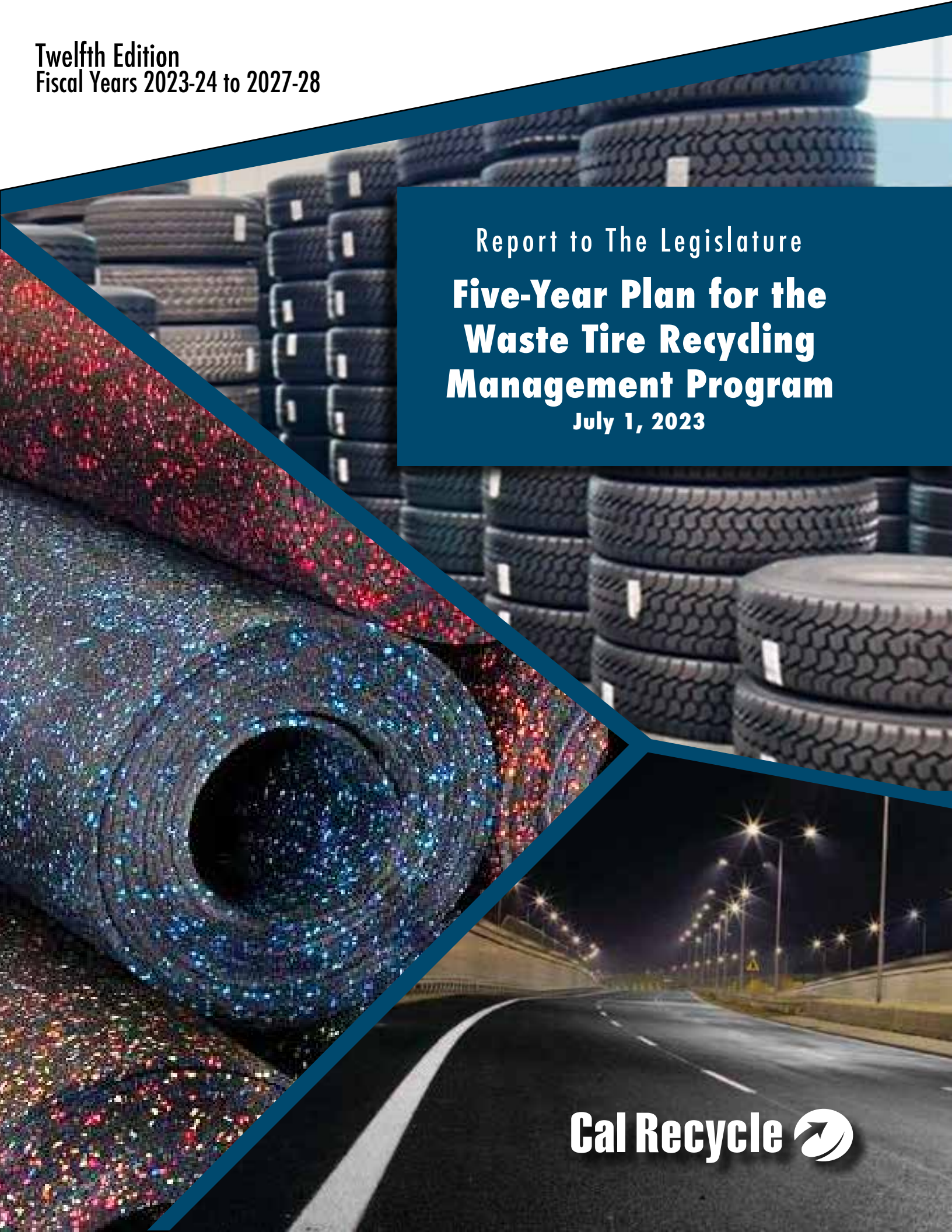
Twelfth Edition
Fiscal Years 2023-24 to 2027-28



Report to The Legislature

Five-Year Plan for the Waste Tire Recycling Management Program

July 1, 2023

Cal Recycle

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Acknowledgments

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Introduction

Five-Year Plan for the Waste Tire Recycling Management Program

Senate Bill (SB) 876 (Escutia, Statutes of 2000, Chapter 838) was enacted to provide a comprehensive measure to extend and expand California's regulatory program related to the management of waste and used tires. One of the key provisions of this measure requires the Department of Resources Recycling and Recovery (CalRecycle) to adopt and submit to the legislature a Five-Year Plan (Plan) that included proposed budget allocations. In addition, it requires that the Plan be updated every two years.

SB 876 requires CalRecycle to include in the Plan the hierarchy used by the department to maximize productive uses of waste and used tires. CalRecycle uses the following hierarchy:

- Source Reduction
- Recycling
- Transformation (energy recovery, tire derived fuel)
- Disposal

The hierarchy is to be used as guidance, but not a rigid formula, in establishing priorities for the Waste Tire Recycling Management Program.

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

- 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 2021 waste tire recycling rate is 35 percent. According to the 2021 California Waste Tire Market Report, this lower recycling rate is attributed to a variety of disruptions that impacted business operations and markets, including:

- Ongoing shifts in: COVID infections, health impacts and restrictions;
- Economic growth followed by high inflation;
- Persistent staffing and hiring challenges;
- High trucking and ocean shipping costs combined with logistical challenges; and,

- A variety of supply chain disruptions impacting diverse commodities and products related to tire-derived products (TDPs).

The activities described in this Plan are intended to increase the tire recycling rate through a combination of additional research to address barriers to increasing markets for waste tire products and technologies, increased marketing, and outreach/education, increasing the amount of waste tire material used in products, continuing to provide incentives/grants, and increasing waste tire processing capacity.

In 2022, Governor Newsom approved Assembly Bill 2836 (Garcia, Statutes of 2022, Chapter 355,) that extends the collection of the tire fee at $1.75 per tire until January 1, 2034. Senate Bill 1181 (Hueso, Statutes of 2022, Chapter 542) was also approved and allows CalRecycle to require data submittal in the format needed, including the use of an electronic format of the California Uniform Waste and Used Tire Manifest in lieu of a paper manifest copy.

CalRecycle has designed the enforcement elements of the Waste Tire Recycling Management Program to protect public health, safety, and the environment, and to provide for a fair and consistent marketplace for recycled tires. CalRecycle has moved aggressively to expand tire enforcement efforts and revise current regulations. Our enforcement staff provides technical assistance and training to the regulated community that includes tire haulers, tire generators, and permitted tire facilities.

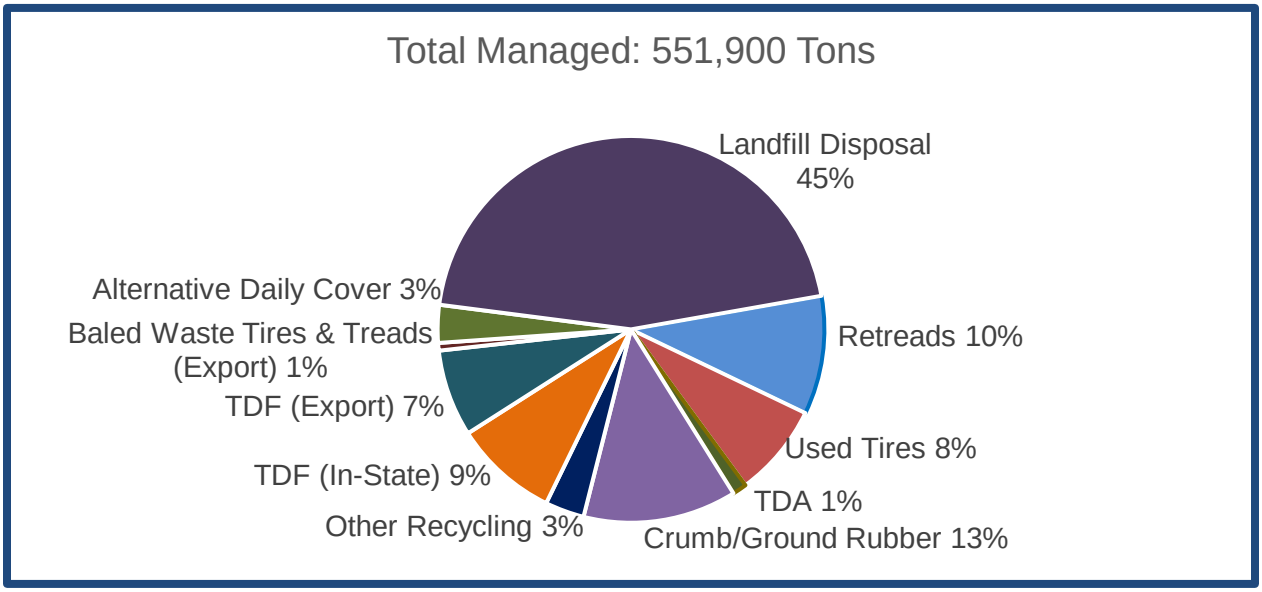
However, if a business demonstrates an unwillingness to comply and is not responsive to technical assistance and training, then CalRecycle initiates enforcement action. Tire facility permitting staff are implementing expanded and robust statewide enforcement efforts to ensure a level playing field for tire facilities, haulers, and generators who operate within the law.

SB 1181 authorizes CalRecycle to move to an electronic format for the California Uniform Waste and Used Tire Manifest instead of a paper manifest copy. CalRecycle will develop and implement electronic mobile manifest application submittal options. This will modernize the waste and used tire tracking system from a paper-based system to an electronic system which will increase data accuracy.

In 2021, an estimated 551,900 tons (55.2 million PTEs[*]) of California-generated waste tires were managed, slightly more than 479,000 tons (47.9 million PTEs) in 2020. California waste tires flowed to ten different market segments as shown in Figure 1.

[*] PTE means Passenger Tire Equivalent, defined by CalRecycle (14 CCR § 17225.770) as 20 pounds. The PTE is useful for reporting purposes as a unit of measure; but in

Figure 1: California Waste Tire Flows in 2021



With respect to diversion and market development, after reaching an all-time high of 92.9 percent diversion from landfills in 2012 (and exceeding CalRecycle's previous 90 percent diversion goal), the overall waste tire diversion rate decreased to 55 percent in 2021. The recycling rate continues to remain stagnant around 35 percent, which excludes alternative daily cover (ADC) and tire-derived fuel (TDF) (including TDF consumed in the state as well as exported size-reduced TDF and waste tire bales assumed to be likely used as fuel). After hitting an all-time low of 7.3 percent in 2012, tire disposal increased to 45 percent in 2021. During 2021, a variety of disruptions impacted business operations and markets, including ongoing shifts in: COVID infections, health impacts and restrictions; economic growth followed by high inflation; persistent staffing and hiring challenges; high trucking and ocean shipping costs combined with logistical challenges; and a variety of supply chain disruptions impacting diverse commodities and products related to tire-derived products (TDPs).

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

- Applying the results of research to identify new waste tire uses and address existing barriers to increasing markets for waste tire products and encouraging the use of technologies.
- Evaluating, assessing, and promoting emerging technologies that could result in additional tire recycling markets.

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practice, tire weights vary significantly by type, and are generally more than 20 pounds per passenger tire. California Waste Tire Market Report: 2021

- Continuing efforts to increase marketing and outreach/education about tire derived products.
- Increasing the amount of tire material used in tire-derived products and expansion of new uses in civil engineering applications.
- Continuing to provide incentives/grants/loans to expand markets and increase waste tire processing capacity to support new recycling markets.

CalRecycle's current market development programs continue to focus on increasing the processing of California waste tires into California-produced TDPs. To move closer to this goal, CalRecycle implemented a small tire recycling incentive program. This program provides economic incentives to participating manufacturers to increase TDP sales to businesses. While many stakeholders would prefer a free-market system with no subsidies, they are continually needed to establish markets for products that incorporate waste tires into TDPs such as paving, molded products, and retaining walls. Although the cost per tire varies among these end uses, a variety of markets that use California-produced TDPs is preferrable because this results in tires being recycled into new products. This approach is consistent with CalRecycle's AB 341 (Chesbro, Chapter 476, Statutes of 2011) policy goal that 75 percent of the solid waste generated in the state be source reduced, recycled, or composted by 2020.
While most tires managed within the tire program are waste tires, each year a portion of the used tires generated in California are of sufficient quality to be reused within the state or exported abroad, primarily to Baja California, Mexico. Private businesses haul these tires to Mexico and eventually those used tires become waste 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, but the remaining tires lack an end market and are either stockpiled at collection points or are illegally disposed, some of which end up in the Tijuana River Valley and New River in California.

CalRecycle has funded and engaged in a range of border-related activities over the past several years in response to the environmental problems associated with waste tires in the border region (see page 52 for more details), including:

1. Tire flow studies in 2009 and 2017
2. California Highway Patrol surveillance work to identify legacy tire piles in the border region.
3. Two CalRecycle-managed cleanups of the Goat Canyon debris basins in Border Field State Park.
4. A University of California Berkeley report in 2012 on the development of an integrated waste management plan for the State of Baja California.
5. Training for approximately 50 Mexican tire haulers regarding California's waste tire hauler registration and manifest program.

6. A 2022–23 CalRecycle conducted study of illegal tire dump sites in the California border region.
7. Local Conservation Corps regularly collects and transports illegally dumped tires in the border region in collaboration with cognizant agencies and jurisdictions. In 2022, the Urban Corps of San Diego County removed over 2,000 waste tires from the Tijuana River Valley.

While modest progress and increased awareness of waste tires issues has been realized along the border region, the environmental problems associated with waste tires and much larger amounts of solid waste and sediment in the border region persist and continue to impact water quality in the Tijuana River estuary and New River area.

Long-term resolution requires continued collaboration and coordination with interested parties in the border region, and any such efforts should be transparent to and involve other stakeholders, including local governments and nonprofit organizations. Regarding waste tire cleanup along the border, CalRecycle continues with 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 aspects.
2. Work with CalEPA and its existing Memorandum of Understanding (MOU) with the Mexican government, along with other interested partners, to clarify and prioritize which projects (including targeted cleanup activities in the future) would best contribute to long-term environmental protection in the border region.
3. Prioritize funding waste tire cleanup and tire amnesty events in San Diego and Imperial Counties.

Potential partners include the U.S. Environmental Protection Agency and existing CalEPA partnerships, such as the California-Mexico Border Relations Council's Border Region Solid Waste Working Group (SWWG), the California-Mexico MOU Working Group, and other governmental and non-governmental organizations such as the Tijuana River Valley Recovery Team and the Imperial-Mexicali Air Quality Task Force.

The SWWG—comprised of CalRecycle, San Diego and Colorado River Regional Water Quality Control Boards, the California Department of Parks and Recreation, and CalEPA—published its Solid Waste and Waste Tire Strategic Plan in January 2017. This multi-agency framework highlights program, cleanup, and outreach recommendations to address both short-term and long-term environmental issues along the border relative to waste tires, solid waste, and sedimentation. The plan's overarching theme emphasizes 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. This set of activities also involves participation with the California Department of Parks and

Recreation and the San Diego and Colorado River Regional Boards on current cleanup initiatives.

As Mexican federal and Baja California state governments continue to work on the establishment of an overall statutory framework for tire management, CalRecycle will continue to provide technical assistance and facilitate knowledge transfer to the governments as they work to institutionalize and finance a waste tire recycling program.

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

- The California Energy Commission implementation of a statewide Replacement Tire Efficiency Program for replacement tires on passenger cars and light-duty trucks, to ensure that replacement tires sold in California are at least as energy efficient as the tires sold as original equipment on the vehicles.
- The Department of Toxic Substance Control (DTSC) proposal to list motor vehicle tires that contain zinc and 6PPD as Priority Products under the Safer Consumer Products (SCP) regulations.
- To potentially list microplastics as a Candidate Chemical.

CalRecycle has a new activity in the Plan to partner with a research institute that has knowledge and experience with environmental studies and research to conduct a comprehensive evaluation and assessment on these emerging environmental issues such as Zinc, 6PPD and microplastics associated with TDPs and waste tires.

Tire Fee

Assembly Bill 2836 extended the $1.75 California Tire Fee (fee) until January 1, 2034. Since 2005, the fee has been $1.75 with $1.00 going to CalRecycle and the remaining $0.75 going to the California Air Resources Board. The $1.00 CalRecycle portion of the fee is used to fund activities in the Five-Year Tire Plan that include 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.

- Some tire sizes are more difficult and expensive to collect and recycle.
- Tires that have tread designed to last a minimum of 30,000 miles will need to be replaced sooner than a tire designed to last a minimum of 60,000 miles.
- Tires purchased for larger heavy equipment, such as construction vehicles, are not normally accepted by all tire recycling processors and need to be sent to a special recycler that can handle larger sized tires.

Program Elements

The Five-Year Plan is divided into the program elements identified in Public Resources Code section 42885.5(b):

- Enforcement and regulations relating 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 directed at promoting and developing 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 individuals or groups of related element activities can be measured to show how well objectives and goals are met.
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.

The following table is a summary of draft proposed expenditures for the twelfth edition covering FYs 2023–24 to 2027–28. The spending authority limit for the Tire Program as outlined in the Governor's Budget is $40,242,000. Further details about each program element are contained in this Plan.

Table 1: Total Tire Program Funding for Fiscal Years 2023–24 through 2027–28*

Program Areas	FY 2023–24	FY 2024–25	FY 2025–26	FY 2026–27	FY 2027–28	Totals for All Fiscal Years
Enforcement	$6,850,000	$6,800,000	$6,800,000	$6,800,000	$6,800,000	**$34,050,000**
Hauler Program and Manifest System	$450,000	$500,000	$500,000	$500,000	$500,000	**$2,450,000**
Cleanup	$7,250,000	$7,250,000	$7,250,000	$7,250,000	$7,250,000	**$36,250,000**
Research and Market Development	$11,709,439	$11,709,439	$11,709,439	$11,709,439	$11,709,439	**$58,547,195**
Mexico/ California Border	$25,000	$25,000	$25,000	$25,000	$25,000	**$125,000**
Program Staffing and Administration	$8,608,667	$8,608,667	$8,608,667	$8,608,667	$8,608,667	**$43,043,335**
Administration	$4,367,859	$4,367,859	$4,367,859	$4,367,859	$4,367,859	**$21,839,295**
Mandatory Contracts	$1,381,035	$1,381,035	$1,381,035	$1,381,035	$1,381,035	**$6,905,175**
Total Spending Plan	**$40,642,000**	**$40,642,000**	**$40,642,000**	**$40,642,000**	**$40,642,000**	**$203,210,000**
Tire Program's Spending Authority	**$40,242,000**	**$40,242,000**	**$40,242,000**	**$40,242,000**	**$40,242,000**	**$201,210,000**
Farm and Ranch Solid Waste Cleanup and Abatement Grant Program's Spending Authority	**$400,000**	**$400,000**	**$400,000**	**$400,000**	**$400,000**	**$2,000,000**

*The numbers in the table are projections of the funding amounts that CalRecycle expects to be appropriated in future State Budgets. These numbers 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 and 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. CalRecycle works closely with State and local governments to:

- Inspect tire businesses for compliance with permitting, storage, movement laws, regulations, and state minimum standards.
- Educate tire businesses and property owners about tire laws and regulations.
- Survey for illegal dumping, storage, and movement of tires.
- Take enforcement actions as needed to correct violations.

CalRecycle's Waste Tire Enforcement Program originated in 1989 with the passage of the California Tire Recycling Act to address the need for better waste tire management in California. While the act established grants and loans to businesses and public entities to develop recycling markets for waste tires, the Act also initiated the development of waste tire facility regulations for safe storage of waste tires and established a related permitting system. The Act established the first waste tire fee and the California Tire Recycling Management Fund. As the program advanced over the years, additional laws were passed to further protect public health and safety and the environment by improving program effectiveness for all stakeholders to better comply with the law. 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.

The Waste Tire Enforcement Program worked closely with other cleanup-related components in the Five-Year Plan. For example, enforcement actions against the largest known waste tire sites in the state resulted in negotiated settlements and CalRecycle's Cleanup Branch administering cleanups. The enforcement program and the cleanup program continue to be closely aligned and administered. The Five-Year Plan's long-term cleanup and remediation costs have been shifted from large cleanup activities to enforcement programs that have shown a continued positive impact on waste tire issues statewide.

Rigorous waste tire enforcement, pursuant to CalRecycle's policy goals, minimizes the likelihood that large waste tire sites will develop, go unaddressed, and potentially cause environmental crises like the Westley and Tracy tire fires that occurred in the late 1990s. CalRecycle's continued focus is on maintenance and prevention of illegal tire piles through permitting, inspection, and the waste tire hauler registration and manifest programs. Additionally, ongoing ground and aerial surveillance assist enforcement efforts by identifying remote illegal tire sites and illegal activities of tire businesses. These programs, especially focusing on inspection and surveillance, generate enforcement cases on an ongoing basis.

CalRecycle's Waste Tire Enforcement Program follows CalEPA's enforcement initiatives, which include a progressive enforcement method. CalRecycle first strives to provide education and outreach about waste tire requirements during regular inspections, and then issues a standard notice of violation if a violation is observed as a first time offense. If a violation is not corrected, or is a repeat of past violations, the following enforcement actions are taken until the violation has been resolved:

- Cleanup and abatement orders
- Administrative complaints to levy penalty payments
- Referrals to California attorney general or to local district attorneys as appropriate

Criminal actions are reserved for egregious violations or repeat offenders.

Part of the Waste Tire Enforcement Program's critical strength and effectiveness is due to the impact of using the Local Government Tire Enforcement Agency (TEA) Grant Program. The Waste Tire Enforcement Program coordinates with CalRecycle's Financial Resources Management (FiRM) Branch to implement the TEA Grant Program that supports the activities of local jurisdictions in carrying out waste tire enforcement efforts. TEA grantees also provide support for CalRecycle's illegal dumping initiatives since waste tires are often illegally dumped along with other solid waste. Therefore, waste tire program field personnel and the surveillance support available through the TEA Grant Program can be leveraged in many instances to address both waste tire and other illegal dumping objectives.

When illegal dumping does occur, the Waste Tire Enforcement Program and the Cleanup Program collaborate with the FiRM Branch on the administration of grant programs for Farm and Ranch Solid Waste Cleanup and Abatement, Local Government Waste Tire Amnesty, Local Government Waste Tire Cleanup, and Local Conservation Corps.

For example, when enforcement staff discover waste tire piles on privately owned agricultural property, and the tire piles are determined not to be the responsibility of the landowner, the Waste Tire Enforcement Program brings them to the attention of the FiRM Branch staff for potential grant funding consideration. Conversely, Farm and Ranch Grant applications that do not have the required landowner certifications of non-responsibility are deemed ineligible and referred to the Waste Tire Enforcement Program for appropriate follow up.

Taking immediate action to assist with clean-up of illegally dumped piles prevents nuisance sites, which can attract further dumping if not cleaned up quickly. Swift outreach, surveillance, enforcement, and cleanup activities continue to be a critical prevention measure in minimizing large waste tire piles and protecting the environment. To address concerns about waste tires in the border region and disadvantaged communities, San Diego and Imperial County will be a priority region for collecting piles of waste tires through various CalRecycle grant programs including the Waste Tire Cleanup, Tire Amnesty, and Local Conservation Corps grant programs.

Objectives

The enforcement program has the following objectives:

1. Support existing and new waste tire enforcement grantees by providing stable funding, training, and ongoing technical assistance.
2. Inspect tire businesses on a routine basis to ensure compliance with all state tire permitting, storage, movement laws, regulations, and state minimum standards.
3. Provide ongoing surveillance for illegal tire sites. Identify and investigate all suspected illegal tire sites through ground and aerial surveillance and respond to complaints.
4. Bring all known sites that are operating illegally (without the proper permits and/or operating outside the terms and conditions of their permits or state minimum standards) into compliance through a progressive enforcement program.
5. Manage a tire database that will collect, store, and report the necessary information for an effective program.
6. Prioritize cleanups in San Diego and Imperial County and report the number of tires collected.

Performance Measures

The performance measures listed below have been streamlined and updated to align with the activities listed in this biennial revision of the Five-Year Plan.

1. **Inspections**
    - Inspect all active major and minor permitted facilities in California at least once every 12 months.
    - Inspect all active registered and exempt haulers located in California at least once every 24 months.
    - Inspect all active tire generators and end-use facilities 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 illegal sites remediated through the enforcement program.
    - Track the number of 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 implements a two-pronged approach to statewide enforcement using local enforcement entities where available and state resources in other areas. The program provides ongoing assistance to local jurisdictions and oversees the entire enforcement effort. Table 2 provides a list of activities and associated budgets for the “enforcement and regulations relating to the storage of waste and used tires” element.

Table 2: Budget for Enforcement and Regulations Relating to the Storage of Waste and Used Tires

Program Area	FY 2023–24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
Waste Tire Enforcement Support Activities	$200,000	$150,000	$150,000	$150,000	$150,000
California Highway Patrol Agreement to Support Enforcement Activities	$100,000	$75,000	$50,000	$50,000	$50,000
Local Government Waste Tire Enforcement Grant Program	$6,250,000	$6,250,000	$6,250,000	$6,250,000	$6,250,000
Database System Maintenance and Enhancement	$200,000	$225,000	$250,000	$250,000	$250,000
Tire Enforcement Inspector Technical Training	$100,000	$100,000	$100,000	$100,000	$100,000
Totals	**$6,850,000**	**$6,800,000**	**$6,800,000**	**$6,800,000**	**$6,800,000**

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. Intensive focus of activities along the California-Mexico border region and illegal activities related to export of tires through California ports. Funds will be allocated to the following projects:
   - **Investigation Database Subscriptions**
     CalRecycle purchases access to advanced government investigation databases for the purposes of properly locating and serving responsible parties with notices when environmental violations have been observed and parties need to be brought into compliance or further enforced upon.

   - **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, and to develop and implement any revised passenger tire equivalent conversion factors and volumetric estimation calculation methods that are used by inspectors in the field 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 can include but not be limited to items such as measuring devices, photography equipment, drones, aerial or satellite imagery services, GPS devices, and hand-held mobile tablets and devices. CalRecycle will also continue an agreement with the California Air Resources Board (CARB) which supports investigations conducted by CalRecycle tire enforcement staff and local waste tire enforcement grantees. CARB has extensive experience in assisting other agencies in the purchase, maintenance, monitoring, and use of both covert and overt surveillance equipment. CARB's expertise has aided and should continue to aid CalRecycle and local waste tire enforcement grantees' efforts to detect, deter, and prosecute those who illegally haul and dispose of tires or engage in illegal activities related to tire exports through California ports. Additionally, as needed, CARB will help CalRecycle identify, evaluate, and procure more sophisticated surveillance equipment for covert activities to allow for real-time remote monitoring and sensing.

- **Waste Tire Enforcement Training, Development, and Outreach**
  CalRecycle will continue to provide training and conduct regular meetings, workshops, and webinars to train and maintain a high level of competence among all local government waste tire inspectors working in the TEA Grant Program in support of ongoing compliance verification, violation detection, and enforcement case development. CalRecycle will also provide ongoing training for CHP officers, local sheriff's deputies, police officers, and other state law enforcement personnel to make them aware of California's waste tire laws and regulations and the role they can play in helping detect violations and provide additional enforcement support, particularly in the border region.

Funds from this activity have been redirected to the Hauler Program and Manifest System activity to support the manifest modernization project.

Activity Funding
FY 2023–24……..…… $200,000 per fiscal year
FYs 2024-25 through 2027–28…….……. $150,000 per fiscal year

2. **California Highway Patrol (CHP) Agreement to Support Enforcement Activities**
   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. CHP will also assist CalRecycle as well as local waste tire enforcement personnel in their efforts to detect and deter waste tire facility and hauling violations. If CHP is unable to continue this work after the current contract expires in December 2024 due to budget or priority issues, CalRecycle will pursue a similar agreement with other law

enforcement agencies. 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.

Funds from this activity have been redirected to the Hauler Program and Manifest System activity to support the manifest modernization project.

Activity Funding
FY 2023–24 ……..…$100,000
FY 2024–25.....……$75,000
FYs 2025–26 through 2027–28 ……..……$50,000 per fiscal year

3. **Local Government Waste Tire Enforcement (TEA) Grant Program**
This long-running TEA Grant Program enhances California's waste tire enforcement infrastructure by providing noncompetitive grants to cities and counties to perform local waste tire inspection and enforcement activities. This program augments CalRecycle's enforcement efforts in overseeing the proper management and flow of waste tires throughout the state. Eligible entities are reimbursed for costs to identify waste tire sites, conduct waste tire facility inspections, investigate illegal tire disposal activities, conduct small tire pile cleanup (tire piles with 35 tires or less), review waste tire hauler documents, and issue notices of violation. This program also helps ensure that tire dealers, waste tire processors, auto dismantlers, retreaders, tire haulers, and other waste tire entities comply with all applicable laws, storage standards, and manifest requirements. This program also allows grantees to be reimbursed for time that grantees spend training or coordinating with a Local Conservation Corps to clean up illegally dumped waste tires.

The program helps ensure consistent statewide inspection and enforcement coverage in a cost-effective and efficient manner. City and County inspectors can apply unique local knowledge of waste tire businesses to ensure proper management of California's annual production of over 55 million waste tires. Through participation in this Program, local governments have an expanded role in waste tire enforcement that enhances public health, safety, and the environment.

To expand participation of local jurisdictions, a new internship component was added to the application in the FY 2022–23 grant cycle to encourage jurisdictions to cooperate in cross-border inspection programs while training local youth in code enforcement and creating a career ladder to well-paid employment. The program allocation was increased by $200,000 in the Five-Year Plan to support this new component.

Activity Funding
FYs 2022–23 through 2027–28 ……..……. $6,250,000 per fiscal year

4. **Database System Maintenance and Enhancement**
The Waste Tire Management System (WTMS) tracks tire enforcement and manifest program activities. WTMS was developed per the requirements defined in the approved feasibility study report. WTMS tracks waste tire generators, registered waste tire haulers, permitted and unpermitted end-use facilities, manifest forms, inspection records, and enforcement actions.

WTMS was initially released in July 2003 and had a technical upgrade in May 2019 to operate with current technologies, department standardized coding platforms, and better display options on more devices. Areas of ongoing maintenance and enhancement include:

- Standard reports to track facility inspections, waste tire storage permits, grantee referrals, and notices of violation to ensure performance measures are achieved.
- Ongoing enhancements to compliance reports that assist grantees with inspection prioritization and planning, development of an automated work plan assignment system, and an integrated complaint and referral system.
- Ongoing maintenance that includes revising inspection forms and making now mandatory electronic inspection reporting efficient and cross-platform supported.
- Examination and development of mobile paperless manifesting solutions that will eliminate or greatly reduce the costs and potential errors in reporting associated with paper-based manifesting.
- Continued, periodic upgrades to WTMS are anticipated as the program continues to grow and change to meet the needs of our internal and external stakeholders and CalEPA reporting requirements.

Funds from the CHP Agreement to Support Enforcement Activities have been redirected to this activity to support the manifest modernization project.

Activity Funding
FY 2023–24 ……..……..……$200,000
FY 2024–25…….....……$225,000
FYs 2025–26 through 2027-28…..…….……..……$250,000 per fiscal year

5. **Tire Enforcement Inspector Technical Training**
These funds are used to supplement the tire portion of CalRecycle's annual technical training series for local waste tire enforcement agencies and CalRecycle tire enforcement staff. Training provides inspectors and managers with up-to-date

information on CalRecycle's waste tire management policies, programs, and grants, as well as a venue to network and discuss other items of interest regarding the management of waste tires and emerging challenges or threats. Other outreach activities may also be held during the year. This annual training event offers concurrent technical sessions, and field tours which provide an opportunity to network with other local enforcement agencies, tire enforcement agencies, CalRecycle staff, and industry representatives.

Activity Funding

FYs 2023–24 through 2027–28 ……..…….…....$100,000 per fiscal year

Waste and Used Tire Hauler and Manifest Program

Hauler and Manifest Program Background and Status

The original waste tire manifest system was created in 1995 to provide documentation of waste tire transactions between the tire generator, tire hauler, and the end-use facility. However, the information was not provided directly to CalRecycle, so there was no simple way to track the movement of tires throughout the state. To better track the flow of waste and used tires in California, and implement a stronger enforcement system for auditing manifests, the Legislature passed SB 876 (Escutia, Chapter 838, Statutes of 2000), which required the development and implementation of a uniform statewide waste and used tire manifest program.

The California Uniform Waste and Used Tire Manifest System, developed pursuant to SB 876, went into operation in July 2003 and encompassed the following major currently regulated tire hauling requirements:

- Every person who transports 10 or more waste or used tires must hold a valid tire hauler registration and use state-issued decals and manifests.
- A prospective hauler is required to post a $10,000 bond prior to obtaining registration.
- Tire haulers have to register annually with CalRecycle.
- Tire haulers have to possess manifests during the transport of waste or used tires.
- Tire haulers can only transport to legally authorized end-use facilities
- Tire generators, haulers, and end-use facilities have to submit manifest forms to CalRecycle.
- A person or end-use facility that receives more than 10 waste or used tires from an unregistered hauler must report that hauler and the number of tires being delivered on the Unregistered Hauler and Comprehensive Trip Log Substitution Form “204 Form” to CalRecycle

The current Waste and Used Tire Hauler and Manifest Program primarily consists of two separate components: 1) registration and 2) manifests. CalRecycle registers more than 1,100 California waste and used tire haulers annually, which includes approximately 9,000 vehicles. Registrations expire annually at the end of each calendar year. CalRecycle sends renewal packages to registered haulers well before the end of the year to ensure haulers can renew their registrations in a timely manner. Tire hauler registrations that are not renewed by the end of the calendar year are canceled. Current

law allows exemptions from waste tire hauler registration requirements under certain conditions.

The manifest system tracks the movement of all waste and used tires throughout the state, documenting on average over 130 million tire pick-ups and drop-offs annually. After the implementation of the new manifest system, CalRecycle staff analyzed and gathered input from stakeholders to develop system improvements to create a revised manifest form called the Comprehensive Trip Log form, typically referred to as a “CTL.” Utilizing this CTL form, the tire hauler submits manifest information on behalf of all parties in the tire transaction, which significantly reduced paperwork previously required.

In 2006, CalRecycle began developing basic opportunities for haulers to submit tire manifest information electronically using an electronic data transfer (EDT) process. The EDT process allows haulers to hand key-in individual manifest data or upload spreadsheets directly into the Waste Tire Management System (WTMS) database rather than mail in the CalRecycle provided paper manifests. Haulers must still provide a physical manifest receipt at their waste or used tire pick-up or drop-off locations. The EDT process resulted in additional program data accuracy and cost-effectiveness. Approximately 46 percent of all manifest records were submitted electronically. Today, that percentage remains approximately the same since entering data manually while still creating a hard copy manifest can be resource intensive for most haulers.

With advancements in handheld technology and related software, mobile devices and application platforms are now widely utilized for business and personal use. Therefore, new opportunities have arisen to explore more efficient electronic mobile manifest apps that can be made available to all Waste Tire Program registered haulers.

Improvements in the efficiency and reliability of the manifest program contributed to CalRecycle’s enhanced enforcement and have resulted in increases in cases and fines. The increased enforcement efforts, number of prosecutions, and related demands on CalRecycle’s legal and program staff required a more expeditious method for processing these violations. In 2009, CalRecycle approved and implemented a Streamlined Enforcement Program, which was modeled on similar protocols utilized by other state agencies. CalRecycle’s use of a streamlined penalty letter process has been an overwhelming success in reducing enforcement-related costs and improving compliance. The streamlined penalty letter process was approved as a permanent enforcement tool in 2009. To date, hundreds of penalty letters have been issued, and a high rate have been signed and returned with business owners agreeing to terms and penalty payments and coming into compliance.

Objectives

The Hauler and Manifest Program has the following objectives:

1. To complement and 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, reinforcing compliance with SB 876, and reducing the incidence of illegal waste tire disposal.
2. To provide information on tire movements within the state and across borders to help support tire diversion and market development activities.
3. To manage a tire database that will collect, store, and report the necessary information for an effective program that regulates the usage of manifests. To manage the movement of tires, while regularly evaluating current technologies available that offer efficiencies for quality data collection, compliance from the regulated community, and equitable access to all stakeholders.

Performance Measures

The performance measures listed below have been streamlined and updated to align with the activities listed in this biennial revision of the Five-Year Plan. The Hauler and Manifest Program will use the following measures to evaluate success in achieving its objectives:

1. Increase the number of registered haulers submitting manifests electronically into WTMS.
2. Track, report, and follow up on complaints and referrals received from:
   a. the "204 Form" from solid waste disposal sites and waste and used tire facilities documenting unregistered hauling vehicles transporting more than 10 tires,
   b. hauler observation forms reporting waste tire haulers that may be violating waste tire hauler and manifest requirements, and
   c. the public.
3. Monitor and report the quantity of waste or used tires being picked up or delivered annually.

Activity Description and Budget

The hauler and manifest program budget line item is shown in Table 3. The costs associated with this budget include the following:

1. Printing, mailing, and return postage 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 and post office handling.

2. Printing registration application materials, registered waste tire hauler decals and certificates, and Tire Program identification number certificates
3. Providing contractor support to scan and conduct data entry of the returned CTL forms.
4. Training and educational materials
5. Augmenting CalRecycle's Information Technology Services Branch annual budget for manifest and hauler registration-related upkeep and maintenance of the WTMS database

Activity Description and Budget

Budgeted funds cover the cost of registration and manifest documents issued to California's 30,000 plus waste tire entities. The hauler registration and manifest program budget line item is shown in Table 3.

Table 3: Budget for the Waste and Used Tire Hauler Program and Manifest System

Program Area	FY 2023–24	FY 2024–25	FY 2025–26	FY 2026–27	FY 2027–28
Hauler Program and Manifest System	$450,000	$500,000	$500,000	$500,000	$500,000
Totals	**$450,000**	**$500,000**	**$500,000**	**$500,000**	**$500,000**

1. **Hauler Program and Manifest System**
   This activity includes the following projects:

   - **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, and 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 for the Comprehensive Trip Log (CTL) waste tire manifest forms that are provided free of charge to California's approximately 1,100 registered waste tire haulers and post office handling. Costs also cover contractor support to scan and conduct manual hand-key data entry of the returned CTL forms. The program also produces training and education materials to instruct haulers and facilities on proper manifesting procedures. These funds cover augmenting CalRecycle's

Information Technology Services Branch annual budget for manifest and hauler registration-related upkeep and maintenance of the WTMS database.

- **Waste Tire Electronic Manifesting**
  CalRecycle will work on developing and implementing an electronic mobile manifest application to modernize the waste and used tire tracking system to transition from the paper-based system to an electronic system.

- **Waste Tire Hauler Training Workshops**
  This effort will focus on providing ongoing education and training to waste tire haulers as part of their annual registration renewal activities. The overall effort is focused on using the internet to communicate with our partners and stakeholders in the regulated community and providing needed education and training. This is a part of CalRecycle's efforts to achieve greater waste tire enforcement compliance through expanded education and outreach. This will enable CalRecycle to focus limited enforcement resources on more serious and repeat offenders. CalRecycle will continue conducting free, bilingual training workshops throughout California, with a special emphasis on the California-Mexico Border region, to augment annual hauler registration renewal outreach and educational efforts and to inform and educate waste tire haulers of their roles and responsibilities under California's waste tire compliance system.

  Funds from the Waste Tire Enforcement Support Activities have been redirected to this activity to support the manifest modernization project.

  Activity Funding
  FY 2023–24 ……..……...…..…$450,000
  FYs 2024-25 through 2027–28…….…...…..…$500,000 per fiscal year

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, the cleanup costs have varied significantly depending on the number of large or complex projects undertaken in any year. No waste tire cleanups occurred in years 2007, 2010, 2013, 2016, 2018, and 2020; therefore, no funds were expended.

Table 4: Tire Remediation Data for Short- and Long-Term Remediations

Year	Number of Sites	Tons of Tires Remediated	Remediation Cost
1995	6	21,544	$870,832
1996	6	4,114	$389,487
1997	9	28,329	$1,367,760
1998	8	43,565	$2,515,592
1999	15	11,867	$1,442,688
2000	6	46,029 [1]	$3,340,505
2001	1	36,209 [1]	$2,162,000
2002	2	214,417 [1]	$11,624,345
2003	1	27,707 [1]	$1,849,943
2004	1	148,833 [1]	$9,836,885
2005	10	72,941 [1]	$4,300,000
2006	2	1,285	$506,405
2007	0	0	$0
2008	2	881	$235,011
2009	5	1,628 [1, 2]	$1,536,161
2010	0	0	$0
2011	1	443	$177,700

Year	Number of Sites	Tons of Tires Remediated	Remediation Cost
2012	1	80 [2]	$599,494
2013	0	0	$0
2014	2	268	$250,000
2015	1	5	$16,000
2016	0	0	$0
2017	1	25	$50,722
2018	0	0	$0
2019	1	3	$27,265
2020	0	0	$0
2021	1	10	$91,000
2022	1	55	$71,591
Totals	**83**	**660,160**	**$43,241,386**

[1] These totals include tons of contaminated debris removed. [2]They also include a joint project with the Short-Term Remediation Program and Solid Waste Cleanup Program in the Tijuana River Valley. See cleanup program discussion in the Mexico/California Border Waste Tire Activities and Support Element.

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 Indian tribes that are eligible for the cleanup of tires that have been illegally disposed along rights-of-way and on private property. For Fiscal Year 2022-23, eligible applicants could apply for up to $100,000 for individual grants and up to $250,000 for regional grants. Since 1997, CalRecycle has provided almost $18 million to fund 310 grants. Due to increased concerns about waste tires in the border region and disadvantaged communities, CalRecycle will prioritize applicants with tire piles in disadvantaged communities and San Diego and Imperial Counties. Table 5 summarizes the grant program.

Table 5: Local Government Waste Tire Cleanup Grant Program

Fiscal Year	Number of Grants	Amount Awarded
1997–98	8	$171,286
1998–99	4	$51,768
1999–00	6	$213,126
2000–01	0	*
2001–02	8	$449,889

Fiscal Year	Number of Grants	Amount Awarded
2002-03	11	$646,260
2003–04	14	$712,286
2004–05	16	$735,511
2005–06	20	$778,044
2006–07	20	$845,867
2007–08	15	$790,923
2008–09	15	$834,943
2009–10	19	$1,027,855
2010–11	21	$1,081,559
2011–12	0	**
2012–13	23	$1,723,223
2013–14	0	***
2014–15	23	$1,715,882
2015–16	0	***
2016–17	23	$1,589,369
2017–18	0	***
2018–19	20	$1,354,412
2019–20	0	***
2020–21	27	$1,975,564
2021–22	0	***
2022–23	17	$1,250,000
Totals	**310**	**$17,947,767**

** No funds available—sunset of tire fee. **Grant program was suspended to transition to a two-year term. ***Funding was allocated (on an alternating-year basis) to the Local Government Waste Tire Amnesty Grant Program.*

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 Indian tribes—to hold collection events in convenient locations for the public to bring in their waste tires for free. Since 1992, CalRecycle has provided more than $19 million in funding by awarding 581 grants. For Fiscal Year 2021–22, applicants were eligible to apply for a maximum of $40,000 for single jurisdiction applicants and $90,000 for regional applicants. 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 communities and San Diego and Imperial Counties. Table 6 summarizes the grant program.

Table 6: Local Government Waste Tire Amnesty Grant Program

Fiscal Year	Number of Grants	Amount Awarded
1992–93	4	$59,100
1993–94	8	$177,720
1994–95	13	$387,989
1995–96	1	$12,744
1998–99	16	$176,543
1999–00	26	$374,043
2000–01	0	*
2001–02	22	$330,817
2002–03	11	$321,247
2003–04	29	$924,674**
2004–05	17	$704,793
2005–06	31	$808,879
2006–07	33	$807,416
2007–08	43	$1,198,594
2008–09	40	$1,240,311
2009–10	43	$1,320,772
2010–11	43	$1,368,441
2011–12	0	***
2012–13	0	****
2013–14	52	$2,034,136
2014–15	0	****
2015–16	36	$1,720,495
2016–17	0	****
2017–18	38	$1,619,916
2018–19	0	****
2019–20	38	$1,660,776
2020–21	0	****
2021–22	37	$1,759,450
2022–23	0	****
Totals	**581**	**$19,008,856**

** No funds available due to sunset of tire fee. ** The number of applicants increased*

*because no matching funds were required. ***Grant program was suspended to transition to a two-year term. ****Funding was allocated (on an alternating-year basis) to the Local Government Waste Tire Cleanup Grant Program.*

The Governor's Budget annually allocates $5 million to the Local Conservation Corps (LCCs) Grant Program from the tire fund. CalRecycle encourages LCCs to assist jurisdictions with cleanup and amnesty grant events because leveraging these resources could potentially enable more jurisdictions to receive grants for this purpose. The ways in which an applicant might coordinate with LCCs include, but are not limited to, assisting with planning, or running an amnesty event, creating, and distributing public education/advertising materials, and covering the cost of tire hauling.

Direction Provided by SB 876

Public Resources Code (PRC) section 42889(b) provides that:

"These (Tire Recycling Management Fund) moneys shall be expended for…the following purposes:

(5) To pay the costs of cleanup, abatement, removal, or other remedial action related to tire stockpiles throughout the state, including all approved costs incurred by other public agencies involved in these activities by contract with the board.

(9) To pay the costs to create and maintain an emergency reserve, which shall not exceed one million dollars ($1,000,000).

(10) To pay the costs of cleanup, abatement, or other remedial action related to the disposal of waste tires in implementing and operating the Farm and Ranch Solid Waste Cleanup and Abatement Grant Program established pursuant to Chapter 2.5 (commencing with Section 48100) of Part 7."

Further, Public Resources Code section 42885.5 provides that:

(9) Grants to certified community conservation corps and community conservation corps, pursuant to paragraph (3) of subdivision (a) of, and paragraph (3) of subdivision (b) of, Section 17001, for purposes of the programs specified in paragraphs (2) and (6) and for related education and outreach.

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 through grant funds in developing public education materials on proper maintenance and disposal of automobile tires and promoting 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 to productive end use rather than landfill disposal to the greatest extent possible within reasonable cost parameters
5. Prioritize cleanup in disadvantaged communities and San Diego and Imperial Counties

Performance Measures

The performance measures listed below have been streamlined and updated to align with the activities listed in this biennial revision of the Five-Year Plan:

1. Complete the short-term waste tire remediation projects referred by the enforcement program in a timely manner and report 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 percent 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. Table 7 provides a list of activities and associated budgets for the element titled “Cleanup, Abatement, or Other Remedial Actions Related to Tire Stockpiles throughout the State.”

Table 7: Budget for Cleanup, Abatement, and Remedial Action

Program Area	FY 2023–24	FY 2024–25	FY 2025–26	FY 2026–27	FY 2027–28
Short-Term Remediation Projects	$300,000	$300,000	$300,000	$300,000	$300,000
Local Conservation Corps Grant Program	$5,000,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000
Local Government Waste Tire Cleanup Grant Program	$0	$1,250,000	$0	$1,250,000	$0
Local Government Waste Tire Amnesty Grant Program	$1,250,000	$0	$1,250,000	$0	$1,250,000
Emergency Reserve Account	$300,000	$300,000	$300,000	$300,000	$300,000
Farm and Ranch Solid Waste Cleanup and Abatement Grant Program*	$400,000	$400,000	$400,000	$400,000	$400,000
Totals	**$7,250,000**	**$7,250,000**	**$7,250,000**	**$7,250,000**	**$7,250,000**

** Funds transferred to Farm and Ranch Solid Waste Cleanup and Abatement Grant program.*

1. **Short-Term Remediation Projects**
   Public Resources Code (PRC) Section 42846 allows CalRecycle to perform any cleanup, abatement, or remedial work required to prevent substantial pollution, nuisance, or injury to public health and safety at waste tire sites where the responsible parties have failed to take appropriate action. CalRecycle funds short-term collection and remediation of illegal waste tire sites with CalRecycle-managed contracts. The contractor may be used to stabilize piles until removal, remove all waste tires, and remediate the site after the tires have been removed.

   Activity Funding
   FYs 2023–24 through 2027–28……..……$300,000 per fiscal year

2. **Local Conservation Corps Grant Program**
   The purpose of this grant program is to implement beverage container recycling and litter abatement programs, recycling activities related to the collection and recovery of used oil and electronic waste, and the cleanup and abatement of waste tires. Eligible applicants are Local Conservation Corps (LCCs) that are designated by a city or county to perform litter abatement, recycling, and related activities, and are

certified by the California Conservation Corps as having operated for a minimum of two years and met other criteria of PRC section 14507.5. This grant program expends funding from the California Beverage Container Recycling Fund, Electronic Waste Recovery and Recycling Account, California Tire Recycling Management Fund, and California Used Oil Recycling Fund. Eligible activities may include cleanup events, education and outreach, event labor and staff resources in partnership with local jurisdictions, collection and hauling services, and other projects allowed under PRC sections 17001(b)(3) and 42872. The LCCs currently assist local governments, state and federal agencies, and Native American Tribes with waste tire cleanup and collection activities. CalRecycle also works with the LCCs to extend Program services to areas of the state not traditionally served by the LCCs, including projects to improve environmental conditions in communities of the California/Baja border region.

Activity Funding
FYs 2023–24 through 2027–28……$5,000,000 per fiscal year

3. **Local Government Waste Tire Cleanup Grant Program**
This grant program is designed to pay for the cost of cleanup of illegally dumped waste tires. Funds are available for the collection, removal, transportation, recycling, and disposal of California waste tires from tire piles and areas where illegal dumping has occurred. Funds are limited to the removal of waste tires along public rights-of-way and on private property with either: 1) less than 500 tires on site, or 2) 500 to 4,999 tires if the property owner signs an affidavit stating that they did not bring the tires on site or allow others to bring the tires on site. Local governments including cities, counties, special districts, other political subdivisions, and jurisdictions joined together by formal agreements, and qualifying Indian tribes, are eligible for funding. Cities or counties may submit a regional application with authorization from other cities and counties participating in the regional application. Priority will be given to applicants with existing tire piles that are 1) a serious threat to public health, safety, and the environment, 2) located within a disadvantaged community, or 3) located in a border region. CalRecycle will conduct outreach in the border region, in collaboration with CalEPA's Border Affairs Office, to increase awareness of this grant program. Applicants that demonstrate coordination with a Local Conservation Corps will have the next priority. Eligible costs for this coordination will be described in the procedures and requirements section of the grant agreement.

Activity Funding
FYs 2024–25 and 2026–27 ….....……$1,250,000 per fiscal year

4. **Local Government Waste Tire Amnesty Grant Program**
This grant program is designed to help divert waste tires from landfill disposal and

prevent illegal tire dumping. Funds pay for waste tire collection events that are held in convenient locations for the public to bring in their used tires at no charge. An amnesty event can also consist of a coupon program that allows citizens to bring in their tires on specified days. Amnesty events are not intended for the disposal of waste tires from waste tire generating businesses (PRC §42954(7)). Local governments—including cities, counties, special districts, other political subdivisions, and jurisdictions joined together by formal agreements, and qualifying Indian tribes—are eligible for funding. Cities or counties may submit a regional application with authorization from other cities and counties participating in the regional application. Priority will be given to applicants who hold tire amnesty collection events within a disadvantaged community or border region. CalRecycle will conduct outreach in the border region, in collaboration with CalEPA's Border Affairs Office, to increase awareness of this grant program. Applicants that demonstrate coordination with a Local Conservation Corps will have the next priority. Eligible costs for this coordination will be described in the procedures and requirements section of the grant agreement.

Activity Funding
FYs 2023–24, 2025–26 and 2027–28…..……$1,250,000 per fiscal year

5. **Emergency Reserve Account**
Senate Bill 876 (Escutia, Statutes of 2000, Chapter 838) requires CalRecycle to create and maintain an emergency reserve account, which shall not exceed $1,000,000. Funding for FYs 2023–24 through 2027–28 is being proposed at $300,000. These funds will be used to respond to emergencies involving waste tires (e.g., tire fires). This Emergency Reserve Account is subject to change depending on the need to fund cleanups for any emergencies that arise. While CalRecycle is required to maintain funds in this account with expenditure authority for emergency purposes, if needed, more than $1,000,000 may be expended on a yearly basis. If allocated funds are not expended, funds may be carried forward to the fund balance in the following fiscal year.

Activity Funding
FYs 2023–24 through 2027–28..... ……$300,000 per fiscal year

6. **Farm and Ranch Solid Waste Cleanup and Abatement Grant Program**
The purpose of this grant program is to provide funding for the cleanup of illegal solid waste sites on farm or ranch property. A site may be eligible for funding if the parcels are zoned for agricultural use, unauthorized solid waste disposal has occurred, and the sites need cleanup to abate a nuisance, a public health and safety threat, or a threat to the environment. Tire piles can attract more dumping. Cleaning up these sites will help deter future illegal dumping of tires. SB 876 requires that

transferred tire funds be allocated to pay the costs of cleanup, abatement, or other remedial action related to the illegal disposal of whole waste tires on farm or ranch properties. Other non-tire cleanup costs are paid for using other program funding sources.

Activity Funding

FYs 2023–24 through 2027–28.....$400,000 per fiscal year

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

As established in the previous editions of this Plan, CalRecycle has combined the Research Program and the Market Development Program into one element because of the close relationship between the activities. In addition, CalRecycle has combined all research and technical support activities for tire-derived aggregate (TDA) into one budget line item and all research and technical assistance activities for rubberized asphalt concrete (RAC) into another line item.

Research and Technical Support

Over the past 20 years, CalRecycle has investigated a variety of waste tire diversion alternatives through research contracts and literature reviews of worldwide studies. To date, TDA, RAC, and molded products have shown the greatest promise for diverting waste tires. To achieve greater waste tire diversion, CalRecycle continues to refine its knowledge of existing technologies but will also research new and innovative applications to increase waste tire usage.

Tire Derived Aggregate (TDA) Research

Research efforts have enabled CalRecycle to make significant progress in the development of several long-term sustainable markets for TDA including vibration mitigation in light rail applications, lightweight fill material for embankment and landslide repair, civil engineering application in landfills, and as a treatment media for stormwater infiltration galleries (SWIG).

A relatively new CalRecycle funded TDA application is landslide repair combining TDA with reinforcing geomembrane layers. This process is similar to mechanically stabilized earth. CalRecycle engineers have dubbed this method as “mechanically stabilized TDA.” Most recently, a TDA landslide repair in Santa Barbara partially funded by CalRecycle, was awarded the 2019 County Engineers Association of California Local Streets and Roads Overall Winner.

The success of these research efforts has allowed CalRecycle to identify new TDA applications, which have created new markets for recycled waste tires. CalRecycle considers TDA to be one of the top-priority markets for waste tires and will continue its TDA research activities to support increased TDA usage.

CalRecycle recently conducted a TDA Bearing Capacity study with University of California, San Diego. This research was needed to determine the behavior of TDA in different loading scenarios when combined compression and shearing behavior (bearing capacity) of TDA and the TDA structure occurs. A specific application for this research would be shallow foundations constructed on TDA to support vertical or inclined loads. A landslide repair or retaining wall with TDA backfill could use this research to place existing water utility pipelines within the TDA fill rather than relocate them outside of the site. The research was also needed to characterize the seismic response of TDA fill layers beneath shallow foundations. The bearing capacity tests provided useful observations for estimating the bearing capacity of footings and pipelines in TDA and the seismic testing showed that TDA can provide a low-cost seismic isolation material for structures supported by shallow footings.

Further, CalRecycle plans to fund research on improved TDA Stormwater Infiltration Gallery (SWIG) Systems. The intent of this work is to design a SWIG system that incorporates elements for the collection of microplastics which may be contaminants in storm water runoff. This new SWIG system will allow for the catchment and eventual removal of these microplastics before they can enter surface waterways. The design will reflect the current knowledge and data used in designing with TDA, including design elements specifically for catching tire wear particles.

Rubberized Asphalt Concrete (RAC) Research

CalRecycle continues to promote rubber paving applications, such as RAC overlays and rubber chip seals, which have successfully resulted in the continued increase of RAC projects statewide. Research has played a key role in CalRecycle's efforts to increase rubber paving applications. This includes investigation into the use of rubberized recycled asphalt pavement (RAP) in new RAC pavement, the effectiveness of warm mix additives to rubber pavements, life cycle cost analysis, and the development of rubber overlay and chip seal performance models.

CalRecycle has contracted with the University of California Pavement Research Center (UCPRC) on several research studies to investigate the beneficial use of rubberized asphalt in various pavement applications. Currently, CalRecycle is planning to support Caltrans' efforts, through UCPRC, to use small amounts of crumb rubber in all asphalt pavements. This research project will ultimately lead to the expansion of the use of rubberized asphalt products in future highway projects.

Under previous contracts with CalRecycle, the California State University, Chico Research Foundation (CSUCRF) developed performance curves for rubberized chip seal and asphalt rubber hot mix for use in pavement management systems used by local governments to select strategies for their pavement projects. CSUCRF is currently investigating the feasibility of incorporating crumb rubber infill (CRI) material into standardized rubberized hot mix asphalt manufacturing processes. The study will investigate adding CRI via both the dry method (added to the aggregate) and wet method (added to the binder) to produce hot mix asphalt materials for laboratory testing and evaluation. These efforts will help local agencies determine the best projects for using rubber paving applications.

CalRecycle will continue to study new and evolving rubber paving applications to gain additional information regarding their benefits and any potential drawbacks. If ongoing research supports the benefits of these new applications, CalRecycle can market and promote the use of these applications by including them in future grant offerings to enhance RAC usage. Additionally, CalRecycle will evaluate current design standards and investigate pavement preservation strategies that use rubber to increase the lifespan and performance benefits (e.g., resistance to reflective cracking, skid resistance, noise reduction) of pavements.

Tire-Derived Product (TDP) and Technology Research

Currently, there is not one single waste tire application that will divert all waste tires from California landfills. CalRecycle continues research in support of its efforts to promote existing tire-derived products as well as identify new ones. There is also a need to evaluate end-of-life options for various TDPs, including turf applications and playgrounds, to ensure the continued viability of these tire-derived product uses.

As part of its effort to achieve a diversified and sustainable market for recycled waste tires, CalRecycle will continue providing technical assistance to facilitate manufacturers producing products using crumb rubber and to support material testing and the industry's use of American Society for Testing and Materials (ASTM) standards for crumb rubber. Previous efforts have resulted in innovative new products, necessary testing that allowed expansion of markets for existing products, and new uses for end-of-life crumb rubber.

To support uses higher in the waste management hierarchy, CalRecycle encourages greater use of retread truck and off-the-road tires. Since each truck tire represents approximately five passenger tire equivalents, improvements in the use of retread truck tires (and the associated reduced disposal of those truck tires) could significantly improve the state's waste tire recycling rate. CalRecycle will collaborate with industry and stakeholders to identify issues and barriers and propose solutions to increase the use of retread truck and off-the-road tires.

Due to the concern regarding the use of tire rubber in artificial turf fields, CalRecycle will continue to assess any new information regarding the human health and environmental risks associated with this application. CalRecycle and OEHHA entered into a new interagency agreement in 2014–15 to conduct a more exhaustive study of the potential health impacts associated with rubber in synthetic turf fields. OEHHA has held three scientific advisory panel meetings to discuss the study design and solicit recommendations from a panel of experts in statistics, toxicology, biomonitoring, and other fields related to the study. OEHHA has collected samples from 33 fields around the state and is currently analyzing the samples for metal, volatile organic compounds, and other chemicals to develop a model to assess human health impacts. The final report will be available in summer 2023. More information on the report can be found on OEHHA's website.

CalRecycle may also perform research on innovative and emerging technologies that utilize waste tires to study and determine whether they are viable in the current tire market and if there are health and safety impacts that could adversely impact their use. Research can also be performed regarding the changing components of tires and the potential impact on recycling and recycled-content products.

Market Development

CalRecycle continues to promote the development of long-term, sustainable markets for waste tires. The goal is to achieve and sustain high diversion and recycling rates by helping to create:

1. Strong customer demand by both government and private sector purchasers for a wide variety of tire-derived products (TDPs).

2. A thriving TDP production infrastructure composed of California manufacturers, contractors, and engineering companies able to consistently produce and install high-quality, tire-derived products satisfying customer demand while utilizing effective marketing and sales capabilities.

3. A resilient, statewide supply infrastructure for collecting waste tires generated throughout California and producing high-quality, tire-derived materials, including TDA or crumb rubber that satisfies the needs of TDP manufacturers and producers.

CalRecycle's waste tire market development program employs several complementary strategies, including:

- Research to identify and evaluate new TDPs and market development opportunities.
- Technical assistance and pilot projects to demonstrate the economic and technical feasibility of new products, technologies, and applications.
- Funding support through grants, incentives, and low-interest loans to help encourage qualified entities to produce and purchase TDPs.
- Training and outreach activities to help raise awareness about the range of TDPs available in California, including their benefits and applications.
- Ongoing monitoring to track progress and update information on opportunities and barriers.

These strategies are being applied in three product categories: TDA used in civil engineering applications; crumb rubber used in rubberized pavement applications; and a broad category comprising all other TDPs. CalRecycle will limit its market development efforts to products that do not pose environmental health risks.

TDA Market Development

Through CalRecycle's research efforts and the successful performance of TDA projects constructed to date, TDA has proven to be a cost-effective and reliable alternative to conventional construction materials. These benefits, along with the ability to use large quantities of waste tires, demonstrate that TDA has great market potential. As such, CalRecycle will continue to aggressively promote its use in civil engineering applications by continuing to conduct outreach and education and by providing funds for the TDA Grant Program that started in 2012.

RAC Market Development

Over the years, CalRecycle has provided support to local agencies for RAC and rubberized chip seal projects. Through the Rubberized Pavement Grant Program, many new paving projects have either been completed or are being planned in California. When compared to conventional asphalt, RAC saves money, provides greater skid resistance, is quieter, and lasts longer than conventional asphalt. CalRecycle has successfully promoted the product's benefits through workshops, conferences, RAC technical centers, performance models, and other outreach efforts.

Other TDP Market Development

CalRecycle is also promoting expansion of diversified markets involving a wide range of TDPs, with applications in a variety of different market segments. Examples include:

- Building construction products such as flooring, roofing, sealants, and pipe couplings
- Various traffic-related devices, delineators, and cones

- Accessibility products such as landing applications, edge reducers, and accessible walkways.
- Outdoor surfacing such as tiles, pavers, and mats
- Pour-in-place and other playground surfacing applications.
- An ever-growing list of other products and applications, such as cleaning supplies, and paints and coatings

Through the Tire Incentive Program and the Tire-Derived Product Grants program, CalRecycle provides funding to help incentivize tire-derived material and TDP suppliers to expand product innovation and marketing and to help support purchase of diverse TDPs. Through the Tire Market Analysis and Support (TMAS) contract, the contractor prepares an annual Waste Tire Market Report documenting market trends and the current diversion and recycling rate. These reports can be found in CalRecycle's Publications Catalog at www2.calrecycle.ca.gov/Publications/. CalRecycle will also coordinate with the Governor's Office of Business and Economic Development, which offers a variety of incentive and financing programs to encourage business development in California.

Market Development Incentives for Waste Tires

For years, CalRecycle has relied on a variety of grant programs, along with focused research, technical support, and outreach, as the bulwark of its market development efforts. While these efforts have been successful in expanding markets and helping businesses to increase production and develop new products, the facts speak to the need to reassess this fundamental market development approach. In particular, the tire recycling rate—i.e., for activities that result in use of waste tires to produce marketable products (as opposed to exporting tires or using them as alternative daily cover [ADC])—has hovered below 40 percent for years. It is only because of exports and ADC end use, along with use of TDF for energy recovery, that the total diversion rate has reached into the 90 percent range. However, CalRecycle is focused on increasing in-state markets in lieu of tires being exported for use as TDF.

Direction Provided by SB 876

SB 876 includes legislative intent language as follows (from 2000 uncodified law, SB 876):

> *"(g) The purpose of this act is to do all of the following:…(2) Encourage tire manufacturers to promote the use of retreaded and longer-lasting tires, as well as develop recycled-content rubber tires."*

Public Resources Code section 42889(b) states:

"The remaining moneys collected pursuant to Section 52885 shall be used to fund the waste tire program, and shall be appropriated to the board in the annual Budget Act…[and] shall be expended…for the following purposes:…

1) To make studies and conduct research directed at promoting and developing alternatives to the landfill disposal of waste tires."…

(7) To assist in developing markets and new technologies for used tires and waste tires. The board's expenditure of funds for purposes of this subdivision shall reflect the priorities for waste management practices specified in subdivision (a) of PRC Section 40051."

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 RAC and TDA by providing funds and technical assistance to state agencies, local governments, and businesses.
4. Increase the purchase of TDPs (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.

Performance Measures

The performance measures listed below have been streamlined and updated to align with the activities listed in this Biennial Revision of the Five-Year Plan.

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

2. Conduct research to address critical barriers to increasing markets for waste tire products and technologies (e.g., manufacturing rubber products using crumb rubber, RAC PG+5 issues, turf field health, and environmental impacts) 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. Support the increase in waste tire processing capacity to facilitate the 75 percent recycling goal.

Activity Description and Budget

CalRecycle is proposing to continue funding the following initiatives:

- Tire-derived aggregate (TDA) and rubberized asphalt concrete (RAC) research and technical support
- Environmental studies and research
- Research on waste tire technologies evaluation and development
- Tire market analysis and support

This will support CalRecycle's focus on RAC, TDA, and other tire-derived products (TDPs) that use the largest number of tires. Since a large number of tires can be diverted through RAC, TDA, and molded product applications, funding to expand this use is a priority. Table 9 provides the budget for this element.

Table 9: Budget for Research and Market Development Activities

Program Area	FY 2023–24	FY 2024–25	FY 2025–26	FY 2026–27	FY 2027–28
Tire-Derived Aggregate Civil Engineering Technical Support and Research	$600,000	$850,000	$600,000	$850,000	$600,000
Technology Center and Laboratory Testing Services	$0	$200,000	$0	200,000	$0
Rubberized Asphalt Concrete Technical Support and Research	$300,000	$300,000	$300,000	$300,000	$300,000
Environmental Studies and Research	$500,000	$500,000	$500,000	$500,000	$500,000
Waste Tire Technologies Evaluation and Development	$250,000	$250,000	$250,000	$250,000	$250,000
Tire-Derived Aggregate Grant Program	$750,000	$750,000	$750,000	$750,000	$750,000
Rubberized Pavement Grant Program	$5,084,439	$5,359,439	$5,109,439	$5,359,439	$5,109,439
Tire-Derived Products Grant Program	$700,000	$0	$700,000	$0	$700,000
Tire Incentive Program	$3,200,000	$3,200,000	$3,200,000	$3,200,000	$3,200,000
Tire Market Analysis and Support	$200,000	$175,000	$175,000	$175,000	$175,000
Tire Events	$125,000	$125,000	$125,000	$125,000	$125,000
Totals	**$11,709,439**	**$11,709,439**	**$11,709,439**	**$11,709,439**	**$11,709,439**

1. **Tire-Derived Aggregate (TDA) Civil Engineering Technical Support and Research**
   CalRecycle will continue to provide technical support to address issues associated with the use of TDA in civil engineering projects and research to investigate new TDA applications as shown in the activity descriptions below. Funding for these efforts will vary between $600,000 and $850,000 per fiscal year. This is done to accommodate the award cycles for the contracts needed to support CalRecycle's Technical Support Contracts.

- **TDA Civil Engineering Technical Support**
  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. CalRecycle also directs its technical assistance contractor to develop technology transfer materials that showcase the performance and cost benefits of using TDA. The technical assistance contractor will present these materials and serve as a CalRecycle liaison at various key stakeholder group workshops and conferences.

- **TDA Research**
  Under this activity, CalRecycle will continue to investigate new civil engineering uses for TDA, including partnering with state, local, and private-sector engineers to conduct research and to train and educate them on the use of TDA in their projects. For TDA-related research projects, CalRecycle may implement project-specific contracts. These projects could include, but are not limited to, erosion control, earthquake damping, vibration mitigation, retaining and sound walls, storm water runoff and drainage control, and septic tank leach field applications. A recent example was the previously mentioned project done in partnership with Santa Barbara County in 2019 to demonstrate the feasibility of using TDA in a mechanically stabilized earth application. The project rehabilitated a failing section of road on a steep hillside.

Activity Funding
FYs 2023–24, 2025-26, and 2027–28……$600,000 per fiscal year
FYs 2024–25 and 2026–27……..……$850,000 per fiscal year

2. **TDA and RAC Technology Center and Laboratory Testing Services**
   CalRecycle will continue its partnership with a contractor who has knowledge and experience with the TDA and RAC material specifications in California. Through the TDA Technology Center, 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. CalRecycle may request that the contractor participate in environmental studies that relate to 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 provide curriculum development support to California universities to educate the next generation of engineers on the benefits of using TDA.

   Activity Funding
   FYs 2024–25 and 2026–27……..……$200,000 per fiscal year

3. **Rubberized Asphalt Concrete (RAC) Technical Support and Research**
   The success of CalRecycle's RAC programs has been largely due to the technical support that has been provided through CalRecycle's RAC technical assistance contract and research efforts conducted by its university partners. CalRecycle is proposing to continue to provide technical support and research to address issues associated with roadway projects, including rubber hot-mix, rubber chip seal, rubber cape seals, and other emerging rubber paving applications. As shown in the descriptions below, funding for these efforts is proposed to be $300,000 per fiscal year.

   - **RAC Technical Support**
     The technical assistance contractor will assist CalRecycle with marketing and promoting the use of RAC through the development and distribution of technology transfer materials and presentation of these materials at key stakeholder workshops and conferences. The contractor provides technical assistance and training to RAC grantees to ensure that their projects are successful. To date, the contractor has conducted training sessions for over 300 local government entities.

     Through this program, the contractor will assist on agency projects and may provide design assistance, specification review, bidding and procurement, construction management, quality assurance, and quality control, as necessary.

   - **RAC Research**
     Under this activity, CalRecycle will continue to conduct research of rubberized paving applications in support of efforts to promote its use. Listed below are several RAC research proposals that CalRecycle is currently considering:
     - Performance model implementation for rubberized paving applications (e.g., hot-mix, chip seals),
     - Rubberized chip seal design specifications, and
     - Research in determining the rubber content in rubberized binders.

   Activity Funding
   FYs 2023–24 through 2027–28……$300,000 per fiscal year

4. **Environmental Studies and Research**
   CalRecycle will partner with a research Institute who has knowledge and experience with environmental studies and research to conduct a comprehensive evaluation and assessment on emerging environmental issues associated with TDPs. The research might be conducted in coordination with other stakeholders and state agencies such

as DTSC and the State Water Resources Control Board. The goal of the research may include, but not limited to, assessing the impact of Tire Wear Particles, 6 PPDQ, Zinc, etc., on the environment.

Activity Funding
FYs 2023–24 through 2027–28……$500,000 per fiscal year

5. **Waste Tire Technologies Evaluation, Investigation and Development**
   CalRecycle will continue to investigate TDPs and technologies that utilize waste tires to study and determine whether they are viable in the current tire market and if there are 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; and research into innovative and emerging technologies such as devulcanization. Research may also be performed 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 the service life of the tire (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.

   Activity Funding
   FYs 2023–24 through 2027–28……$250,000 per fiscal year

6. **Tire-Derived Aggregate Grant Program**
   This program provides funding for civil engineering projects utilizing TDA to:
   - Local governments, special districts, and joint powers authorities
   - State agencies (including offices, departments, bureaus, and boards)
   - California-based private and for-profit entities
   - Non-profit organizations
   - Qualifying California Indian tribes

   To be eligible for the grants, projects must use TDA in one of a variety of approved civil engineering applications.

   Activity Funding
   FYs 2023–24 through 2027–28……$750,000 per fiscal year

7. **Rubberized Pavement Grant Program**
   This program will continue to be offered to cities, counties and qualifying California Indian tribes that fund public works projects located in California. The program is designed to help create long-term sustainable markets by focusing on first-time and limited-experience users of rubberized paving. This may include grants and incentives to further the purposes of the program.

   Activity Funding
   FY 2023–24 ……$5,084,439
   FYs 2024–25 and 2026–27……..……$5,359,439 per fiscal year
   FYs 2025–26 and 2027–28……..……$5,109,439 per fiscal year

8. **Tire-Derived Product Grant Program**
   This program and its predecessors have increased demand for TDPs, especially with local governments and school districts. It has also encouraged the appropriate substitution of recycled rubber for virgin rubber (also known as feedstock conversion). Typical TDPs include:
   - Storm water mitigation measures
   - Landscaping and playground loose-fill mulch
   - Playground tiles
   - Crumb rubber infill for all-weather sports surfacing, rubberized sidewalks and tree wells, floor and agricultural mats, and sports tracks

   This activity is pending the results of the Office of Environmental Health Hazard Assessment (OEEHA) study and future funding may be eliminated or further reduced.

   Activity Funding
   FYs 2023–24, 2025–26, and 2027-28…….....……$700,000 per fiscal year

9. **Tire Incentive Program**
   This successful and competitive program is targeted at expanding demand for higher value-added products using crumb rubber from California-generated waste tires. Incentives may include new and existing tire-derived products, end-of-life material, feedstock conversion, and use of fine (≤ 50) mesh material.

   Examples of possible eligible products include, but are not limited to:
   - Flooring underlayment
   - Rubberized flooring
   - Conveyer belts
   - Calendared or compounded rubber

- Agricultural harvesting devices
- Landscaping and garden products
- Building products
- Traffic devices
- Spacers
- Fencing
- Asphalt products (that are not eligible under other CalRecycle programs)
- Paintings and coatings

Asphalt products must contain a minimum of 5 percent crumb rubber in the binder or flux.

Activity Funding
FYs 2023–24 through 2027–28……$3,200,000 per fiscal year

10. Tire Market Analysis and Support

This contract intends to document market trends and assist with the arrangement and organization of the California tire conferences. CalRecycle staff and an independent contractors will provide:

- An annual in-depth survey and analysis of the waste tire and TDP markets in California and the associated *California Waste Tire Market Report*. This effort consists of a market analysis study to assess the market for California waste tires and influencing factors in the market, including providing information on the waste tire diversion rate, market trends, supply and demand balance and capacity, and other relevant market analyses. The analysis will culminate with the annual publication of the *California Waste Tire Market Report*.
- In coordination with CalRecycle, the contractor will assist with the arrangement and organization of the California tire conferences. The contractor will solicit stakeholder input on topics that will be the subject of the conferences, develop educational priorities and plans for achieving them, organize conference sessions, identify, and secure potential presenters, and attend and participate/present at the conferences.

Activity Funding
FY 2023–24……..……..……$200,000
FYs 2024–25 through 2027–28……$175,000 per fiscal year

11. Tire Events

CalRecycle will continue to hold tire workshops, forums, and trainings, as it has in past years. These tire business and product events will provide attendees with up-to-

date information about waste tire management programs. They provide a venue to 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 stakeholders to meet and focus on issues of common concern. These events may be held virtually. Wherever possible, events will be conducted in conjunction with related events organized by organizations such as the League of California Cities, California Public Works Association, and California State Association of Counties. In addition, CalRecycle staff combined the tire and used oil/household hazardous waste annual conference and the Recycling Market Development Zone conferences and training workshop planning and implementation activities into one combined three-year contract to provide efficiencies of scale and other benefits. All events will be coordinated with CalRecycle's Office of Public Affairs.

Activity Funding

FYs 2023–24 through 2027–28……$125,000 per fiscal year

California/Mexico Border Waste Tire Activities and Support

Program Background and Status

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.

Used tires in Baja California come from many sources, including from new tires sold in Baja California and used tires imported as commodities from California, Arizona, and other states. After tires have been used or reused and reach the end of their useful life, some of the tires end up as waste tires. Waste tires that are not properly disposed may cause environmental problems in the California-Mexico border region, impacting areas such as the Tijuana River estuary and the New River of the Imperial Valley in California. Illegal disposal and improper storage and use of waste tires in the California-Mexico border region contribute to environmental problems in California and Mexico.

Mexican officials do collect fees to manage waste tires in Baja California. These fees are then remitted to the Mexican State Government Treasury. In Baja California, the fee amount varies based on tire size and a portion of this fee is paid to state-certified operators of waste tire disposal facilities to fund the proper disposal. Baja California does not levy a fee on the sale of new tires.

To date, many entities including Mexican and United States federal agencies, state and local agencies, and non-profit organizations have helped address the impacts of improperly managed waste tires in Mexico. These efforts have primarily focused on the cleanup and remediation of large legacy waste tire piles, as well as the removal of waste tires from the Tijuana River estuary and New River area. CalRecycle's efforts have included enforcement, waste tire hauler manifests, cleanups, research, and technical assistance. CalRecycle continues to support the development of a tire management program in Mexico by providing technical assistance when needed and intends to build on these efforts in the years to come.

Based on more than 20 years of experience implementing tire-related management programs, CalRecycle believes a long-term solution to the problems resulting from the improper handling of waste tires along the California-Mexico border will require continued binational collaboration. This collaboration should continue to focus on building and sustaining a healthy institutional framework and associated financing mechanisms to implement key regulatory and market development functions in Mexico

similar to those seen in California and other U.S. states. These include facility permitting and oversight, hauler registration, enforcement, cleanup and remediation activities, and research and market development programs.

Based on its previous work with the University of California, Berkeley on a model tire management framework for Baja California, CalRecycle understands that the Mexican federal and Baja California state governments have made progress in the last few years in establishing an overall statutory framework for tire management. CalRecycle welcomes the opportunity to provide technical assistance to the government of Baja California as it engages in institutionalizing and self-financing a long-term waste tire management program.

To assist Mexico, CalRecycle recognized a need to better understand current used and waste tire flows in the border region and to collaborate with multiple stakeholders on identifying and prioritizing specific border projects where the use of tire funds may be most effective in contributing to long-term environmental protection in the region. Accordingly, CalRecycle contracted with San Diego State University Research Foundation to accomplish these objectives. Several workshops were conducted under the contract to discuss these issues.

In April 2017, a workshop was held in Sacramento to discuss the challenges of waste tire disposal in Mexico. At this workshop nine stakeholders from Mexico attended, including staff from the Secretariat de Protección al Ambiente de Baja California.

In August 2017, a workshop was held in San Diego to discuss solutions for waste tire disposal in Mexico. At this workshop ten stakeholders from Mexico attended, including staff from the Secretaría de Protección al Ambiente, Mexican Secretaría of the Economy, Association of Tire Dealers, Center for Innovation and Environmental Planning, and the National Chamber of Commerce, Services, and Tourism in Tijuana.

In November 2017, a third workshop was held in Tijuana, Baja California where representatives from Mexico, California Environmental Protection Agency, and CalRecycle discussed waste tire regulations and the possible usage of rubberized asphalt concrete and tire derived aggregate. Thelma Castaneda Secretaría de Protección al Ambiente attended this workshop and afterwards created a list of next steps for Mexico. San Diego State University Research Foundation’s final report is available in English and Spanish.

In addition to issues with waste tires, the border region also faces issues with discarded solid waste and soil run-off. To address these issues, Senate Bill 83 (Committee on Budget and Fiscal Review, Chapter 24, Statutes of 2015) established the Solid Waste Working Group. Overseen by the California-Mexico Border Relations Council (Council)

and facilitated by CalRecycle, the group is tasked with developing and coordinating long-term solutions to address challenges and remediate issues associated with waste tires, solid waste, and accumulation of sediment along the California-Mexico border region. Issues include the degradation of valuable estuarine and riparian habitats and threats to water quality and public health. The working group includes members from CalRecycle, California Environmental Protection Agency (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 Solid Waste Working Group finalized a strategic plan in December 2016 entitled the "Solid Waste and Waste Tire Strategic Plan" and presented the plan to the Council in January 2017.

To advance work in the border areas, Senate Bill 83 appropriated $300,000 from the California Tire Recycling Management Fund (Tire Fund) to the CalEPA to support the Council. Two projects commissioned by the Council's Solid Waste Working Group received grants.

WILDCOAST received a $100,000 grant to address waste tire issues along the border in Tijuana. In turn, WILDCOAST recovered a total of 33,620 waste tires from areas near the California-Mexico border and adjacent to tributaries of the Tijuana River.

The Sonoran Institute received $200,000 to research solid waste issues on both sides of the border and to implement small-scale remediation projects that impact the New River. The main achievements of this project included:

1. Installation of two trash screens in Mexicali in the International Drain (installed one new screen and replaced one old screen with a new one)
2. Installation of two permanent trash containers near the drains
3. Installation of four cameras that monitor illegal dumping activities, which can then be acted upon by police
4. Planting 450 trees in and near the drains
5. Removal of 6,066 cubic meters of trash
6. Removal of 1,760 tires
7. Installation of six street lights at the drains
8. Identification of four illegal dump sites in Calexico, California

Objective

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

CalRecycle will coordinate with interested parties in the border region, in an open and transparent manner involving all interested stakeholders, especially local governments

and nonprofit organizations, to address the Illegal disposal and improper storage and use of waste tires in the California-Mexico border region.

Performance Measures

The performance measures for the border element are:

1. Increase communication with Baja California's government, non-profits, local governments, and other stakeholders 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 this *Memorandum Of Understanding to Enhance Cooperation on Environmental Protection, Natural Resources, And Climate Change Between the Ministry of Environment and Natural Resources of the United Mexican States and the Environmental Protection Agency and the Natural Resources Agency of the State of California of the United States of America*, 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:
    - Local Government Waste Tire Cleanup Grant Program
    - Local Government Waste Tire Amnesty Grant Program
    - Farm and Ranch Solid Waste Cleanup and Abatement Grant Program
    - Local Conservation Corps Grant Program
    - CalRecycle's southern California short-term remediation contractor to remediate the waste tires.
3. Market development and technical virtual workshops to Baja California government, non-profits, 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 US EPA Border 2025, Tijuana River Valley Recovery Team, and the California-Mexico Border Relations Council

When appropriate, CalRecycle will consult with an advisory group for the activities listed below. The advisory group will include national, state, and local governments, non-profits, and stakeholders from both sides of the border.

Update on the **Border Region Site Identification, Enforcement, and Cleanup Assistance** activity from the previous Five-Year Tire Plan that was funded in the amount of $200,000 in FY 2021–22. CalRecycle has received numerous complaints over several years claiming illegal waste tire dumping in the border region. To address this concern, 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 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 non-profits operating in the border region. The survey was followed by field assessments of identified potential sites. The study was conducted in the summer and fall of 2022, with surveys and field assessments completed recently. CalRecycle will work with GLA to develop a study report during spring of 2023.

Table 10: CalRecycle's California/Mexico Border Waste Tire Activities and Support

Program Area	**FY 2023–24**	**FY 2024–25**	**FY 2025–26**	**FY 2026–27**	**FY 2027–28**
Spanish Translation and Interpretation Services	$25,000	$25,000	$25,000	$25,000	$25,000
Totals	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$25,000**
	n/a	n/a	n/a	n/a	n/a
Program Area (existing budget line items in Plan)	**FY 2023–24**	**FY 2024–25**	**FY 2025–26**	**FY 2026–27**	**FY 2027–28**
Tire Cleanups in California including the Border Region*	Funding based on projects received	Funding based on projects received	Funding based on projects received	Funding based on projects received	Funding based on projects received
Local Government Waste Tire Cleanup and Amnesty Grant Programs*	Funding based on applications received	Funding based on applications received	Funding based on applications received	Funding based on applications received	Funding based on applications received
Local Conservation Corps Grant Program*	Funding based on projects	Funding based on projects	Funding based on projects	Funding based on projects	Funding based on projects
Market Development	$5,000	$5,000	$5,000	$5,000	$5,000

Program Area	FY 2023–24	FY 2024–25	FY 2025–26	FY 2026–27	FY 2027–28
Technical Virtual Workshops					
Waste Tire Hauler Training to Mexican Haulers	$8,000	$8,000	$8,000	$8,000	$8,000
Feasibility Committee for Market Development of Civil Engineering in Mexico	$15,000	$15,000	$15,000	$15,000	$15,000
Border Check Point Cross-Training Workgroup	$10,000	$10,000	$10,000	$10,000	$10,000
Knowledge Transfer and Technical Assistance	$10,000	$10,000	$10,000	$10,000	$10,000
Staff Participation in Groups that Focus on the Border Region	$5,000	$5,000	$5,000	$5,000	$5,000
Totals from existing budget line item in Plan (Plus cleanup projects funded by CalRecycle grants and contracts that are undetermined at this time.)	**$53,000**	**$53,000**	**$53,000**	**$53,000**	**$53,000**

*An amount designated to the border activities cannot be determined at this time. The amount allocated will be based on the projects received in the border region.

Activities

1. **Spanish Translation and Interpretation Services:** This contract would provide both verbal interpretation and written translation from English to Spanish and Spanish to English. These services are for tire events, reports, and educational material that are of interest to the border area. This would increase accessibility for Spanish-speaking stakeholders to our tire conferences, workshops, and other programmatic activities.

   Activity Funding
   FYs 2023–24 through 2027–28……$25,000 per fiscal year

Existing Budget Line Items in Plan

2. **Tire Cleanups in California including the Border Region:** 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.

   CalRecycle's Amnesty and Cleanup Grant Programs will give priority funding for local governments in the California border region. This activity will be funded from the existing allocation in the Cleanup Element.

   The Local Conservation Corps (LCC) in the border region assist local governments with waste tire cleanup and collection activities. This activity will be funded from the existing allocation to the LCC in the Cleanup Element.

3. **Market Development Technical Virtual Workshops:** CalRecycle will hold virtual workshops to disseminate information on Rubberized Asphalt Concrete (RAC) and Tire-Derived Aggregate (TDA) technology to the Mexican Government, non-profits, and businesses. This activity will be funded in the amount $5,000 each fiscal year from the technical support contracts described in the Research and Market Development Element.

4. **Waste Tire Hauler Training to Tire Haulers based in Mexico:** CalRecycle will continue conducting free bilingual workshops throughout California, with a special emphasis on the border region. Trainings inform and educate waste tire haulers of their roles and responsibilities under California's waste tire compliance system including how to register annually, how to create a manifest, how to use the online system to submit a manifest, how to properly handle and dispose of waste tires, and how reduce the impacts to public health and the environment that arise from improper hauling, storage, and disposal of waste tires.

Additional assistance is available on a one-on-one basis to participants after the virtual workshop. This activity will be funded in the amount of $8,000 each fiscal year from the Hauler and Manifest Element.

5. **Feasibility Committee for Market Development of Civil Engineering in Mexico:** CalRecycle could help chair a committee to determine which type of civil engineering projects could develop a market in Mexico. This committee could explore market development, equipment and plant requirements, funding opportunities, business networks, and training. The committee could include members from CalEPA, US EPA, Mexican Government, tire recycling businesses, non-profits, and local governments. CalRecycle estimates $15,000 a year for staffing cost to facilitate a committee, which could be funded from the existing Program Staffing listed in the Plan.

6. **Border Check Point Cross-Training Workgroup:** CalRecycle could work to coordinate regular workgroups with government authorities from Mexico and the U.S. involved with international ports to exchange information about tire commodity import and export requirements and monitoring processes. The workgroup could identify how the flow of tire commodities are tracked at international border check points by each country and evaluate if any additional opportunities exist to further monitor the flow of tires across the border. They could also explore enforcement needs, identify issues relating to illegal flows of tires, and develop communication protocols to report to each other should any issues of concern arise that need to be further investigated. The workgroup could include CalRecycle, U.S. and Mexico Border Customs Agencies, California Highway Patrol, and registered tire hauler stakeholder representatives. This activity will be funded in the amount of $10,000 from the existing Waste Tire Enforcement Support activity.

7. **Technical Assistance:** CalRecycle will provide technical assistance to Baja California to develop an integrated waste tire management program. This activity will be funded from the existing Program Staffing listed in the Plan.

8. **Staff Participation in Groups that Focus on the Border Region:** CalRecycle staff members will participate in groups that focus on the border region, such as US EPA Border 2025, Tijuana River Valley Recovery Team, Commission of the Californias, and the California-Mexico Border Relations Council. This activity will be funded from the existing Program Staffing listed in the Plan.

Administrative Costs

Program Staffing

Tire-related activities are performed by a total of 65 positions within CalRecycle. The cost of staffing is approximately $8.6 million. Breakdown of positions are as follows:

Division or Office	Positions
Administration, Finance & Information Technology Services Division	1
Audits Office	1
Legal Affairs Office	3
Legislative & External Affairs Office	1
Materials Management and Local Assistance Division	19
Waste Permitting, Compliance and Mitigation Division	40
Total Tire Positions within CalRecycle	**65**

Personnel Funding

FYs 2023–24 through 2027–28……$8,608,667 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 (as mentioned in the 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 2023–24 through 2027–28..... $4,367,859 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:

- California Department of Tax and Fee Administration
- Foundation for California Community Colleges
- Risk Management

- Health and Safety
- California Conservation Corps
- The Governor’s Office of Planning and Research

Activity Funding
FYs 2023–24 through 2027–28..... $1,381,035 per fiscal year*
**Estimate of costs for mandatory contracts.*

Appendix A: Accomplishments Based on Performance Measures from the Five-Year Plan (Eleventh Edition July 1, 2021)

This section contains performance measures from the *Five-Year Plan for the Waste Tire Recycling Management Program (Eleventh Edition: Covering Fiscal Years 2021–22 to 2025—26)* with accomplishments reported after each performance measure. Data collected is for Fiscal Year 2021–22, unless otherwise specified.

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

The enforcement program will use the following measures to evaluate success in achieving its objectives:

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

     As of November 21, 2022, there were 34 major and minor waste tire facilities in California. In the preceding 12 months, 34 (100 percent) were inspected at least once.

   - Inspect all active registered and exempt haulers located in California at least once every 24 months.

     As of November 21, 2022, there were 1,761 registered and exempt waste tire haulers in California. In the preceding 24 months, 1,484 (84.3 percent) 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 November 21, 2022, there were 20,615 active generators in California. In the preceding 36 months, 17,231 (83.6 percent) were inspected at least once.

     The internal performance measures for generator and hauler inspections were about 15% lower than the goal due to a reduced number of inspections by CalRecycle and the TEAs because of COVID and stay-in-place orders (see Chart 1 below).

2. **Noncompliant Tire Businesses**
   - Take timely progressive enforcement actions on illegal, unpermitted waste tire facilities and hauling violations.

     For January 1, 2020, to December 31, 2021, staff issued a total of 12 enforcement actions. There were 8 enforcement actions at illegal and unpermitted facilities and 4 enforcement actions issued based on manifest system information in Waste Tire Management System (WTMS). The enforcement actions for this period include: 8 cleanup and abatement orders, 3 administrative complaint, and 1 hauler registration denial.

     For Calendar Year 2020, CalRecycle staff issued a total of 5 enforcement actions, which included: 1 administrative complaint, 3 cleanup and abatement orders (2 at registered hauler locations), and 1 hauler registration denial.

     For Calendar Year 2021, CalRecycle staff issued 7 enforcement actions, which included: 2 administrative complaints and 5 cleanup and abatement orders (1 at a registered hauler location).

   - Report the number of illegal sites remediated through the enforcement program.

     CalRecycle's enforcement actions resulted in the removal of 81,740 waste tires from 8 illegal sites.

   - Track the number of penalties levied for violations pertaining to waste and used tires.

     For January 1, 2020, to December 31, 2021, there were 3 enforcement cases resolved against waste tire facilities resulting in assessed penalties of $1,559,750 of which $1,246,750 was to be paid and $313,000 was suspended or held in abeyance pending continued compliance. In 2 of the enforcement actions, it is likely that the property owners will not 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 these and other tire enforcement actions, CalRecycle provides notice of violations in inspection reports and through letters of violation.

3. **Grant Program**
   - Provide training to TEA grantee inspectors.

CalRecycle provided one Grant Application training webinar to stakeholders in December 2021. CalRecycle conducted Grant Administration training webinar for TEAs during June 2020 and June 2021. In April 2020 and April 2021, CalRecycle held the Technical Training Series virtually.

Additionally, CalRecycle continues to train and approve individual TEA inspectors as they enter the program. For January 1, 2020, to December 31, 2021, CalRecycle staff trained and certified a total of 63 waste tire inspectors and participated in over 100 joint inspections. Finally, CalRecycle provides on-going 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 table below provides the aggregated data from all grantees in TEA26 and TEA27. Grantee activity reduced significantly between March 2020 until the end of the grant performance period on June 29, 2020, due to the COVID-19 pandemic and stay-at-home orders. The reduced activity resulted in lower grantee performance in the number of tires found and remediated. However, permission was given to grantees to temporarily conduct inspections virtually during the pandemic which resulted in grantees completing planned inspections and reducing budget expenditures. In addition, illegal waste tire dumping, which is indicated by the number of waste tires and waste tire piles discovered and remediated, has increased significantly from the prior cycle.

Chart 1: Local Government Waste Tire Enforcement Program Performance

	TEA27 (FY19-20)	TEA28 (FY 20-21)	% Difference
Grant Term End Date	**9/30/2021**	**9/30/2022**	**n/a**
Notices of Violation (NOV) Issued	156	124	-21%
NOVs Brought into Compliance	149	105	-30%
Percent of NOVs Brought into Compliance	95.5%	85%	-11%
Hauler Reports Submitted	217	189	-13%
Number of Tires Found	13,337	8900	-33%
Number of Tire Piles Found	974	799	18%
Number of Tires Piles Remediated	969	8074	733%
% Tires Piles Remediated	96%	91%	-5%
Worked with an LCC	11	8	-27%
Number of Inspections Completed	10,382	10,979	6%
Number of Inspections Planned	17,602	16,419	-7%
Percent of Planned Inspections Completed	76%	67%	-9%
Number of Priority inspections in Work Plan	5,512	8,462	54%
Number of Completed Priority Inspections in Work Plan	4,438	7,040	59%
Percent of Work Plan Inspections Completed	90%	83%	-7%
Percent of Grantee Budgets Expended	42%	56%	14%

Hauler and Manifest Program

The Hauler and Manifest Program will use the following measures to evaluate success in achieving its objectives:

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

   For January 1, 2020, to December 31, 2021, 92 (6.3 percent) of the 1,460 registered waste tire haulers failed to submit waste tire manifests. However, of that total 71 (77.2 percent) have only been registered haulers since January 2021. The hauler program will begin educational outreach to these haulers regarding manifesting requirements.

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

   As of November 2022, 236 of 1,460 (16.2 percent) active registered waste tire haulers that submit 100 or more manifests per year, had greater than a 10 percent error rate. Senate Bill 1181 passed during the 2022 legislative session which allows

CalRecycle to require the electronic submittal of manifests. This is expected to significantly reduce the error rate.

3. Track the number of complaint forms received, including the “204 Form” from solid waste disposal sites and waste and used tire facilities documenting unregistered hauling vehicles transporting more than 10 tires, hauler observation forms reporting waste tire haulers that may be violating waste tire hauler and manifest requirements, and waste tire complaints received from the public.

   For July 1, 2019, to June 30, 2021, a total of 579 complaint forms were received. Of that total, 249 complaints were for solid waste disposal sites documenting unregistered vehicles hauling more than 10 tires, which were documented on “204 Form”. The vehicle owners associated with these complaints were issued a warning for unregistered waste tire hauling. The remaining complaints received were from TEA inspectors and the public.

4. Monitor the quantity of waste or used tires being picked up or delivered annually.

   For January 2020 through December 2021, there was a yearly average of 65,805,760 waste or used tires picked up and 68,066,815 waste or used tires delivered.

Chart 2: Pickups and Deliveries of Waste and Used Tires within California

Load Date Year	Pickups in CA (PTEs)	Deliveries in CA (PTEs)
2020	61,568,110	64,764,735
2021	70,043,838	71,368,894

Cleanup Program

The cleanup program will use the following measures to evaluate success in achieving its objectives:

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

   In June 2021, CalRecycle approved and completed a tire cleanup project at the Williamson property. CalRecycle removed and disposed of approximately 500 tires, equivalent to 10 tons of passenger tires, and some solid waste for $91,000. These

tires had been used for erosion control and were excavated and stockpiled by the owner, with CalRecycle loading and transporting the tires for disposal.

In January 2022, CalRecycle approved and completed a tire cleanup project at N&S Tire shop near Bakersfield. CalRecycle removed and disposed of approximately 55 tons tires and some solid waste for $28,000. This site was completed as an enforcement action for failure to comply with a permit.

2. Increase the number of tires collected through Farm and Ranch Cleanup, Tire Cleanup, Tire Amnesty, and Local Conservation Corps grants by 10 percent annually.

   Local Conservation Corps grantees continued waste tire collection programs but were hampered by operational restrictions due to COVID-19 during the final quarter of Fiscal Year (FY) 2019-20 resulting in an overall decline in waste tire collection of 3.65%. However, Third Quarter (Q1-Q3) data in FY 2019-20 before COVID began to impact Corps' operations showed a 9.5% increase in waste tire collection over the same period in FY 2018-19.

   Chart 3: Waste Tires Collected by Grant Program and Percent of Change

Grant Program	FY 2018–19	FY 2019–20	FY 2020–21	FY 2021-22	Percent Change
Farm and Ranch Solid Waste Cleanup and Abatement	587	1,440	509	Open Grants	-64.6%
Local Government Waste Tire Amnesty	No Grant Cycle	Open Grants	No Grant Cycle	Open Grants	0.2%
Local Government Waste Tire Cleanup	300,833	No Grant Cycle	Open Grants	No Grant Cycle	15%
Local Conservation Corps	93,961	90,527	90,443	97,409	7.7%

   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 communities and San Diego and Imperial Counties

During FY 2019–20, the TA5 grant reported collection of 8,900 tires. During FY 2020-21, the TCU18 grant reported collection of over 20,936 tires in San Diego and Imperial Counties.

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

The market development program will use the following measures to evaluate success in achieving its objectives:

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

   CalRecycle is focused on implementing programs to achieve a statewide 75 percent recycling (as opposed to diversion) goal for all discarded materials, as outlined under AB 341 (Chesbro, Chapter 476, Statutes of 2011). Consequently, the department is focusing mainly on recycling tires through reuse, civil engineering applications, and crumb rubber, as opposed to diversion through export, alternative daily cover (ADC), or tire-derived fuel (TDF). Based on this definition, the 2021 waste tire recycling rate is estimated at 35 percent, which is a slight decrease from the 2020 rate of 37 percent. Recycling increased by 10 percent (19.3 million PTEs); however, this was offset by a 15 percent increase in total generation.

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.

   The Feedstock Conversion Technical Assistance and Material Testing Services contract has enabled several manufactures to produce products with crumb rubber that were previously produced with virgin rubber and/or other materials. Products included: underlayment, rotating platforms, Americans with Disabilities levelers, anti-fatigue mats, pipe sealants, t-retaining walls, and ground reinforcement systems. This research and technical assistance contract have directly resulted in new applicants in the Tire Incentive Program. Additional research and assistance are anticipated to be provided in the coming fiscal years.

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 2021 California Waste Tire Market Report:

- The use of RAC and other paving material was estimated to have increased to 72-92 million pounds of crumb rubber in 2021 from 60-70 million pounds reported in 2020,
- The use of molded and extruded products is estimated at increasing 15 percent with 27-34 million pounds of crumb rubber in 2021 from 20-25 million pounds in 2020, and
- Civil engineering applications were estimated to decrease from 1.7 million PTEs in 2020 to 0.7 million PTEs in 2021.

To increase waste tire usage, CalRecycle continues to offer rubberized pavement, TDA, and tire derived products grant programs and a tire incentive program.

CalRecycle continues to address the lack of familiarity of use of waste tires in civil engineering applications, specifically TDA and RAC, by increasing outreach efforts through more focused technology exchange and outreach to local and state governments, contractors, and engineers in projects for which these technologies are viable. CalRecycle's past 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)) continue to be a focus area for CalRecycle. To assist in expanding this segment, CalRecycle pursues a three-point strategy:

- First, the Tire Market and Support (TMAS) contract increases the exposure of tire-derived products to public works departments, public and private colleges, universities, school districts, major corporations, retailers, and other private entities that are in a position to procure TDPs. Entities may include construction developers, building designers and specification writers, remodelers and home improvement contractors, fast food restaurants with playgrounds, Department of Transportation, Department of General Services, Department of Parks and Recreation, the California State University system, and architects.

- Second, CalRecycle provides Tire-Derived Product grants to local governments and school districts to offset the cost of purchasing tire-derived products. The intent is that local governments and school districts will gain the necessary experience with a TDP and will not solely rely on a grant to use this material.

Moving forward, the Tire-Derived Product grants may focus on more storm water mitigation related TDPs.

- Third, the Tire Incentive Program (TIP) supports higher value-added products. The TIP provides an incentive to 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 enhanced by a contract to provide technical assistance to manufacturers to produce higher value-added products with crumb rubber or to increase the percent of crumb rubber used (i.e., traffic device bases, rubber tiles, various roofing shingles, anti-fatigue mats, weight plates, various underlayment, ADA transition, pipe sealant/couplings, and ballistic tiles).

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

   Expanding capacity is a demand-driven decision for businesses so CalRecycle is actively working to expand the demand for products made with tire-derived materials. CalRecycle is accomplishing this by providing financial assistance through various market development grants, providing technical assistance, and performing market-based research. CalRecycle works with existing waste tire processors that have made the business decision to expand their existing capacity or establish an additional facility at a different location. As a direct result of the Tire Incentive Program's continued success, waste tire processors have increased capacity and have also purchased de-stoner equipment to produce higher quality material. CalRecycle also works with individuals seeking to start a new waste tire processing facility. Financial assistance is available from the recycling Market Development Zone Loan Program.

California/Mexico Border Waste Tire Activities and Support

The California/Mexico border program will use the following measures to evaluate success in achieving its objectives:

1. Increase communication with Baja California's government, non-profits, local governments, and other stakeholders to find solutions to waste tire problems in the border region.

   To increase communication with our stakeholders in the border region, CalRecycle presented an overview of their tire program to the Imperial-Mexicali Air Quality Task Force Meeting on February 4, 2021, the California-Mexico Border Relations Council

Meeting on December 13, 2021, and the Border 2025 Hazardous Waste Workshop on June 8, 2022.

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

   In January 2011, CalRecycle entered into a contract with the University of California, Berkeley to provide technical assistance for a framework for cooperation among jurisdictions on both sides of the border to adequately address the continued illegal dumping of waste tires that cause problems in the border region. *Methodology for the Development of a Model Integrated Waste Tire Management Plan Framework for the State of Baja California* was published in November 2012 and is available in English and Spanish.

   As Mexican federal and Baja California state governments continue to work on the establishment of an overall statutory framework for tire management, CalRecycle will continue to provide technical assistance and facilitate knowledge transfer to the governments as they work to institutionalize and finance a waste tire recycling program.

   Further, CalRecycle has a contract for Spanish translation and interpretation service to better assist the communication with representatives in Baja California. CalRecycle is available to provide technical assistance to the government of Baja California as they build their integrated waste tire management program.

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

   One of the Local Conservation Corps Grant Program grantees, the Urban Corps of San Diego County, collaborated with the City of San Diego Parks Department and the San Diego County Watershed Protection Program to remove several large waste tire piles with over 2,000 waste tires from the Tijuana River near a water plant located close to the San Ysidro International Border in FY 2021-22.

Chart 4: Waste Tires Collected in the Border Region by Grant Program and Percent Change

Grant Program	FY 2016-17	FY 2017-18	FY 2018–19	FY 2019–20	FY 2020-21	FY 2021-22	Percent Change
Local Government Waste Tire Amnesty	No Grant Cycle	403,699	No Grant Cycle	332,308	No Grant Cycle	Open Grants	-17.682%*

Local Government Waste Tire Cleanup	261,560	No Grant Cycle	300,833	No Grant Cycle	Open Grants	No Grant Cycle	15%*