; Waste Permitting, Compliance and Mitigation Division; Administration, Finance & Information Technology Services Division; Office of Public Affairs; and Legal Affairs Office. Staff would like to thank the tire recycling industry, environmental groups, local and state agencies, the regulated community, other CalRecycle programs, and interested parties that participated in the development of this plan.

Introduction

Five-Year Plan for the Waste Tire Recycling Management Program

[Senate Bill \(SB\) 876 \(Escutia, Chapter 838, Statutes of 2000\)](#) was enacted to provide a comprehensive measure to extend and expand California's regulatory program for the management of waste and used tires. The law's enactment, along with amendments to the California Public Resource Code (PRC), provide direction for the content contained in this document.

SB 876 requires the Department of Resources Recycling and Recovery (CalRecycle) to adopt and submit to the Legislature a Five-Year Plan (Plan) that includes proposed budget allocations and performance evaluation of elements prescribed by statute. The statute requires the department to update the Plan every two years. It also requires CalRecycle to include in the Plan the hierarchy used by the department to maximize productive uses of waste and used tires. The hierarchy provides guidance, not a rigid formula, in establishing priorities for the Waste Tire Recycling Management Program, including:

1. Source Reduction
2. Recycling
3. Transformation (energy recovery, tire-derived fuel)
4. Disposal

Goals

CalRecycle's goal, although not codified in statute, is that 75% of waste tires be recycled. Affiliated goals include:

- Developing long-term, sustainable, and diversified market demand for tire-derived products made in California.
- Ensuring the protection of public health, safety, and the environment while developing a safe and high-quality supply infrastructure to meet that demand.
- Fostering information flow, technology, and product development so environmental protection and diversion goals are achieved with supply and demand in balance.

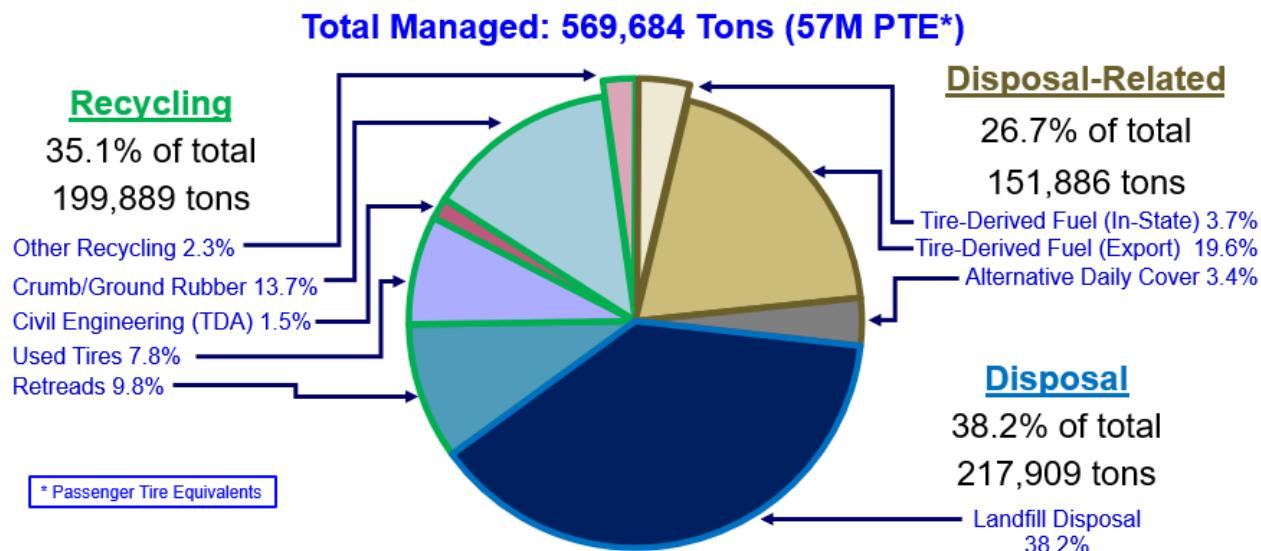
The activities described in this Plan are intended to increase the tire recycling rate through a combination of: research to address barriers to market growth for waste tire products and technologies; expanded marketing, outreach, and education; increased use of waste tire material in products; continued provision of incentives and grants; and enhanced waste tire processing capacity. Background information and previous Five-Year Tire Plans can be found on the CalRecycle [Five-Year Plan for the Waste Tire Recycling Management Program webpage](#).

Waste Tire Flow Data

This section is intended to provide insight into the scope of waste tire generation in California, specifically the total tires managed and waste tire flows. CalRecycle uses the most current data, which is taken from the 2023 market analysis report, and compares it to data from the previous year's market analysis report. This data helped to inform the funding of programs in this plan.

In 2023, an estimated 569,684 tons, or approximately 57 million passenger tire equivalents (PTEs), of California-generated waste tires were managed. This is slightly less than the 601,000 tons (~60 million PTEs) managed in 2022. California waste tires flowed to nine market segments, as shown in Figure 1.

Figure 1: California-Generated Waste Tire Flows in 2023



In 2023, the waste tire diversion rate increased to 61.8%, up from 50.4% in 2022. This includes all recycling activities, alternative daily cover (ADC), and tire-derived fuel (TDF). However, when excluding ADC and TDF, the recycling rate remained stagnant at around 35%. Tire landfill disposal fell from 49.6% in 2022 to 38.2% in 2023. TDF exports grew from 6.2% in 2022 to 19.6% in 2023, while in-state TDF decreased from 5.4% in 2022 to 3.7% in 2023. The use of used tires, tire-derived aggregate (TDA) in civil engineering projects, retreads, and crumb/ground rubber remained roughly the same when compared to 2022.

Increasing the tire recycling rate to 75% from 35% will necessitate a combination of the following activities:

- Conduct and apply research to identify new waste tire uses, address existing barriers to increasing markets for waste tire products, and encourage the use of technologies.

- Evaluate, assess, and promote emerging technologies that could result in additional tire recycling markets.
- Continue efforts to increase marketing, outreach, and education about tire-derived products.
- Increase the amount of tire material used in tire-derived products and expanding new uses in civil engineering applications.
- Continue to provide incentives, grants, and loans to expand markets and increase waste tire processing capacity to support new recycling markets.

Mexico/California Border Region Tire Flow Issues

CalRecycle remains committed to addressing solid waste, used tire, and waste tire issues in the Mexico/California border region by supporting and engaging with interested parties. The most recent example of the renewed commitment to addressing cross-border concerns is a Memorandum of Understanding (MOU) between the California Environmental Protection Agency (CalEPA) and the State of Baja California, signed in September of 2024 ([2024 Memorandum of Understanding](#)). The MOU strengthens the ongoing work in the border region that stems from past directives and goals outlined in legislation, planning documents, and funded projects since 2005.

CalRecycle will continue to provide technical assistance and facilitate knowledge transfer with the state of Baja California and the Mexican federal government to support their work to develop a waste tire recycling program and establish an overall statutory framework for tire management.

Since the last Plan report out, CalRecycle has:

- Finalized an illegal tire disposal report
- Funded border region cleanups and enforcement teams
- Facilitated the cleanup of waste tires
- Conducted compliance inspections on waste and used tire haulers destined for export.
- Begun modernizing the waste and used tire tracking system
- Provided several technical trainings to cross-border stakeholders in English and Spanish

CalRecycle's planned activities and support are outlined in detail in the Border Element section of this document.

CalRecycle Partnerships

CalRecycle continues to work in partnership with other state agencies on tire-related issues. These include:

- [The California Energy Commission](#)'s implementation of a statewide Replacement Tire Efficiency Program for passenger car and light-duty truck tires, ensuring that replacement tires sold in California are at least as energy efficient as those sold as original equipment on vehicles.
- The Department of Toxic Substance Control's (DTSC) efforts for the removal and replacement of [Zinc](#) and [6PPD](#) from motor vehicle tires under the Safer Consumer Products (SCP) regulations.
- DTSC's consideration of listing microplastics as a Candidate Chemical, which could lead to regulations for products that may release microplastics, such as tires or tire-derived products.

Tire Fee

[Assembly Bill \(AB\) 2836 \(Garcia, Chapter 355, Statutes of 2022\)](#) extended the \$1.75 California Tire Fee (fee) until January 1, 2034. Since 2005, the fee has been \$1.75, with \$1.00 allocated to CalRecycle and the remaining \$0.75 to the California Air Resources Board. The CalRecycle portion of the fee is used to fund activities in the Five-Year Tire Plan, including the permitting and enforcement of waste tire facilities, cleanup of waste tires at illegal waste tire facilities, and activities to promote waste tire recycling and market development.

This fee is assessed on the retail purchase of new tires intended for use with, but sold separately from, on-road or off-road motor vehicles, trailers, motorized equipment, construction equipment, or farm equipment. The fee also applies to new tires (including the spare) sold with the retail purchase of new or used motor vehicles, trailers, construction equipment, or farm equipment. The fee is a flat fee that does not consider the tire size, tire mileage ratings, or the type of vehicle the tire will be used on.

Program Elements

The Five-Year Plan is organized according to program elements identified in PRC section 42885.5(b):

- Enforcement and regulations related to the storage of waste and used tires
- Waste and used tire hauler program and manifest system
- Cleanup, abatement, or other remedial actions related to tire stockpiles throughout the state
- Research to promote and develop alternatives to the landfill disposal of tires
- Market development and new technology activities for waste and used tires
- California-Mexico border activities and support for waste and used tires

Each of the program elements consists of four sections:

1. **Program Background and Status:** This section includes background information, a summary of achievements, and an overview of planned activities.

2. **Objectives:** This section lists the objectives the program element is designed to achieve.
3. **Performance Measures:** This section identifies how activities in each program element are evaluated to meet objectives and goals. It also evaluates the efficacy of performance measures identified in the preceding Plan and includes performance measures for the current Plan.
4. **Activity Description and Budget:** This section includes an overall chart of element activities and describes each activity with associated budget information by fiscal year.

Table 1: Total Tire Program Funding for Fiscal Years 2025-26 through 2029-30 summarizes proposed expenditures for the 13th edition of the Plan, covering FYs 2025–26 to 2029–30. All grant programs are linked to their respective web pages. Additional details about each program element are included in this Plan. Background information and detailed descriptions of program areas are available on the CalRecycle website.

Table 1: Total Tire Program Funding for Fiscal Years 2025-26 through 2029-30

Program Areas	FY 2025–26	FY 2026–27	FY 2027–28	FY 2028–29	FY 2029–30
Enforcement of Waste and Used Tire Storage and Transportation Regulations					
Waste Tire Enforcement Support Activities	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
California Highway Patrol Agreement to Support Enforcement Activities	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
<u>Local Government Waste Tire Enforcement Grant Program</u>	\$6,250,000	\$6,250,000	\$6,250,000	\$6,250,000	\$6,250,000
Database System Maintenance and Enhancement	\$250,000	\$250,000	\$0	\$0	\$0
Tire Enforcement Inspector Technical Training	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Totals:	\$6,925,000	\$6,925,000	\$6,675,000	\$6,675,000	\$6,675,000
Waste and Used Tire Hauler Registration and Manifest Program					
Hauler Registration Program and Manifest System	\$925,000	\$925,000	\$975,000	\$975,000	\$975,000
Totals:	\$925,000	\$925,000	\$975,000	\$975,000	\$975,000
Cleanup, Abatement, or other Remedial Actions Related to Tire Stockpiles throughout California					
Short-term Remediation Projects	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
<u>Local Conservation Corps Grant Programs</u>	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000
<u>Local Government Waste Tire Cleanup Grant Program</u>	\$0	\$1,500,000	\$0	\$1,500,000	\$0
<u>Local Government Waste Tire Amnesty Grant Program</u>	\$1,500,000	\$0	\$1,500,000	\$0	\$1,500,000
Emergency Reserve Account	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
<u>Farm and Ranch Solid Waste Cleanup and Abatement Grant Program*</u>	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Totals:	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000

Research directed at promoting and developing alternatives to the landfill disposal of tires, market development, and new technology activities for waste and used tires					
Tire-Derived Aggregate Civil Engineering Technical Support	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Technology Center and Laboratory Testing Services	\$0	\$200,000	\$0	\$200,000	\$0
Rubberized Asphalt Concrete Technical Support	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Tire-Derived Aggregate & Rubberized Asphalt Concrete Research	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Environmental Studies and Research	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Waste Tire Technologies Evaluation and Development	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
<u>Tire-Derived Aggregate Grant Program</u>	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000
<u>Rubberized Pavement Grant Program</u>	\$6,571,315	\$6,371,315	\$6,771,315	\$6,571,315	\$6,771,315
<u>Tire Incentive Program</u>	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Tire Equipment Loan Program	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Tire Market Analysis and Support	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Tire Events	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Totals:	\$14,021,315	\$14,021,315	\$14,221,315	\$14,221,315	\$14,221,315
California-Mexico Border Support for Waste and Used Tire Activities					
Spanish Translation and Interpretation Services	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Totals:	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Administrative Costs					
Program Staffing	\$8,025,669	\$8,025,669	\$8,025,669	\$8,025,669	\$8,025,669
Administration	\$1,281,015	\$1,281,015	\$1,281,015	\$1,281,015	\$1,281,015
Mandatory Contracts	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Totals:	\$9,406,685	\$9,406,685	\$9,406,685	\$9,406,685	\$9,406,685
Total Spending Plan	\$38,818,000	\$38,818,000	\$38,818,000	\$38,818,000	\$38,818,000

Tire Program Spending Authority	\$38,818,000	\$38,818,000	\$38,818,000	\$38,818,000	\$38,818,000
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*The numbers in the table are projections of the funding amounts CalRecycle expects to be appropriated in future state budgets. These figures remain subject to revision.

Enforcement and Regulations Related to the Storage of Waste and Used Tires

Enforcement Program Background and Status

The Waste Tire Enforcement Program's primary goal is to manage and mitigate the impacts of tires on public health, safety, and the environment by ensuring that tire businesses comply with tire permitting, storage, movement laws, regulations, and state minimum standards. CalRecycle monitors compliance through integrated and consistent permitting, inspection, and enforcement efforts and by working closely with state and local government partners.

Inspection priorities proposed for this planning period focus on sites with the highest potential to impact public health and the environment, while also helping to maintain a level playing field in the waste tire industry. CalRecycle inspectors respond to complaints about illegal operations, including illegal baling operations. In addition, CalRecycle contracts with the California Highway Patrol to conduct unannounced checkpoints several times a year. These efforts help identify illegal haulers and illegal operations. All parties involved, including those hauling to and/or operating an illegal site, are liable under the law.

Waste and used tire movement laws utilize a manifest system to track the transportation of waste and used tires throughout the state. The historic paper manifest system is being transitioned to an electronic manifest system, which will allow for more efficient identification of anomalies that may indicate illegal site operations. The transition will also strengthen the manifesting system by requiring real-time reporting, the use of CalRecycle-authorized systems, and reducing opportunities for fraudulent paper manifests.

Participation in the electronic system is not yet required by regulation. However, legislation adopted through [SB 1181 \(Hueso, Chapter 542, Statutes of 2022\)](#) updated the Waste Tire Act in the PRC to authorize CalRecycle to revise the "California Uniform Waste and Used Tire Manifest" system to collect data in the form it requires, which could be electronic. To date, the electronic manifest system has been designed and some registered haulers are voluntarily using the mobile application ahead of the formal rulemaking process. Approximately 807 out of 1,184 registered haulers are currently using the electronic manifest system voluntarily.

Waste tire laws require operations, including baling operations that store between 500 and 4,999 tires, to obtain a minor waste tire permit, and those storing over 5,000 tires to

obtain a major permit. Requiring baling operations to obtain a minor or major waste tire facility permit, not incumbent on tire storage limits, would require a statute change.

During inspections, CalRecycle determines the number of tires at a site based on several scientific calculation methods. When CalRecycle measures the volume of waste tire piles using the Volumetric Calculation Count Method, standards used are based on a 1996 study conducted by California State University, Fresno. To ensure that CalRecycle maintains proficient industry standards while preserving the current stringent state protocols and procedures, a new waste tire count methodology study will be initiated during this planning period to update calculation methodologies.

CalRecycle's Waste Tire Enforcement Program background is detailed in prior 5-year tire plans available on CalRecycle's [Five-Year Plan for the Waste Tire Recycling Management Program](#) webpage. More detail about the legislative history of the program is contained in the [Five-Year Tire Plan for the Waste Tire Recycling Management Program Report to the Legislature](#) dated September 2001.

Objectives

The enforcement program has the following objectives:

1. Inspect tire businesses on a routine basis to ensure compliance with all state tire permitting, storage, movement laws, regulations, and state minimum standards.
2. Survey for illegal dumping, storage, and movement of tires; identify and investigate all suspected illegal tire sites; and respond to complaints.
3. Bring all known sites that are operating illegally, without proper permits and/or operating outside the terms and conditions of their permits or state minimum standards, into compliance through progressive enforcement, and take enforcement actions as needed to correct violations.
4. Support existing and new waste tire enforcement grantees by providing stable funding, training, and ongoing technical assistance.
5. Manage a tire database that will collect, store, and report the necessary information for an effective program.

Evaluation of Success Based on Performance Measures Identified in the Previous Plan

The effectiveness of the "Enforcement and Regulations Related to the Storage of Waste and Used Tires Program" is evaluated based on past performance measures outlined in the 12th edition of the Five-Year Tire Plan (Fiscal Years 2023-24 to 2027-28).

- **Inspect all active major and minor permitted facilities in California at least once every 12 months.**

- As of December 30, 2024, there were 33 major and minor waste tire facilities in California. In the preceding 12 months:
 - 33 (100%) facilities were inspected at least once.
 - 10 of the 33 facilities were inspected 2 times
 - 2 of the 33 facilities were inspected 3 times
 - 2 of the 33 facilities were inspected 5 times
 - All inspections were conducted unannounced
- **Inspect all active registered and exempt haulers located in California at least once every 24 months.**
 - As of December 30, 2024, there were 1,876 registered and exempt waste tire haulers in California. In the preceding 24 months, 1,812 (96.6%) were inspected at least once.
- **Inspect all active tire generators and end-use facilities located in California at least once every 36 months.**
 - As of December 24, 2024, there were 18,636 active generators in California. In the preceding 36 months, 18,258 (98%) were inspected at least once.

2. Noncompliant Tire Businesses

- **Take timely progressive enforcement actions on illegal, unpermitted waste tire facilities and hauling violations.**
 - For the period of January 1, 2022, to December 31, 2023, staff issued a total of eight enforcement actions. All eight involved illegal unpermitted facilities, with one also addressing hauling program violations. One enforcement action was issued to a permitted waste tire facility for illegally operating outside the terms and conditions of its permit.
 - The enforcement actions for this period included five cleanup and abatement orders and three administrative complaints.
- **Report the number of illegal sites remediated through the enforcement program.**
 - For the time period from January 1, 2022, to December 31, 2023, seven illegal sites were remediated, resulting in the removal of 49,376 waste tires. One permitted facility operating illegally outside the terms and conditions of its permit was ordered to remove 117,813 waste tires to bring the facility into compliance with its permitted capacity. In total, these enforcement actions resulted in the removal of 167,189 waste tires.

- **Track the number of penalties levied for violations pertaining to waste and used tires.**
 - From January 1, 2022, to December 31, 2023, three enforcement cases against waste tire facilities were resolved, resulting in assessed penalties totaling \$2,472,000. Of this amount, \$2,372,000 was to be paid, while \$100,000 was held in abeyance pending continued compliance. In two of these enforcement actions, property owners are unlikely to pay their assessed penalties. If that occurs, liens will be recorded on the properties, and the assessed penalties will be collected when the properties are sold. It should be noted that prior to initiating tire enforcement actions, CalRecycle typically issues a notice of violation, either through a letter or inspection reports, provides information on how to comply with the law, and provides a period of time for entities to correct the violations before further enforcement action is taken.

3. Grant Program

- **Provide training to Tire Enforcement Agent (TEA) grantee inspectors.**
 - CalRecycle conducted grant administration training webinars for TEAs in June 2023 and June 2024. In April 2024, CalRecycle held the Technical Training Series virtually and in person.
 - CalRecycle continues to train and approve individual TEA inspectors as they enter the program. From January 1, 2022, to December 31, 2023, CalRecycle staff trained and certified a total of 71 waste tire inspectors and participated in 115 joint inspections. CalRecycle also provides ongoing outreach to TEAs regarding waste tire regulations, inspection and enforcement procedures, tire enforcement legal issues, and surveillance resource options.
- **Report on TEA grantee performance.**
 - The following table provides aggregated data from all TEA29 and TEA30 grantees.

Table 2: Local Government Waste Tire Enforcement Program Performance

	TEA29 (FY21-22)	TEA30 (FY22-23)	% Difference
Grant Term End Date	9/30/23	9/30/24	n/a
Notices of Violation (NOV) Issued	208	236	13%
NOVs Brought into Compliance	148	189	28%
Percent of NOVs Brought into Compliance	71%	80%	9%
Hauler Reports Submitted	60	309	415%
Number of Tires Found	8,279	14,119	71%

Number of Tires Removed	7,561	8,469	12%
Number of Tire Piles Found	762	1,109	46%
Number of Inspections Completed	8,893	11,637	31%
Number of Inspections Planned	12,852	13,743	7%
Percent of Planned Inspections Completed	69%	85%	16%
Number of Priority Inspections in Work Plan	5,517	6,036	9%
Number Completed Priority Work Plan Inspections	4,553	5,287	16%
Percent of Work Plan Inspections Completed	83%	87%	4%
Percent of Grantee Budgets Expended	62%	66%	4%

Performance Measures Identified for This Plan

The “Enforcement of the Storage of Waste and Used Tires Program” will use the following measures to evaluate success in achieving its objectives. The efficacy of these measures will be assessed and reported in the next edition of the Five-Year Tire Plan.

1. Inspections

- Inspect all active major and minor permitted facilities in California at least once every 12 months.
- Inspect all active registered haulers located in California at least once every 24 months.
- Inspect tire-related businesses and end-use facilities with the highest potential to impact the environment and public health located in California at least once every 36 months.

2. Noncompliant Tire Businesses

- Take timely, progressive enforcement actions on illegal, unpermitted waste tire facilities and hauling violations.
- Report the number of tires cleaned up as a result of progressive enforcement.
- Track penalties levied for violations pertaining to waste and used tires.

3. Grant Program

- Provide training to TEA grantee inspectors.
- Report on TEA grantee performance.

Activity Description and Budget

The Waste Tire Enforcement Program carries out statewide enforcement by partnering with local TEA grantees in participating jurisdictions and utilizing state enforcement team resources in the remaining areas. The program provides ongoing assistance to local jurisdictions and oversees enforcement activities, including conducting inspections, surveying for illegal activity, maintaining a program case database, conducting

enforcement, and coordinating with internal and external partners as needed to ensure compliance with the law. The program also monitors emerging trends in the industry.

CalRecycle provides onboarding training for new TEA inspectors, conducts annual joint TEA inspections, and organizes workshops and roundtables to support ongoing compliance verification, violation detection, and enforcement case development. These efforts help maintain a high level of competence among all local government waste tire inspectors working in the TEA Grant Program.

Table 1 lists the activities and associated budgets that support the Waste Tire Enforcement Program in carrying out the “Enforcement and Regulations Relating to the Storage of Waste and Used Tires” element.

1. Waste Tire Enforcement Support Activities

The activities in this line item support the overall mission of enforcing the laws regarding the hauling, storage, and disposal of waste and used tires in California. This includes intensive focus on activities along the California-Mexico border region and illegal activities related to the export of tires through California ports. Funds will be allocated to the following projects:

- Investigation Database Subscriptions**

CalRecycle purchases access to investigation databases to properly locate and serve responsible parties with notices when environmental violations have been documented.

- Waste Tire Conversion Calculation Re-evaluation**

CalRecycle will procure contractor support and/or execute an interagency agreement to evaluate any changes in the average industry-standard tire size and weight. The goal is to develop and implement revised passenger tire equivalent (PTE) conversion factors and volumetric estimation methods used by inspectors to estimate the number of waste tires in tire piles.

- Surveillance Equipment and Assistance**

To support CalRecycle’s field investigations and surveillance, the program purchases equipment and services to collect field data. Equipment may include, but is not limited to, measuring devices, cameras, drones, aerial or satellite imagery services, GPS devices, and handheld mobile tablets and devices. CalRecycle also will continue its agreement with the California Air Resources Board for technical support with surveillance cameras used in investigations conducted by CalRecycle and local waste tire enforcement grantees.

2. California Highway Patrol Agreement to Support Enforcement Activities

The CHP will continue its support of CalRecycle's field efforts in the areas of ground and aerial surveillance, covert and overt investigations, inspector security, training for state and local law enforcement officers, and roadside checkpoints. The CHP also assists CalRecycle and local TEAs in efforts to detect and deter waste tire facility and hauling violations. This effort also includes surveillance and enforcement support focused on illegal activities related to tire exports through California ports and in the California-Mexico border region.

3. Local Government Waste Tire Enforcement (TEA) Grant Program

The TEA Grant Program is a critical component of California's waste tire enforcement infrastructure. It provides noncompetitive grants to cities and counties to perform local waste tire inspection and enforcement activities, augmenting CalRecycle's efforts to oversee the proper management and flow of waste tires throughout the state. The program helps ensure consistent, statewide inspection and enforcement coverage in a cost-effective manner. It also leverages the unique local knowledge of city and county inspectors to support proper management of California's waste tires. The TEA Grant Program webpage is hyperlinked in Table 1 and contains more information about the program's history and eligibility requirements.

4. Database System Maintenance and Enhancement

The Waste Tire Management System (WTMS) tracks tire enforcement and manifest program activities, including waste tire generators, registered waste tire haulers, permitted and unpermitted end-use facilities, manifest forms, inspection records, and enforcement actions. Initially released in July 2003 and developed in accordance with an approved feasibility study, WTMS received a technical upgrade in 2019. It continues to support program activities but requires upgrades to meet modernization requirements and leverage new technologies that enhance enforcement and investigations. WTMS is currently undergoing another upgrade as part of CalRecycle's enterprise-wide database development program. It will continue to support existing functions, including integration with electronic mobile manifesting applications. Funding for this activity is included in the Hauler Program's proposed allocations to support the continued implementation of electronic mobile manifesting.

5. Tire Enforcement Inspector Technical Training

These funds are used to supplement the tire portion of [CalRecycle's Local Enforcement Agency/Tire Enforcement Agency Technical Training Series](#). The training provides inspectors and managers with up-to-date information on CalRecycle's waste tire management policies, programs, and grants through concurrent technical sessions. Field tours are also included to provide operational working knowledge of waste tire management practices and operations. The training

series provides an opportunity to share experiences, discuss best practices, and address emerging challenges or threats with other local enforcement agencies, tire enforcement agencies, CalRecycle staff, and industry representatives.

Waste and Used Tire Hauler and Manifest Program

Hauler and Manifest Program Background and Status

The Waste and Used Tire Hauler and Manifest Program carries out and enforces two program components: 1) registration and 2) manifests. CalRecycle registers California waste and used tire haulers annually, provides education and training on program and manifesting requirements, conducts inspections, and takes any necessary enforcement actions to ensure entities comply with the law.

The manifest system tracks the movement of waste and used tires throughout the state, documenting an average of over 130 million tire pick-ups and drop-offs annually. Advancements in mobile devices and application platforms, now widely utilized for business and personal use, have created new opportunities to make electronic mobile manifesting apps more available to registered haulers in the Waste Tire Program.

SB 1181 allows CalRecycle to require data submittal in the format needed, including the use of an electronic format for the California Uniform Waste and Used Tire Manifest in lieu of a paper form. CalRecycle has begun implementing electronic mobile manifest submittal options to modernize the waste and used tire tracking system and increase data accuracy, participant compliance, and accountability.

Additional background on the Hauler and Manifest Program, and its legislative history, is detailed in prior 5-year tire plans and on the [Used and Waste Tire Haulers: Tire Management](#) webpage.

Objectives

The Hauler and Manifest Program has the following objectives:

1. Manage a tire database that will collect, store, and report the information necessary to effectively track the movement of waste and used tires and regulate manifest usage.
2. Support CalRecycle's waste tire enforcement program by providing comprehensive and auditable data on waste tire transactions between generators, haulers, and end-use facilities, thereby implementing SB 876 and SB 1181 and reducing illegal waste tire disposal.
3. Upgrade the paper manifest system to a modern, efficient electronic system that ensures quality data collection, compliance from the regulated community, and equitable access for stakeholders.

4. Engage regulated entities in the transition to modernized electronic manifest system submittal options.
5. Provide information on tire movements within the state and across borders to support tire diversion and market development activities.
6. Ensure compliance by generators and haulers with hauling and manifesting laws, and bring noncompliant entities into compliance through outreach, education, training, and progressive enforcement.

Evaluation of Success Based on Performance Measures Identified in the Previous Plan

The effectiveness of the Hauler and Manifest Program is evaluated based on past performance measures outlined in the 12th edition of the Five-Year Tire Plan (Fiscal Years 2023-24 to 2027-28).

1. Increase the number of registered haulers submitting manifests electronically into WTMS.

From January 1, 2022, to December 31, 2023, registered haulers submitted 1,174,377 manifests to WTMS. Of that total, 731,854 manifests, or 63%, were submitted electronically, while the remaining 37% were submitted using the paper Comprehensive Trip Log. CalRecycle continues to provide outreach, education, and training to haulers to increase the number of electronic submittals, with a goal of transitioning to 100% electronic manifests submittals.

2. Reduce the number of registered waste tire haulers that do not submit manifests to no more than 5% of the active tire haulers.

From January 1, 2022, to December 31, 2023, 85 of the 1,560 registered waste tire haulers (5.4%) failed to submit waste tire manifests. Of those 85 haulers, 54 (or 63.5%) have only been registered haulers since January 2023. The hauler program provides educational outreach documents to all new haulers regarding manifesting requirements, and further education occurs in person during the initial compliance inspection.

3. Reduce the percentage of active tire haulers whose manifest form error rate is greater than 10%.

As of December 2024, 289 of the 1,560 active registered waste tire haulers (18.5%) who submitted 100 or more manifests per year had an error rate greater than 10%. SB 1181 allows CalRecycle to require the electronic submittal of manifests. Electronic submittal is expected to significantly reduce the error rate.

4. Track the number of: 1) complaint forms (204 Forms) received from solid waste disposal sites and waste and used tire facilities, which document unregistered hauling vehicles transporting more than 10 tires; 2) hauler observation forms reporting waste tire haulers that may be violating hauler and manifest requirements; and 3) waste tire complaints received from the public.

From July 1, 2022, to June 30, 2024, a total of 866 complaint forms (204 Forms) were received. Of that total, 589 complaints were from authorized disposal sites reporting alleged unregistered tire hauler vehicles hauling more than 10 tires. The vehicle owners associated with these complaints were issued warnings for unregistered waste tire hauling. Additionally, for the reporting period, 251 Hauler Observation Reports were received from the public and submitted to staff for further investigation.

5. Monitor the quantity of waste and used tires being picked up and delivered annually.

From January 1, 2022, through December 31, 2023, the approximate annual average waste and used tires picked up was 68,800,000, and the number delivered was 69,200,000.

Table 3: Pickups and Deliveries of Waste and Used Tires within California

Load Date Year	Pickups in CA (PTEs)	Deliveries in CA (PTEs)
2022	67,009,527	69,354,323
2023	70,643,472	69,160,524

Performance Measures Identified for This Plan

The Hauler and Manifest Program will use the following measures to evaluate success in achieving its objectives. The efficacy of these measures will be assessed and reported in the next edition of the Five-Year Tire Plan.

1. Increase the number of registered haulers submitting electronic manifests into WTMS.
2. Track, report, and follow-up on complaints and referrals received from:
 - o 204 Forms from solid waste disposal sites and waste and used tire facilities documenting unregistered hauling vehicles transporting over 10 tires,
 - o Hauler observation reports identifying waste tire haulers that may be violating waste tire hauler and manifest requirements, and
 - o The public.

3. Monitor and report the quantity of waste and used tires being picked up and delivered annually.

Activity Description and Budget

The Waste and Used Tire Hauler and Manifest Program carries out statewide enforcement, hauler registration, and manifesting program components necessary to engage with California's 30,000 waste tire-related entities. CalRecycle registers California waste and used tire haulers, provides education and training on program and manifesting requirements, and conducts inspections and enforcement activities.

One program component is to provide ongoing education and training to waste tire haulers as part of their annual registration renewal process, informing them of their roles and responsibilities under California's waste tire compliance system. Training will be conducted both in person and virtually, with recorded sessions available on demand. CalRecycle will continue conducting free, bilingual training workshops throughout California, with a special emphasis on the California-Mexico border region.

The Hauler and Manifest Program budget line item is shown in Table 1 and covers the cost of registration and tire program identification materials, manifest documents, and the transition to electronic mobile manifesting electronic systems.

Hauler Program and Manifest System

Waste Tire Hauler Registration: CalRecycle costs associated with waste and used tire hauler registration include printing registration application materials, registered waste tire hauler decals and certificates, Tire Program identification number certificates, and training and education materials.

Waste Tire Manifest Program: The Waste Tire Manifest Program costs include printing, mailing, and return postage, and post office handling for the Comprehensive Trip Log (CTL) waste tire manifest forms that are provided free of charge to California's approximately 1,400 registered waste tire haulers. Costs also cover contractor support to scan and manually enter data from the returned CTL forms. The program also produces training and education materials to instruct haulers and facilities on proper manifesting procedures.

Waste Tire Electronic Manifesting: CalRecycle will continue implementing an electronic mobile manifest application to modernize the waste and used tire tracking system to transition from the paper-based system. The waste tire regulations in Title 14, California Code of Regulations, section 18449 et seq., will be updated to be consistent with authorizations in SB 1181. This shift will streamline the manifesting process,

improve data accuracy, enhance oversight of waste tire transportation and handling, and strengthen the waste tire manifest system to better track the number of used tires flowing from California to other states and Mexico. Data will aid in working with border agencies to best inform program needs and developments. Funds from the Waste Tire Enforcement Support Activities have been redirected to this activity to support the manifest modernization project.

Cleanup, Abatement, or Other Remedial Actions Related to Tire Stockpiles Throughout the State

Cleanup Program Background and Status

The cleanup program consists of short-term remediation projects, four grant programs, and the emergency reserve account.

Since 1995, CalRecycle has removed more than 660,000 tons of illegal waste tires and contaminated debris from 83 sites at a total cost of more than \$43 million. While the number of sites remediated each year has generally decreased since 1999, cleanup costs have varied significantly depending on the number of large or complex projects undertaken in any year. To review the annual costs and tons remediated since 1999, refer to Table 4 in the 12th edition of the [Five-Year Tire Plan](#).

The Local Government Waste Tire Cleanup Grant Program provides funding to California jurisdictions, including cities, counties, special districts, other political subdivisions, and jurisdictions joined together by formal agreements, as well as qualifying California Native American tribes that are eligible for the cleanup of tires illegally disposed of along rights-of-way and on private property. Since 1997, CalRecycle has provided almost \$19 million to fund 324 grants. The three most recent fiscal years funded a yearly average of 19 grants and \$1,491,855. Due to increased concerns about waste tires in the border region and disadvantaged communities, CalRecycle will prioritize applicants with tire piles in disadvantaged and border communities located in San Diego and Imperial counties.

The Local Government Waste Tire Amnesty Grant Program provides funding to California jurisdictions, including cities, counties, special districts, jurisdictions joined together by formal agreements, and qualifying California Native American tribes, to hold collection events in convenient locations for the public to bring in their waste tires for free. Since 1992, CalRecycle has provided almost \$20 million in funding by awarding 618 grants. The three most recent fiscal years funded a yearly average of 37 grants and \$1,729,400. Due to increased concerns about waste tires in the border region and disadvantaged communities, CalRecycle will give priority to applicants holding amnesty events in disadvantaged and border communities located in San Diego and Imperial counties.

The Governor's Budget annually allocates \$5 million from the tire fund to the Local Conservation Corps (LCCs) Grant Program. CalRecycle encourages LCCs to assist

jurisdictions with cleanup and amnesty grant events, as leveraging these resources could enable more jurisdictions to receive grants for this purpose.

Ways applicants might coordinate with LCCs include, but are not limited to, assisting with planning or running amnesty events, creating and distributing public education and advertising materials, and covering the cost of tire hauling.

Objectives

The Cleanup Program has the following objectives:

1. Eliminate illegal waste tire stockpiles throughout California, either directly or through grant assistance, where the responsible parties have failed to take appropriate action.
2. Decrease illegal waste tire dumping by assisting local governments with grant funds to develop public education materials on proper maintenance and disposal of automobile tires, and to promote waste tire amnesty events for the general public.
3. Assist victims of illegal dumping on farm and ranch properties in cleaning up waste tires.
4. Direct tires from cleanup activities to productive end uses rather than landfill disposal, to the greatest extent possible within reasonable cost parameters
5. Prioritize cleanup efforts in disadvantaged and border communities located in San Diego and Imperial counties.

Evaluation of Success based on Performance Measures Identified in the Previous Plan

The Cleanup Program's effectiveness is evaluated based on past performance measures outlined in the 12th edition of the Five-Year Tire Plan (2023-24 to 2027-28).

- 1. Complete the short-term waste tire remediation projects referred by the enforcement program in a timely manner and report the status of projects to CalRecycle on an annual basis.**

No tire remediations were performed in FY 2023/24. One enforcement case was referred, but while it was under review, the private party opted for private remediation.

- 2. Quantify the number of tires collected through the farm and ranch cleanup, tire cleanup, tire amnesty, and local conservation corps grants.**

Table 4: Waste Tires Collected by Grant Program

Grant Program	FY 2019–20	FY 2020–21	FY 2021–22	FY 2022–23
Farm and Ranch Solid Waste Cleanup and Abatement	1,440	509	1,024	Open Grants
Local Government Waste Tire Amnesty	332,308	No Grant Cycle	317,447	No Grant Cycle
Local Government Waste Tire Cleanup	No Grant Cycle	240,908	No Grant Cycle	Open Grants
Local Conservation Corps	90,527	90,443	97,409	116,781

CalRecycle will conduct outreach in the border region, in collaboration with CalEPA's Border Affairs Office, to increase awareness of the Local Government Waste Tire Cleanup and Local Government Tire Amnesty grant programs. CalRecycle will also increase outreach in disadvantaged communities.

3. Increase the number of tires collected in disadvantaged and border communities located in San Diego and Imperial counties.

During FY 2021–22, the TA6 grant reported the collection of 9,616 tires in disadvantaged and border communities in San Diego and Imperial counties. During FY 2022–23, the TCU18 grant reported the collection of over 25,341 tires in disadvantaged and border communities in San Diego and Imperial counties.

Performance Measures Identified for This Plan

The Cleanup Program will use the following measures to evaluate success in achieving its objectives. The efficacy of these measures will be assessed and reported in the next edition of the Five-Year Tire Plan.

1. Complete the short-term waste tire remediation projects referred by the enforcement program promptly and report the status of projects to CalRecycle on an annual basis.
2. Increase the number of tires collected through Farm and Ranch Cleanup, Tire Cleanup, Tire Amnesty, and Local Conservation Corps grants by 10 % annually.
3. Increase the number of tires collected in disadvantaged communities and San Diego and Imperial counties.

Activity Description and Budget

The Cleanup Program will continue to clean up illegal tire piles with CalRecycle-managed contractors and grants. The Local Conservation Corps will continue to assist

local governments with cleanup and collection activities. Also, CalRecycle will continue an emergency reserve account, which cannot exceed \$1,000,000, as directed by SB 876.

CalRecycle is proposing to continue funding the following initiatives:

- Short-Term Remediation Projects
- Local Conservation Corps Grant Program
- Local Government Waste Tire Cleanup Grant Program
- Local Government Waste Tire Amnesty Grant Program
- Emergency Reserve Account
- Farm and Ranch Solid Waste Cleanup and Abatement Grant Program

Tire cleanup activities and associated budget line items are shown in Table 1. Also provided in Table 1 are the grant programs within the Cleanup Program, which are hyperlinked to each grant webpage.

Research Directed at Promoting and Developing Alternatives to the Landfill Disposal of Tires, Market Development, and New Technology Activities for Waste and Used Tires

Program Background and Status

The Research and Market Development Program background is also detailed in prior 5-year tire plans and on the [Five-Year Plan for the Waste Tire Recycling Management Program](#) webpage.

Objectives

The research and market development element has the following objectives:

1. Conduct research and establish programs that support and promote new technology, new uses for waste tires, and improvements to products that use California-generated waste tires and tire-derived material.
2. Identify research gaps in existing data and determine what areas need further investigation.
3. Increase the use of Rubberized Asphalt Concrete (RAC) and Tire-Derived Aggregate (TDA) by providing funds and technical assistance to state agencies, local governments, and businesses.
4. Increase the purchase of Tire-Derived Products (other than RAC or TDA) by providing services and funding to offset costs and promote sustainable purchase practices.
5. Increase the production capability and cost-effectiveness of processing waste tires into value-added products by offering incentives to businesses.

To increase waste tire usage, CalRecycle continues to offer rubberized pavement, TDA, and TDP grant programs, in addition to a tire incentive program. CalRecycle continues to address the lack of familiarity with the use of waste tires in civil engineering applications, specifically TDA and RAC, by increasing outreach efforts through more focused technology exchange to local and state governments, contractors, and engineers. CalRecycle's outreach efforts resulted in the construction and design of numerous projects, including TDA use in the expansion of the Bay Area Regional Transit (BART) light rail projects, the introduction of low-impact TDA infiltration galleries,

and the integration of new rubber paving technologies, such as warm mix, into CalRecycle's Rubberized Pavement Grant Program. The success of these efforts demonstrates that technical challenges and environmental concerns can be overcome to create long-term, sustainable markets for both TDA and RAC.

Higher value-added products (per PRC 42872(g)) remain a focus area for CalRecycle. To help expand this market segment, CalRecycle continues to pursue the following:

- The Tire Market and Support (TMAS) contract supports the organization and the implementation of tire conferences, providing a platform for waste tire stakeholders to collaborate and discuss the latest national and international tire issues, new tire processing and recycling technologies, and industry trends.
- The Tire Incentive Program (TIP) supports higher value-added products by incentivizing manufacturers to produce and sell products using crumb rubber, including fine (≤ 50) mesh, devulcanized, and end-of-life materials, which may be combined with other virgin materials. This innovative effort is aided by a contract that provides technical assistance to manufacturers to produce higher value-added products with crumb rubber or increase the percentage of crumb rubber used in products (e.g., traffic device bases, rubber tiles, various roofing shingles, anti-fatigue mats, weight plates, underlayment, ADA transitions, pipe sealant/couplings, and ballistic tiles).

Evaluation of Success based on Performance Measures Identified in the Previous Plan

The effectiveness of the market development program is evaluated based on past performance measures outlined in the 12th edition of the Five-Year Tire Plan (2023-24 to 2027-28).

1. Increase the amount of waste tires recycled to 75%.

- The 2023 waste tire recycling rate is estimated at 35.1%, a 0.4% increase from the recycling rate in 2022. Additionally, landfill disposal decreased in 2023 to 217,909 tons, a 26.9% decrease from 2022.

2. Conduct research to address critical barriers to increasing markets for waste tire products and technologies and incorporate research findings in education, marketing, and outreach materials to continue to promote these applications.

- Recent CalRecycle research efforts included the investigation of the feasibility and benefits of incorporating pelletized rubber additives and other dry processes into pavement, which does not require specialized equipment. In an agreement

with Stanislaus County, CalRecycle constructed pavement test sections to evaluate the constructability of pavement using pelletized rubber additives and construction performance via performance testing and monitoring. This demonstration project will assist CalRecycle in determining if pelletized rubber additives would be a viable technology that CalRecycle could promote, potentially increasing waste tire recycling in California and making utilization of RAC a more viable alternative in rural areas of California.

3. Increase the amount of waste tire material used in priority market segments, including RAC, molded and extruded products, and civil engineering.

According to the [2023 California Waste Tire Market Report](#):

- California producers shipped 49,000 tons (4.9 million PTEs) of crumb rubber for use in asphalt paving projects in 2023, the same number shipped in 2022.
- Crumb/ground rubber production remained stable in 2023 at 78,159 tons (7.8 million PTEs, 13.7% of the end-use total for California-generated waste tires), driven by a stable demand in the paving, molded/other product, and crumb rubber market segments.
- In 2023, TDA used in civil engineering applications increased by 17.8%, totaling 8,682 tons (0.87 million PTEs or 1.5% of all waste tires managed), compared to 7,371 tons (0.7 million PTEs or 1.2% of all waste tires managed) in 2022.

4. Support the increase in waste tire processing capacity to facilitate the 75% recycling goal.

- Expanding capacity is a demand-driven decision for businesses, so CalRecycle is actively working to increase demand for products made with tire-derived materials. CalRecycle accomplishes this by providing financial assistance through various market development grants, offering technical assistance, and performing market-based research. More specifically, CalRecycle's Tire Incentive Program expands demand for higher value-added tire-derived products (TDPs) by providing financial incentives to eligible manufacturers to competitively price and market their TDPs, thereby increasing sales and market share.
- In April 2024, the maximum grant award was increased from \$500,000 to \$650,000. At the time of the criteria change, several existing grantees were consistently maximizing their grant awards before the end of the two-year grant term and were incentivized to invest in and utilize more California-derived crumb rubber. The increased maximum grant award within this market development grant program supports CalRecycle's overall goal of increasing waste tire processing through crumb rubber production and usage.

Performance Measures Identified for This Plan

The market development program will use the following measures to evaluate success in achieving its objectives. The efficacy of these measures will be assessed and reported in the next edition of the Five-Year Tire Plan.

1. Increase the amount of waste tires recycled to 75%.
2. Conduct research to address critical barriers to increasing markets for waste tire products and technologies (e.g., manufacturing rubber products using crumb rubber, innovative RAC applications, tire rubber devulcanization, turf field health and environmental concerns) and incorporate research findings in education, marketing and outreach materials to continue to promote these applications.
3. Increase the amount of waste tire material used in priority market segments, including RAC, molded and extruded products, and civil engineering.
4. CalRecycle, through the Tire Equipment Loan Program, will provide low-interest loans for equipment purchases for tire-derived product manufacturing to encourage tire recycling manufacturers to site new facilities and expand existing operations. The goal is to utilize the full allocation, resulting in 1-2 loans each year.

Activity Description and Budget

CalRecycle is proposing to continue funding the following initiatives:

- TDA Civil Engineering Technical Support
- TDA and RAC Technology Center and Laboratory Testing Services
- RAC Technical Support
- TDA and RAC Research
- Environmental Studies and Research
- Waste Tire Technologies Evaluation, Investigation, and Development
- TDA Grant Program
- Rubberized Pavement Grant Program
- Tire Incentive Program
- Tire Market Analysis and Support
- Tire Events

All Research and Market Development Program activities and budget line items are in Table 1.

- **TDA Civil Engineering Technical Support**

CalRecycle will continue to provide technical support to address issues associated with the use of TDA in civil engineering projects. CalRecycle's technical support efforts will promote the use of TDA through technical assistance and targeted outreach to industry, associations, and other potential TDA users. The technical assistance contractor will serve as a CalRecycle liaison

at various workshops and conferences and provide education and technical assistance to public and private entities interested in TDA for civil engineering projects (e.g., retaining wall backfill, lightweight fill, vibration attenuation, stormwater management, gas collection). CalRecycle will also direct its technical assistance contractor to develop TDA technical standards and assist TDA users with design and specific development and construction management support.

- **TDA and RAC Technology Center and Laboratory Testing Services**

CalRecycle will continue its partnership with a contractor that has knowledge and experience with the TDA and RAC material specifications in California. The contractor will provide statewide technical assistance to local governments through direct consultation and presentations at local and regional workshops related to material specifications for both TDA and RAC. To assure compliance with material specifications, the contractor will also provide validation-testing services in support of CalRecycle RAC and TDA projects. The contractor will also continue to develop curricula for college and university students, supporting California universities in educating the next generation of engineers on the benefits of using TDA and enhancing institutional and industry knowledge.

- **RAC Technical Support**

The success of CalRecycle's RAC programs is largely due to the technical support provided through CalRecycle's RAC technical assistance contract. The technical assistance contractor will assist CalRecycle in marketing and promoting the use of RAC by developing and distributing technology transfer materials and presenting them at key stakeholder workshops and conferences. The contractor will also provide technical assistance and training to RAC grantees to ensure the success of their projects.

Since 2008, the contractor has conducted training sessions for over 350 local government grantees. Through this contract, the contractor will assist on CalRecycle-funded projects, including direct projects with local governments, other state agencies, and private industry, to support CalRecycle's non-grant RAC initiatives. Their assistance may include design support, specification review, bidding and procurement, construction management, quality assurance, and quality control, as needed.

- **TDA and RAC Research**

CalRecycle will continue to investigate new civil engineering uses for TDA and conduct rubberized paving research to promote its broader use. Current RAC research proposals under consideration include:

- Investigating various strategies for incorporating rubber into dense-graded hot-mix asphalt through laboratory studies and test section construction
- Further research on developing performance curves for RAC to be available in pavement management systems used by Caltrans and local agencies
- Expanding the use of rubber into the structural layers of asphalt pavement
- Establishing design specifications for rubberized chip seals

Potential TDA-related research projects may include, but are not limited to:

- TDA in concrete
- Earthquake damping
- Vibration mitigation
- Retaining and sound walls
- Stormwater runoff and drainage control
- Septic tank leach field applications

- **Environmental Studies and Research**

CalRecycle will continue to research the environmental impacts of TDPs and investigate processes to eliminate or reduce any impacts. The research will be coordinated with other stakeholders and state agencies such as DTSC and the State Water Resources Control Board. CalRecycle is currently funding research to evaluate the literature regarding the short- and long-term environmental impacts of using TDA in civil engineering applications and waste tire crumb rubber in RAC. The results will be incorporated into two State of Knowledge reports, which will identify existing data and knowledge gaps.

- **Waste Tire Technologies Evaluation, Investigation and Development**

CalRecycle will continue to investigate TDPs and technologies that utilize waste tires to determine their viability in the current tire market and identify any health and safety impacts that could adversely affect their use.

Some of these applications may include:

- Identification of end-of-life options for various TDPs, including turf applications and playgrounds
- Assessing the feasibility of using crumb rubber in molded, extruded, and other products
- Assessing market challenges and potential solutions for retread tires
- Assessing market opportunities for various TDPs
- Researching innovative and emerging technologies, such as devulcanization.

Research may also be conducted regarding changes in the composition of

materials used to manufacture tires, the potential impacts of those changes on manufacturing TDPs, and the impacts of those manufacturing changes on tire service life (e.g., rolling resistance, durability, microplastics generated by tire wear particles). To conduct this investigation, CalRecycle may partner with industry, universities, and other state agencies.

- **Tire Equipment Loan Program**

The Tire Loan Program will provide low-interest loans for equipment purchases for tire-derived product manufacturing, consistent with the existing Recycling Market Development Zone Loan Program, to encourage tire recycling manufacturers to site new facilities and expand existing operations. All eligibility, terms, and conditions would be consistent with the existing loan program, except loans will be available to all tire recycling manufacturers located in California that make tire-derived products. Funds would be tied directly to efforts to increase the processing of waste tires and the production of final products, where markets exist for those products. Loans for shredding tires at landfills and monofills would only be for activities designed to divert shredded material as a feedstock for tire-derived products.

- **Tire Market Analysis and Support**

CalRecycle staff and independent contractors will provide an annual in-depth survey and analysis of the waste tire and TDP markets in California and the associated publication of the annual “California Waste Tire Market Report.” In coordination with CalRecycle, the contractor will also assist with the arrangement and organization of the California tire conferences.

- **Tire Events**

CalRecycle will hold tire workshops, forums, and trainings to provide attendees with up-to-date information about waste tire management programs. The events will discuss all aspects of waste tire management, including hauling, manifests, cleanup, proper disposal, recycling technologies, and research and market development activities. These events also offer a venue for staff and interested parties to meet and collaborate on issues of common concern. These events may be held virtually. Wherever possible, events will be conducted in conjunction with related events organized by groups such as the League of California Cities, California Public Works Association, and California State Association of Counties.

California-Mexico Border Waste Tire Activities and Support

Program Background and Status

The Flow of Used Tire Commodities in the U.S.-Mexico Border Region

Used tires are exported from California into Mexico as a commodity for sale to tire dealers. These used tires are transported by private businesses through border ports of entry and are allowed on a Mexican-permitted quota basis.

Tires in Baja California come from new tires sold in Baja California and used tires imported as commodities from California, Arizona, and other states. Once these tires are used or reused by buyers in Mexico and reach the end of their useful life, they become waste tires. Improperly managed waste tires cause environmental problems in the California-Mexico border region, impacting communities and tribes in areas such as the Tijuana River estuary and the New River of the Imperial Valley in California. Some of these improperly managed waste tires end up in the Tijuana and New rivers flowing into the U.S. during storm events. Tires are regularly cleaned up from those flow events.

Mexican officials do collect fees to manage waste tires in Baja California. These fees are then remitted to the Mexican State Government Treasury. Baja California does not levy a fee on the sale of new tires. Based on information from CalRecycle-funded research, about two-thirds of waste tires in Baja California are diverted for use as tire-derived fuel for cement kilns or as construction material for both formal and informal civil engineering applications. The remaining one-third of tires lack an end market and are either stockpiled at collection points or illegally disposed of.

Commitment and Plan

To date, many entities — including Mexican and U.S. federal agencies, state and local agencies, and nonprofit organizations — have helped address the impacts of improperly managed waste tires in Baja California. CalRecycle continues to support the development of a tire management program in Baja California by providing technical assistance when needed and intends to continue these efforts in the years to come.

Most recently, the CalEPA signed a new MOU with the State of Baja California in September of 2024, which will enable new opportunities to manage tires and stronger collaboration across the border.

Proper tire management requires continued collaboration and coordination with interested parties in the border region including federal, state, and local governments, communities, and nonprofit organizations. CalRecycle will continue activities that:

1. Better define the problem by obtaining updated information on how and where used and waste tires are being transported and stored (including in tire piles and collection sites) along the border region and on associated economic factors.
2. Support CalEPA and the Mexican government with the implementation of the [2024 Memorandum of Understanding](#) and [2014 Memorandum of Understanding](#), prioritizing funding for waste tire cleanup and tire amnesty events in disadvantaged and border communities located in San Diego and Imperial counties.

Ongoing partners include the U.S. Environmental Protection Agency (U.S. EPA), the California Air Resources Board, and the Tijuana River Valley Recovery Team.

Historic Directive, Authority, and Accomplishments

Because the border region has faced persistent issues with improperly managed waste tires, discarded solid waste, and soil run-off, [SB 83 \(Committee on Budget and Fiscal Review, Chapter 24, Statutes of 2015\)](#) established the Solid Waste Working Group (SWWG). The SWWG, which is currently inactive, was overseen by the California-Mexico Border Relations Council (Council) and was tasked with developing and coordinating long-term solutions to address these challenges and remediate issues associated with waste tires, solid waste, and sediment accumulation along the California-Mexico border region. The SWWG addressed issues including the degradation of valuable estuarine and riparian habitats, and threats to water quality and public health. Members of the SWWG included CalRecycle, CalEPA, the California Department of Parks and Recreation (California State Parks), and the San Diego and Colorado River Basin Regional Water Quality Control Boards.

The SWWG published its [Solid Waste and Waste Tire Strategic Plan in January 2017](#).

This multi-agency framework highlighted programmatic, cleanup, and outreach recommendations to address short- and long-term environmental issues along the border relative to waste tires, solid waste, and sedimentation. The plan's overarching theme emphasized the importance of collaboration and consultation with local and regional governments in California and Mexico on programmatic infrastructure strategies to improve materials management and environmental protection.

CalRecycle's ongoing efforts include enforcement, waste tire hauler manifesting, hauler training in English and Spanish, cleanups, research, and technical assistance.

Current CalRecycle Mexico-California Border Region Activities

Translation Services: CalRecycle has secured a contract that provides both verbal interpretation and written translation from English to Spanish and Spanish to English. Translation services increase accessibility for Spanish speakers to our technical conferences, workshops, and trainings. Translation services are provided for tire events, reports, and educational materials.

Priority Funding: CalRecycle's amnesty and cleanup grant programs give priority funding for local governments, California Native American tribes, disadvantaged communities, and communities in the California border region.

Local Conservation Corps Grant Program River Clean Ups: The noncompetitive LCC Grant Program provides opportunities for the LCCs to provide recycling services and implement litter abatement projects related to the collection and recovery of waste tires. In June 2022, CalRecycle and the Urban Corps of San Diego County (Urban Corps) removed 3,000 tires from the Tijuana border riverbed on land managed by the Federal International Boundary Water Commission. CalRecycle and the Urban Corps also carried out cleanup efforts in 2023 at California Border Field State Park (Goat Canyon Project) removing approximately 4,800 tires. This cleanup was conducted in partnership with California State Parks, which granted access to the land. Waste tire cleanup plans at the California Border Field State Park were initiated in 2024 and final cleanup data is in the process of being reported.

Local Government Waste Tire Cleanup (TCU) Grant Program: The Local Government TCU Grant Program provides funding for the collection, removal, transportation, recycling, and disposal of California waste tires from tire piles and areas where illegal dumping has occurred. Within the grant program criteria, applications for sites with existing tire piles located in disadvantaged and border communities in San Diego and Imperial counties receive priority ranking (ranked one out of five total ranks). Both the City of San Diego and Imperial County were recently awarded TCU grants:

- TCU19 (FY 2022–23)—Activities in 2023 and 2024 (grant term end date of October 31, 2024):
 - City of San Diego: Awarded \$59,669; 6,833 waste tires collected and properly disposed of.
 - Imperial County: Awarded \$250,000; 18,598 waste tires collected and properly disposed of.
- TCU20 (FY 2024–25)—Grant term end date of October 31, 2026
 - Imperial County: Awarded \$250,000; authorization to incur grant expenditures began September 2024.

- City of San Diego: Applied and was recommended for \$57,169. Even though the application received a qualifying rank, it was not awarded due to limited program funds. However, the application will be funded with tire reallocation monies in spring 2025.

Local Government Waste Tire Amnesty (TA) Grant Program: The Local Government TA Grant Program funds applicants to conduct free amnesty events for the public to recycle their waste tires. Like the TCU Grant Program, TA applications that have at least two amnesty event locations within San Diego and Imperial counties receive priority ranking (ranked one out of five total ranks). Imperial County was awarded \$90,000 in its TA7 grant and received authorization to incur grant expenditures in November 2023. The grant term end date of this project is October 30, 2025. CalRecycle is increasing the funding allocation by \$250,000 to both the TCU and TA grant programs due to current program oversubscription.

Short-Term Remediation Funding: CalRecycle has a three-year contract to fund short-term remediation of illegal waste tires. There are two contracts: \$150,000 for Northern California and \$150,000 for Southern California. CalRecycle-managed contracts can be used on a case-by-case basis for tire cleanups in California, including the border region. However, our contractor can only perform cleanups in California.

Technical Knowledge Sharing: CalRecycle held virtual and in-person workshops in both English and Spanish to share information on RAC, TDA, and other tire-derived products. CalRecycle most recently held the 2024 Tire Market Conference in June 2024, the Tire Market Report Workshop in November 2024, and the 5-Year Tire Plan Workshop in December 2024. The workshops were held virtually and in person, with interpretation services provided and shared with contacts from the border region.

Border Checkpoints: In 2024, in partnership with the CHP, CalRecycle conducted eight waste and used tire checkpoints in the border region, including at the commercial ports of exit at both Otay Mesa in San Diego County and Calexico in Imperial County. Almost 1,600 trucks and vehicles with the potential to haul tires were inspected. Two violations were served because of the checkpoints, and follow-up enforcement is in process.

Used and Waste Tire Tracking Modernization: SB 1181 was introduced by Senator Ben Hueso in 2022 to address environmental challenges in cross-border waste management, improve tire tracking systems, and monitor tire safety in Baja California and Sonora, Mexico. This statute grants CalRecycle the authority to modernize manifesting requirements by implementing electronic manifesting and enforcing compliance with the updated regulations. The law requires updates to regulations to

implement new manifest data submission formats and related manifest submission processes.

CalRecycle continues to implement SB 1181 which authorized CalRecycle to transition to an electronic manifest tracking system to enhance analysis and improve the tracking of manifested used and waste tires in the region. The bill supports enforcement to address illegal dumping, enhances cross-border collaboration, and strengthens compliance and reporting in waste tire management.

Border Region Site Identification, Enforcement, and Cleanup Assistance Study:

This study was completed and then published on March 5, 2023. The report, titled, [Investigation of Illegal Tire Dumping Sites along the Southern California-Mexico Border](#), can be downloaded from the CalRecycle website. Initiated in FY 2021–22, CalRecycle worked with the Solid Waste and Tire Cleanup Program engineering consultant, Geo-Logic and Associates (GLA), to develop a study of illegal dumping sites in the border region. The study found about seven locations that were identified and addressed. It included an extensive survey of federal, county, and city-level public agencies with property or property jurisdiction in the border region, along with numerous non-governmental organizations and nonprofit organizations operating in the border region. Information was gathered through interviews with over 70 regional stakeholder entities and over 100 regional individuals. Field assessments were conducted to locate and assess illegal tire dumping sites. The study was conducted in the summer and fall of 2022 on the U.S. side of the border. CalRecycle continues to regulate and monitor tire piles throughout the state and is not currently aware of large tire piles along the U.S. side of the border.

Engagement: CalRecycle staff have participated in groups that focus on the border region, including U.S. EPA Border 2025 Border Regional Coordinators meeting in January 2024, the U.S. EPA Border 2025 Region 9 Task Force meeting in January 2025, the U.S. EPA Headquarters Border 2025 Scrap Tire Webinar in February 2024, and the CalEPA California-Mexico Border Relations Council meeting in November 2024.

Objective

The border element of this plan sets out the following objective:

CalRecycle will coordinate openly and transparently with interested parties in the border region, especially local governments and nonprofit organizations, to address the illegal disposal and improper storage and management of waste tires in the California-Mexico border region.

Evaluation of Success Based on Performance Measures Identified in the Previous Plan

The border element is evaluated based on past performance measures outlined in the 12th edition of the Five-Year Tire Plan (2023-24 to 2027-28).

- 1. Increase communication with Baja California's government, nonprofits, local governments, and other interested parties to find solutions to waste tire problems in the border region.**

CalRecycle staff have participated in groups focused on the border region, including the U.S. EPA Border 2025 Border Regional Coordinators meeting in January 2024, the U.S. EPA Border 2025 Region 9 Task Force meeting in January 2025, the U.S. EPA Headquarters Border 2025 Scrap Tire Webinar in February 2024, and the CalEPA California-Mexico Border Relations Council meeting in November 2024. Additionally, CalRecycle intends to meet the goals outlined in the 2024 MOU.

- 2. Provide technical assistance to Baja California to develop an integrated waste tire management program.**

CalRecycle holds virtual and in-person workshops in both English and Spanish to share information on RAC, TDA, and other tire-derived products. CalRecycle most recently held the 2024 Tire Market Conference in June 2024, the Tire Market Report Workshop in November 2024, and the 5-Year Tire Plan Workshop in December 2024. The workshops were held virtually and in person, with interpretation services provided and shared with contacts from the border region. Further, CalRecycle has a contract for Spanish translation and interpretation services to better assist the communication with representatives in Baja California. CalRecycle will continue to be available to provide technical assistance to the government of Baja California as it builds its integrated waste tire management program.

- 3. Increase participation in grant programs from the border region.**

CalRecycle's amnesty and cleanup grant programs will continue to give priority funding for local governments, California Native American tribes, disadvantaged communities, and communities in the California border region. Additionally, CalRecycle is increasing the funding allocation by \$250,000 for both the TCU and TA grant programs due to current program oversubscription. This will provide a direct benefit to disadvantaged and border communities in San Diego and

Imperial counties. Lastly, CalRecycle will continue to fund the Local Conservation Corps Grant Program river cleanups. The noncompetitive LCC Grant Program provides opportunities for the LCCs to provide recycling services and implement litter abatement projects related to the collection and recovery of waste tires. For example, in 2024 waste tire cleanups were initiated at the California Border Field State Park and final cleanup data is in the process of being reported.

Performance Measures Identified for This Plan

The border element will use the following measures to evaluate success in achieving its objectives. The efficacy of these measures will be assessed and reported in the next edition of the Five-Year Tire Plan:

1. Increase communication with Baja California's government, nonprofits, local governments, and other interested parties to find solutions to waste tire problems in the border region.
2. Provide technical assistance to Baja California to develop an integrated waste tire management program.
3. Increase participation in grant programs from the border region.

Activity Description and Budget

Consistent with the MOUs previously mentioned, CalRecycle plans to provide:

1. Translation and interpretation services that will allow documents, meetings, workshops, and conferences to be available in Spanish.
2. Referral of property owners with illegal waste tire piles to one of the following:
 - o Local Government Waste Tire Cleanup Grant Program
 - o Local Government Waste Tire Amnesty Grant Program
 - o Farm and Ranch Solid Waste Cleanup and Abatement Grant Program
 - o Local Conservation Corps Grant Program
 - o CalRecycle's Southern California short-term remediation contractor to remediate waste tires
3. Market development and technical virtual workshops with Baja California government, nonprofits, and businesses.
4. Hauler and manifest virtual training to tire haulers based in Mexico and operating, or interested in operating, in California or around the border region.
5. A Feasibility Committee for Market Development of Civil Engineering in Mexico.
6. A Border Check Point Cross-Training Workgroup, in coordination with the binational work group regarding waste tires.
7. Knowledge transfer and technical assistance to the governments of Baja California to establish a long-term tire management program.

8. Staff members to participate in groups that focus on the border region, such as the U.S. EPA Border 2025, the Tijuana River Valley Recovery Team, and the California-Mexico Border Relations Council.

Administrative Costs

Program Staffing

Tire-related activities are performed by a total of 56 positions within CalRecycle. The cost of staffing is approximately \$8 million. Breakdown of positions are as follows:

Division or Office	Positions
Audits Office	0.5
Legal Affairs Office	3
Legislative & External Affairs Office	1
Materials Management and Local Assistance Division	12
Division of Circular Economy	2
Office of Public Affairs	0.3
Waste Permitting, Compliance and Mitigation Division	37.5
Total Tire Positions within CalRecycle	56.3

Personnel Funding

FYs 2025–26 through 2029–30.....\$8,025,669 per fiscal year*

**Staffing costs are estimates only, due to the unpredictability of costs for personnel services.*

Administration

Administration includes the following: executive management, accounting, human resources, grants, business services, employee health and safety, small-office support, and statewide pro rata assessments. Pro rata is the sharing of central service costs (per State Administrative Manual section 8753) that generally serve all CalRecycle (i.e., indirect or overhead costs) by funds other than the General Fund. Administration funding represents the distribution of these “indirect costs” to direct CalRecycle program activities that include the tire program.

Activity Funding

FYs 2025–26 through 2029–30.....\$1,281,015 per fiscal year*

**Administrative costs are estimates only due to the unpredictability of costs for any given year.*

Mandatory Contracts

Mandatory contracts include allocations for the following:

- Foundation for California Community Colleges
- Training Services

Activity Funding

FYs 2025–26 through 2029–30..... \$100,000 per fiscal year*

**Estimate of costs for mandatory contracts.*