

**Draft Five-Year Plan
For The
Waste Tire Recycling Management Program
(Eighth Edition Covering Fiscal Years 2015/16-2019/20)**

Draft Report to the Legislature

October 21, 2014 Workshop

The following document is a draft report that contains only the proposed activities and budgets for FYs 2015/16-2019/20. The full version of the draft report that contains program status, objectives, performance measures, activities, budgets and appendices will be presented during a CalRecycle workshop to be held tentatively in March 2015 with final adopt of the Plan in May/June 2015.

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. The seventh edition of the Five-Year Plan was adopted in May 2013 and covers Fiscal Years 2013/14 through 2017/18. Staff has begun the process to revise the plan to cover FYs 2015/16 to 2019/20.

Vision for the Future

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/or 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 exports or use as ADC) – has hovered for years around 40%. It is only because of exports and ADC end-use, along with energy recovery, that the total diversion rate has reached the 90% range. In accord with implementing AB 341's 75% recycling goal, and CalRecycle's complementary focus on handling waste materials within California in an environmentally safe manner and on generating jobs within the State, CalRecycle proposes the following long-term vision for the future of tire recycling in California. This vision will require significant legislative changes.

The primary change would be to implement an expanded incentive program that provides payments for desired end-uses of tires. This would entail differential incentive payment rates, with higher payments for preferred end-uses such as incorporation of crumb rubber into rubberized asphalt concrete; moderate payments for end-uses such as use of tire-derived aggregate in retaining walls; and lower payment rates for less-preferred but still non-disposal uses such as energy recovery (which, while not recycling, still allows for capture of the energy content in tires). This approach focuses on creating demand by assisting manufacturers in covering the costs of marketing their products against competing non-recycled products; it is modeled after similar incentive programs such as for plastic market development, etc. In order to be effective and reach as high a recycling rate as possible, such a program would require on the order of tens of millions of dollars per year, an amount that is currently not available from the Tire fund given the need to devote funding to enforcement, manifest system, and administrative costs. This approach would not include payments to processors for the production of material, as that would likely create an oversupply of material and result in downward pricing. However, it could include requiring processors to be responsible for ensuring that tires are appropriately collected and providing a small incremental payment so that processors could pay haulers depending on distance traveled.

This primary change will require the following legislative changes:

- 1) increase fee for new tires to a level of approximately \$3.50-\$4.00, to provide the necessary funding support for the incentive payments;
- 2) prohibit generators (tire shops/dealers) from charging any other fees for handling/disposal of tires because this would be covered by 1) and appropriately channeled to fund the tire incentive payments;
- 3) repeal prohibition on use of tire funds for activities associated with energy recovery, to allow incentive payments for this type of end-use and for research on energy recovery byproducts ;
- 4) repeal the rubberized pavement grant mandate, since this use would be covered by the incentive payments
- 5) eliminate most existing market development grant programs, as these would be replaced by the incentive payments; and
- 6) continuously appropriate tire funds to provide continuity to programs across fiscal year boundaries.

Secondly, CalRecycle's long-term vision also would entail other legislative changes to augment this approach:

- 1) Mandate that State agencies, universities/colleges, and local governments procure tire-derived products, where such products meet specifications and are economically feasible.
- 2) Prohibit, with a phased-in ban over a reasonable time period and if sufficient processing capacity is available, tire disposal and the use of tire-related ADC.
- 3) Require that waste tires be processed with at least a minimal level of shredding to discourage disposal and to ensure an adequate supply of processed tires for recycling.
- 4) Support source reduction by requiring a minimum tire life of 60,000 miles; tires meeting this standard would be subject to the normal new tire fee, while tires with a lower life would be subject to higher fees.

As part of this long-term approach, CalRecycle also would propose to increase supporting research, consolidate its tire cleanup grant programs into a more efficient set of programs, eliminate some market development grant programs, and provide for the required emergency reserve through an escrow account or contract. It would continue the current level of support for inspection and enforcement activities, hauler manifest system, market trend analysis and targeted outreach, and consolidated technical support for rubberized asphalt concrete and tire-derived aggregate projects.

Most of the changes suggested above will, as noted, require legislative change. In the interim, and in this Five-Year Tire Plan, CalRecycle still proposes changes that would entail increased research (e.g., CalTrans specification development, landfill tire-related emissions, end-of-life management of synthetic turf fields and playgrounds, etc.), elimination of some cleanup programs, and consolidation of market development technical support activities. As with the longer-term vision, CalRecycle would continue current levels of support for other activities such as inspection and enforcement, hauler manifest system, market analysis, etc.

The following table is a summary of draft proposed expenditures for the eighth edition covering FYs 2015/16 to 2019/20. The proposed expenditures reflect the spending authority limit for the Tire Program as outlined in the Governor's Budget. Further details of each program area are contained in this draft Plan. We anticipate the next version of the draft revised Plan will be presented during a CalRecycle workshop in March 2015.

Table 1: Total Tire Program Funding for Fiscal Years 2015/16-2019/20

Program Areas	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	Totals for All Fiscal Years
Enforcement	\$7,585,000	\$7,585,000	\$7,585,000	\$7,585,000	\$7,585,000	\$37,925,000
Hauler and Manifest Program	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$2,250,000
Cleanup*	\$8,000,000	\$8,000,000	\$6,200,000	\$6,200,000	\$6,200,000	\$34,600,000
Research and Market Development	\$15,550,000	\$15,950,000	\$14,900,000	\$14,900,000	\$10,350,000	\$71,650,000
Program Staffing and Administration	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000	\$37,500,000
Administration	\$3,028,000	\$3,028,000	\$3,028,000	\$3,028,000	\$3,028,000	\$15,140,000
Mandatory Contracts	\$1,231,000	\$1,231,000	\$1,231,000	\$1,231,000	\$1,231,000	\$6,155,000
Totals	\$43,344,000	\$43,744,000	\$40,894,000	\$40,894,000	\$36,344,000	\$205,220,000
Spending Authority	\$43,445,000	\$43,445,000	\$43,445,000	\$43,445,000	\$38,445,000	\$212,225,000

* The cleanup element includes the Farm and Ranch Solid Waste Cleanup and Abatement Grant Program. Its spending authority is separate from the Tire Fund's spending authority.

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

Activity Description and Budget

The waste tire enforcement program will implement a two-pronged approach to statewide enforcement which will use local enforcement entities where available and state resources in “other” areas. This program will provide ongoing assistance to local jurisdictions and oversee the entire 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 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Waste Tire Enforcement Support Activities	\$120,000	\$320,000	\$120,000	\$320,000	\$120,000
California Highway Patrol Agreement to Support Enforcement Activities	\$200,000	\$0	\$200,000	\$0	\$200,000
Local Government Waste Tire Enforcement Grant Program	\$7,000,000	\$7,000,000	\$7,000,000	\$7,000,000	\$7,000,000
Database System Maintenance and Enhancement	\$165,000	\$165,000	\$165,000	\$165,000	\$165,000
Tire Enforcement Inspector Technical Training	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Totals	\$7,585,000	\$7,585,000	\$7,585,000	\$7,585,000	\$7,585,000

*Fiscal Years are zero due to contract running for a two-year cycle.

1. Waste Tire Enforcement Support Activities: This line item supports the overall mission of enforcing the laws regarding the hauling, storage, and disposal of waste and used tires in California and 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:

- Surveillance Equipment and Assistance:** CalRecycle entered into an agreement with the Air Resources Board (ARB) in May 2014 which continues ARB’s previous support of field investigative efforts by CalRecycle tire enforcement staff and local enforcement waste tire grantees. ARB has extensive experience in assisting other agencies in the purchase, maintenance, monitoring, and use of both covert and overt surveillance equipment. ARB’s expertise has aided, and should continue to aid, CalRecycle and local waste tire grantees in their efforts to deter or locate and prosecute those who illegally haul or dispose of tires, or illegal activities related to tire exports through California ports. Additionally, ARB will assist CalRecycle in identifying and procuring more sophisticated surveillance equipment for covert activities allowing for real-time remote monitoring and sensing.

- **Enforcement Case Assistance:** CalRecycle’s Legal Office generally prosecutes administrative enforcement penalty actions to ensure uniformity of enforcement and to expedite processing. However, criminal and certain civil enforcement cases must be referred to the Attorney General’s office or local district attorneys’ offices. Some jurisdictions do not have the resources to handle waste tire misdemeanor cases. CalRecycle will continue to work with authorized enforcement organizations as contractors or grantees for investigative and prosecutorial services to pursue criminal or civil enforcement actions including enforcement actions related to tire exports from California ports.

- **California Environmental Quality Act (CEQA) Compliance Support:** CalRecycle will procure contractor support for conducting required CEQA analyses for new permitted facilities or for permitted facilities who want to/need to expand their facility’s authorized operating limits. Often facilities with a minor waste tire facility permit find that the practical operating demands of remaining viable within their industry bring them into conflict with the statutory 4,999 waste tire storage limit of their minor permit. For these facilities, one of the biggest hurdles in acquiring the needed major waste tire facility permit, which would enable them to operate successfully while staying in compliance, is meeting the CEQA requirements for the larger permit. The contractor will provide CEQA expertise and analyses for CalRecycle to complete the needed CEQA compliance in considering applications for major permits.

- **Permitting Assistance Contract:** Permitted waste tire storage and processing capacity in the state is limited and needs to be expanded. Providing contractor support with expertise in local land use and state permitting requirements would assist local waste tire facilities more quickly comply with permitting requirements and achieve a permitted status that fits their business operations while ensuring compliance with waste tire laws. This would provide waste tire enforcement resources to operators who are complying but who need expertise in permitting to expand their business.

- **Waste Tire Enforcement Inspectors and Managers Coordination, Training, and Development:**
 - CalRecycle will continue to provide training and meetings to support enforcement case development and enforcement training, including environmental compliance in support of training for both law enforcement and grantees.

 - CalRecycle will procure contractor support to develop and implement distance learning capabilities and curricula via the Internet in support of providing initial and ongoing training for local tire enforcement grantee inspectors. This will enable more inspectors are able to receive more frequent training than is currently capable and will leverage limited travel budgets that currently prevent many inspectors from being able to attend in-person annual and periodic roundtable training sessions. This effort will also 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 ever-expanding reach of the Internet to communicate with our partners and stakeholders in the regulated community and provided needed education and training. The latter effort is part of CalRecycle efforts to achieve greater waste tire enforcement compliance through expanded education and outreach. This will enable CalRecycle to focus limited enforcement resource on the more serious and repeat offenders.

Activity Funding

FYs 2015/16, 2017/18 and 2019/20.....	\$120,000 per fiscal year
FYs 2016/17 and 2018/19.....	\$320,000 per fiscal year

- 2. California Highway Patrol (CHP) Agreement to Support Enforcement Activities:** CHP to continue its support to 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 to assist CalRecycle as well as local enforcement personnel in regards to waste facility and hauling violations. If CHP is unable to continue this work after the current contract expires due to budget or priority issues, CalRecycle will pursue a similar agreement with other law enforcement agencies. This effort includes a surveillance and enforcement support focus on illegal activities related to tire exports through California ports and in the California/Mexico border region.

Activity Funding

FYs 2015/16, 2017/18 and 2019/20.....\$200,000 per fiscal year

- 3. Local Government Waste Tire Enforcement Grant Program:** This [program](#) enhances California’s waste tire enforcement infrastructure by providing non-competitive grants to cities, counties, or 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 facilities inspections, investigate illegal tire disposal activities, review waste tire hauler documents, and issue Notices of Violation. They also ensure that tire dealers, auto dismantlers, tire haulers, and others comply with all applicable laws, storage standards, and manifest requirements.

The program strives to provide consistent statewide inspection and enforcement coverage in a cost-effective and efficient manner. As a result of the program, local governments have an expanded role in the enforcement of these entities, thereby improving the protection of public health, safety, and the environment.

Activity Funding

FYs 2015/16-2019/20.....\$7,000,000 per fiscal year

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

The system was initially released in July 2003, and has continued to meet requirements through continued maintenance and enhancement at an annual cost of \$165,000 per fiscal year. Areas of ongoing maintenance and enhancement include:

- Standard reports to track facility inspections, waste tire storage permits, grantee referrals, and Notice of Violations to ensure performance measures are achieved.
- Ongoing enhancements to compliance reports that assist grantees with inspection prioritization and planning.
- Ongoing maintenance that includes revising inspection forms, entering into contracts to have inspections forms and other documents scanned and entered into the database on an ongoing basis.
- Additionally, periodic upgrades to the system are anticipated as the program continues to grow and change to meet the needs of our internal and external stakeholders as well as reporting requirements requested by Cal/EPA.

Activity Funding

FYs 2015/16-2019/20.....\$165,000 per fiscal year

- 5. Tire Enforcement Inspector Technical Training:** These funds are used to supplement the tire portion of CalRecycle’s annual enforcement conference for local agencies and CalRecycle tire enforcement staff. Training provides inspectors and managers with up-to-date information on CalRecycle’s waste tire management programs and grants, as well as a venue to network and discuss other items of interest. Other outreach activities may also be held during the year. This annual training event offers concurrent technical sessions, and field tours guaranteed to provide an extraordinary opportunity to learn and network with other local enforcement agencies, tire enforcement agencies, CalRecycle staff and industry.

Activity Funding

FYs 2015/16-2019/20.....\$100,000 per fiscal year

Waste and Used Tire Hauler Program and Manifest System

Activity Description and Budget

The hauler and manifest program is a general line item budget as shown in Table 3 budget for the waste and used tire hauler program and manifest system. The costs associated with this budget are printing and mailing of the Comprehensive Trip Log forms; training and educational materials; contracting with an outside source for data entry of the trip log forms; and CalRecycle’s Information Technology Services Branch annual budget for manifest and hauler registration-related upkeep and maintenance of the WTMS database. Additionally, funds cover the cost of printing waste tire hauler decals and certificates as well as Tire Program Identification Number certificates.

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

Program Area	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Waste Tire Hauler Portal	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000
Totals	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000

Hauler Program and Manifest System: With CalRecycle approval of the trip log form, the overall costs for the manifest program have been reduced as less printing, postage, and processing time is necessary. The numbers presented above in Table 3 adequately reflects this revision. Funds also will be allocated to the following project:

- 1. Waste Tire Hauler Portal:** CalRecycle will continue development and expansion of its online waste tire hauler portal. This resource is designed to enable California’s 1400+ waste tire haulers to complete most activities associated with applying for and annually renewing their waste tire hauler registrations, as well as managing their business’ hauler information within the WTMS database.

Activity Funding

FYs 2015/16–2019/20.....\$450,000 per fiscal year

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

Activity Description and Budget

The cleanup program will continue to remediate sites with CalRecycle-managed contractors and grants to entities for cleanup of illegal piles. New for this edition is the inclusion of the Local Conservation Corps grant program. The Corps will assist local governments with clean-up and collection activities, which will eventually phase out the necessity for the Local Government Waste Tire Cleanup and Amnesty grant programs (this will necessitate CalRecycle working with the LCC's to support the availability of these services in areas of the State not traditionally serviced by LCC's). In addition, CalRecycle will continue to provide funding to the Farm and Ranch Solid Waste Cleanup and Abatement Grant Program to further mitigate future accumulations of waste tires. However, this program and CalRecycle's Solid Waste Cleanup grant program will be evaluated over the next few years to determine if it is more efficient to consolidate them into one cleanup grant program. Also, CalRecycle will establish an emergency reserve account, which cannot exceed \$1 million, 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 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Short-Term Remediation Projects Including Emergency Reserve	\$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	\$1,800,000	\$0	\$0	\$0
Local Government Waste Tire Amnesty Grant Program	\$1,800,000	\$0	\$0	\$0	\$0
Emergency Reserve Account	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Farm and Ranch Solid Waste Cleanup and Abatement Grant Program*	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Totals	\$8,000,000	\$8,000,000	\$6,200,000	\$6,200,000	\$6,200,000

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

- 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 the public's health and safety at waste tire sites where the responsible parties have failed to take appropriate action. CalRecycle funds short-term remediations of illegal waste tire sites with CalRecycle-managed contracts, which may be used to stabilize piles until removal; removing all waste tires; and/or remediating the site after the tires have been removed.

Activity Funding

FYs 2015/16–2019/20.....\$300,000 per fiscal year

- 2. Local Conservation Corps Grant Program:** The purpose of the 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 clean-up and abatement of waste tires. Eligible applicants are Local Conservation Corps that are designated by a 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 as meeting all other criteria of PRC section 14507.5 This 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, clean-up events, education and outreach, event labor and staff resources in partnership with local jurisdictions, fleet support for local businesses and of governmental agencies, and collection and hauling services (if permitted). The LCC’s will assist local governments with waste tire clean-up and collection activities which will eventually phase out the necessity for the Local Government Waste Tire Cleanup and Amnesty grant programs. CalRecycle will work with the LCC’s to support the availability of these services in areas of the State not traditionally serviced by the LCC’s.

Activity Funding

FYs 2015/16-2019/20.....\$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: (a) less than 500 tires on site, or (b) 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, as well as qualifying Indian Tribes are eligible for funding. Cities or counties may submit a regional application with authorization from other cities and/or counties participating in the regional application.
Note: This program will be phased out after FY 2016/17. Cleanup activities may be conducted by the LCC’s. CalRecycle will work with the LCC’s to support the availability of these services in areas of the State not traditionally serviced by the LCC’s

Activity Funding

FY 2016/17.....\$1,800,000

- 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, as well as qualifying Indian Tribes are eligible for funding. Cities or counties may submit a regional application with authorization from other cities and/or counties participating in the regional application. *Note: This program will be phased out after FY 2015/16. Amnesty activities may be conducted by the LCC’s. CalRecycle will work with the LCC’s to support the availability of these services in areas of the State not traditionally serviced by the LCC’s.*

Activity Funding

FY 2015/16.....\$1,800,000

- 5. Emergency Reserve Account:** SB 876 required CalRecycle to create and maintain an emergency reserve account which shall not exceed \$1 million. Funding for FYs 2013/14–2017/18 is proposed at

\$500,000. 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, 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 2015/16–2019/20\$500,000 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 parcel(s) is (are) zoned for agricultural use, unauthorized solid waste disposal has occurred, and the site(s) is (are) in need of cleanup in order to abate a nuisance or public health and safety threat and/or a threat to the environment. Tire piles can attract more dumping, so 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 2015/16–2019/20\$400,000 per fiscal year

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

Activity Description and Budget

In past Five-Year Plans, CalRecycle has separated Research and Market Development activities into two different sections. In this edition, CalRecycle has combined them into one Research and Market Development Program because of the close relationship of the activities. In addition, CalRecycle has combined all research and technical support activities for TDA into one line, and all research and technical assistance activities for RAC into another line. Overall, CalRecycle is proposing increased funding for TDA and RAC research and technical support; new funding in support of CalTrans specifications development; research on end-of-life issues for tire-derived products; and research on landfill emissions. This will continue CalRecycle’s focus on rubberized asphalt concrete, tire-derived aggregate, and other tire-derived products that use the largest number of tires. Since the largest number of tires can be diverted through RAC and TDA applications, significantly more resources are being devoted to them. At the same time, due to a very low response rate in the first two cycles of the TDA grant program, CalRecycle is proposing reducing funding for the program; over the long-term, it could be replaced if the broader incentive approach is implemented. Table 9 provides the budget for this element.

Table 9: Budget for Research and Market Development Activities

Program Area	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Tire-Derived Aggregate Civil Engineering Technical Support; Technology Center and Laboratory Testing Services; and Research	\$500,000	\$950,000	\$950,000	\$500,000	\$950,000
Rubberized Asphalt Concrete Technical Assistance Contract and Research	\$650,000	\$650,000	\$200,000	\$650,000	\$650,000
Caltrans PG+5 Binder Project	\$400,000	\$350,000	\$0	\$0	\$0
End of Life Research on TDPs and Non-Highway Technologies Using Waste Tires	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Research on Landfill Emissions	\$250,000	\$250,000	\$0	\$0	\$0
Tire-Derived Aggregate Grant Program	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Rubberized Pavement Grant Program	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$3,000,000
Tire Incentive Grant Program and Tire-Derived Products Grant Program	\$4,125,000	\$4,125,000	\$4,125,000	\$4,125,000	\$4,125,000
Tire Outreach and Market Analysis	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
Tire Events	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Totals	\$15,550,000	\$15,950,000	\$14,900,000	\$14,900,000	\$10,350,000

1. **Tire-Derived Aggregate (TDA) Civil Engineering Technical Support; TDA Research Efforts; and Technology Center and Laboratory Testing Services:** CalRecycle will provide technical support and education to TDA grantees using a technical assistance contract component. This technical support may address issues associated with the use of TDA in civil engineering projects. Typical projects may include applications such as lightweight fill, landfill applications, retaining walls, and vibration damping layers in rail transit projects. Funding these efforts fluctuates due to the funding for TDA technical support contracts, which are funded for two consecutive fiscal years (FYs 2016/17 and 2017/18) followed by a year without funding (FY 2018/19). A baseline funding of \$500,000 for all years is for the technology center and laboratory testing services and for research.

- **Tire-Derived Aggregate Civil Engineering Technical Support:** The technical support component will promote the use of TDA through a technical marketing and education outreach plan. This will be accomplished by the technical assistance contractor through: video documentation and assisting the Office of Public Affairs in the coordination of media events of TDA demonstration projects. The technical assistance contractor also will 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 Efforts:** Research efforts have enabled CalRecycle to make significant progress in the development of several long-term sustainable markets for Tire Derived Aggregate (TDA). One of the most notable, is the use of TDA in the expansion of the light rail systems in the both the Bay Area Rapid Transportation (BART) and the Metropolitan Transportation Agency in Southern California. The success of these research project have also allowed CalRecycle to identify new engineering properties of TDA that may lead to new applications. Although CalRecycle considers TDA one of the top priority marketing targets for diverting waste tires from landfills, there is still much work that needs to be done to establish this use of waste tires as an accepted material.

Under this activity, CalRecycle will continue to investigate new civil engineering uses for waste tires, including partnering with state, local, and private-sector engineers to conduct research and to train and educate them on the use of TDA in these projects. For research projects focusing on specific civil engineering uses of waste tires, project-specific contracts may be implemented. These projects could include, but are not limited to, erosion control, earthquake damping, vibration mitigation, retaining and sound walls, storm water runoff/drainage control, and septic tank leach field applications. Listed below are several TDA research proposals and estimated costs that CalRecycle would consider funding as project concepts mature.

Research project to investigate the feasibility of using TDA in a mechanically stabilized earth (MSE) application. These applications are used to repair roads that have been damaged by landslides and typically use geo-grids in compacted soil to provide additional strength. However, instead of using soil, this project would analyze the use TDA to take advantage of its stability and light-weight properties. The project would include conducting slope stability analysis of a MS-TDA design and obtaining any additional material properties needed to conduct the analysis. Estimated cost of this project is \$300,000.

Conduct Pilot project in partnership with Santa Barbara County to demonstrate the feasibility of using TDA in an MS-TDA application. The proposed project will repair and relocate a section of road on a steep hill side. Estimated cost of this project is \$450,000.

- **Tire-Derived Aggregate Technology Center and Laboratory Testing Services:** CalRecycle will continue its technical outreach efforts by continuing its contract with a contractor that has

knowledge and experience with using TDA and RAC 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. 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 2015/16 and 2018/19.....	\$500,000 per fiscal year
FYs 2016/17-2017/18 and 2019/20.....	\$950,000 per fiscal year

2. Rubberized Asphalt Concrete (RAC) Technical Support and RAC Research: The success of CalRecycle’s RAC programs has been due in part to the technical support that has been provided through CalRecycle’s RAC technical assistance contract. The contractor will continue to provide technical support and education to local government agencies, grantees and CalRecycle under a new technical assistance contract. This technical support may address issues associated with roadway projects, including rubber hot-mix, rubber chip seal, rubber cape seals, and other emerging paving applications that use tire-derived materials that have been determined by CalRecycle to have benefits derived from the use of scrap tires. The technical assistance contractor will also serve as the liaison at various stakeholder workshops and conferences that will help promote RAC programs. Funding for the RAC technical support contract is provided for two consecutive fiscal years (FYs 2015/16 and 2016/17; FYs 2018/19 and 2019/20), each followed by a year without funding (FY 2017/18). This is because the terms of the contracts are two years and awarded every three years. A baseline funding of \$200,000 for all years is for research.

- **Rubberized Asphalt Concrete (RAC) Technical Support:** The technical assistance contractor will also assist CalRecycle with marketing and promoting the use of RAC. This will be accomplished through the development and distribution of technology transfer materials that showcase the benefits of using RAC and presentation of these materials key stakeholder workshops and conferences. The contractor will also assist CalRecycle in implementing a cooperative purchasing program to address obstacles to wider and continued, sustainable use of RAC by local agencies. Local government agencies that typically have smaller paving projects due to budgetary issues or lack of proximity to RAC manufacturing facilities, will benefit from the cost savings provided by a cooperative purchase project. Through this program, the contractor will coordinate the participating agency projects and may provide design assistance, specification review, bidding/procurement, construction management, quality assurance, and quality control, as necessary. In addition, the contractor will provide training to each participating agency so that they can carry out future cooperative purchase on their own.
- **RAC Research:** CalRecycle continues to make significant progress in promoting RAC and as a result, its use continues to increase statewide. Research of rubber paving applications has played a key role in CalRecycle’s outreach efforts. For example, CalRecycle is currently working with the University of California Davis, Pavement Research Center to investigate the feasibility of incorporating rubberized recycled asphalt pavements (RAP) into new RAC pavements. Since Caltrans currently does not allow the use of RAP in new RAC pavements, this research project may ultimately lead to the use of more rubberized RAP into RAC pavements.

As this technology continues to evolve and new applications emerge, CalRecycle will continue to study to gain additional information regarding their benefits and drawbacks. Some of these applications may include new developments in rubberized hot mix, and rubberized chip and slurry seals. Under this program element, CalRecycle will research and if necessary conduct pilot studies for these applications in order to evaluate their performance and cost benefits.

If the ongoing research supports the benefits of these applications, CalRecycle then can market and promote the use of these applications by including them in future grant offerings, with the aim of enhancing sustainable markets for additional waste tires. Additionally, CalRecycle staff will evaluate current design standards and investigate pavement preservation strategies that use rubber and increase the lifespan and performance benefits (e.g., resistance to reflective cracking, skid resistance, noise reduction) of pavements. However, improvements in mix design and range of use are continuously evolving and may warrant further investigation. Listed below are several RAC research proposals that CalRecycle is currently considering.

Research proposal that would develop new Performance modeling of asphalt rubber and terminal blend chip seals. Caltrans and Local agencies are using pavement management systems (PMS) as a decision making tool for identifying the appropriate maintenance or rehabilitation strategy for their pavement project. Typical PMS programs use performance models/curves to predict future pavement condition and the improvement in pavement condition when maintenance and rehabilitation treatments are applied. The types of chip seal projects would include: Conventional emulsion, Polymer modified emulsions, Terminal blends, and field blended asphalt rubber. This would be a continuation of a previous research project under which performance curves were developed for asphalt rubber, terminal blend and rubberized warm mix asphalt materials for use by both Caltrans and local governments in their pavement management systems (PMS). Estimated cost of this project is \$350,000.

Activity Funding

FYs 2015/16–2016/17 and FYs 2018/19-2019/20..... \$650,000 per fiscal year
 FY 2017/18.....\$200,000

- 3. **Caltrans PG+5 Binder Project:** CalRecycle would partner with Caltrans to identify a series of research proposals to support the implementation the Caltrans PG+5 Binder proposal, that would require the use of a minimum 5% crumb rubber in all asphalt binder that is currently classified as unmodified. For example, these research proposals would potentially investigate the performance of the new PG+5 binder as compared to unmodified binders containing no rubber. The research could also investigate the performance and any potential impacts to the current rubber pavement technologies (i.e., field blended asphalt rubber and terminal blend). Estimated cost of this research project is \$750,000.

Activity Funding

FY 2015/16..... \$400,000
 FY 2016/17.....\$350,000

- 4. **End of Life Research on TDPs and Non-Highway Technologies Using Waste Tires:** CalRecycle will evaluate end-of-life options for various TDPs including turf applications and playgrounds. CalRecycle will also continue to investigate non-highway related 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. Some of these applications may include: identification of human health and environmental risks associated with tire-derived products (TDPs); assessing feasibility of using crumb rubber in molded, extruded, and other products; and assessing market opportunities for waste tire residual fluff; CalRecycle would partner with universities, state agencies, and the U.S. Environmental Protection Agency as applicable to conduct this research.

Activity Funding

FYs 2015/16–2019/20 \$250,000 per fiscal year

- 5. **Research on Landfill Emissions:** Many landfills use shredded tires as daily cover, in landfill gas collection systems, and/or dispose of significant amounts altered tires along with municipal solid

waste. “Lenses” of tires in the waste mass may have an impact on landfill gas movement within, and external to, the waste mass. CalRecycle will study the surface emissions and lateral migration of landfill gas in landfills that use and/or dispose of large quantities of waste tires to determine effects on and overall performance of landfill monitoring and control systems. For comparative purposes the emissions from representative landfills that do not use and/or dispose of significant amounts of waste tires will also be studied.

Activity Funding

FYs 2015/16 and 2016/17..... \$250,000 each fiscal year

- 6. **Tire-Derived Aggregate Grant Program:** The [program](#) provides funding to local governments, special districts, joint powers authorities, State agencies (including offices, departments, bureaus, and boards), California-based private, for-profit entities, and qualifying California Indian tribes for civil engineering projects utilizing TDA. To be eligible for the grants, projects must use TDA in one of a variety of approved civil engineering applications.

CalRecycle may also consider an incentive to facilitate efficient movement of TDA through the supply chain. Such an incentive may be targeted at the processor, purchaser, or a combination of the two.

Activity Funding

FYs 2015/16–2019/20 \$1,000,000 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 assist in creating 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

FYs 2015/16-2018/19.....\$8,000,000 per fiscal year

FYs 2019/20.....\$3,000,000

- 8. **Tire Incentive Program and Tire-Derived Product Grant Program:** Both the Tire Incentive Program (TIP) and the Tire-Derived Product (TDP) Grant Programs are designed to increase demand for TDPs.

- **Tire Incentive Program:** This competitive pilot [incentive program](#) is aimed at expanding commercial (business) demand for higher value-added products using crumb rubber from California-generated waste tires. Emphasis will be on products which have not benefited from the TDP Grant Program. Incentives will be targeted to three product types: existing tire-derived products, feedstock conversion and use of fine (<50) mesh material. A general cost incentive is also available for eligible manufacturers. The incentive can be used for a myriad of costs, such as: transportation, production, product development, testing and certification, marketing, or selling expenses.

Examples of possible eligible products include, but are not limited to: flooring underlayment, rubberized flooring, conveyer belts, calendared or compounded rubber, agricultural harvesting devices, various landscaping and garden products, various building products, various traffic devices, spacers, fencing, asphalt products (that are not eligible under other CalRecycle programs), paintings, coatings, etc. Asphalt products must contain a minimum of five percent crumb rubber in the binder or flux.

To encourage and support business and product success, CalRecycle will provide subsequent funding for specific products, gradually reducing the incentive to maintain appropriate support while ensuring the program serves as a sustainable market development tool. The program will be continuously evaluated for effectiveness and efficiency with CalRecycle making adjustments, as appropriate.

- **Tire-Derived Products Grant Program:** This [program](#), and its predecessors, has successfully 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: 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, sports tracks, etc. The program currently offers grants, but in the future, may consider offering incentives.

Activity Funding

FYs 2015/16-2019/20.....\$4,125,000 per fiscal year

9. Tire Outreach and Market Analysis: This program is intended to document market trends and conduct focused technical outreach to public and private procurement entities to increase demand and expand the use of waste tire-derived material in a variety of applications including higher value-added products. Staff and an independent contractor 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/demand balance and capacity, and other relevant market analyses. The analysis will culminate with the annual publication of the *California Waste Tire Market Report*.
- Focused technical outreach and education targeted at stakeholders, such as federal, state and local governments, school districts, and private entities, that are in a position to procure tire-derived products (TDPs) and/or have the authority to specify them in future projects. The goal of this effort is to increase demand for TDPs, foster the application of new technologies, and expand the use of waste tire derived material into a variety of applications, including higher value-added products. This includes monitoring and measuring the outcome of these efforts; developing case studies; conducting meetings, trainings, and webinars to targeted stakeholders (including two CalRecycle tire conferences); and maintaining and updating outreach and education materials.
- Devise and implement measures to extend the life of passenger tires and create market incentives for the use of California waste tires. Target industries may include tire retreader/recaps, tire maintenance, and expanding private sector use of TDPs.
- Identify end-of-life best management practices and markets for synthetic turf, infill, playground and other TDPs.
- Research and testing to address identified gaps in TDP product data and specifications that pose a barrier to TDP market expansion.

Annually \$150,000 will be spent on focused outreach, education and promotion, and \$150,000 will be spent on the market analysis.

Activity Funding

FYs 2015/16-2019/20.....\$300,000 per fiscal year

10. Tire Events: CalRecycle will continue to hold tire workshops, forums, and/or trainings, as it has in past years. These tire business/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. 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, staff has combined the Tire, Used Oil/Household Hazardous Waste Annual Conference, and Recycling Market Development Zone Conferences and Training Workshops into one combined three-year contract to provide efficiencies of scale and other benefits. All events also will be coordinated with CalRecycle’s Office of Public Affairs.

Activity Funding

FYs 2015/16-2019/20.....\$75,000 per fiscal year

Administrative Costs

Program Staffing and Administration

Tire-related activities are performed by a total of 69.66 positions within CalRecycle. The cost of staffing and administration is approximately \$7.5 million.

Activity Funding

FYs 2015/2016–2019/20.....\$7,500,000 per fiscal year*

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

Administration

Administration refers to the accounting of central management costs, such as those pertaining to 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 general funded central service costs by funds other than the General Fund, as mentioned in the State Administrative Manual, Section 8753) that generally serve all of CalRecycle (i.e., indirect or overhead costs). Administration funding represents the distribution of “indirect costs” to direct CalRecycle program activities that include the tire program.

Activity Funding

FYs 2015/2016–2019/20.....\$3,028,000

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

Mandatory Contracts

Mandatory Contracts includes allocation for the following: Attorney General’s Office, Board of Equalization, Department of Finance, Foundation of California Community Colleges, and the Governor’s Office of Planning and Research.

Activity Funding

FYs 2015/2016–2019/20.....\$1,231,000 per fiscal year*

**Estimate of costs for mandatory contracts*

Other Submitted Ideas

The following table lists ideas submitted by CalRecycle staff and stakeholders, with comments indicating whether they are incorporated into this draft plan above or why they were not considered.

	CONCEPT	COMMENTS
1	Escrow account for reserve	Proposed (exactly which one TBD)
2	Put reserve into clean-up contract	
3	Expand incentive program	Proposed long-term; requires legislation
4	Level market for crumb	Proposed via incentive payment program
5	Incentives first to CA companies then to others that could benefit CA	Proposed via incentive payment program
6	Expand waste tire processing and storage capacity	Additional assistance to operators is proposed; which would provide additional assistance to operators regarding siting and local permitting for waste tire processing and storage. Assistance could be in the areas of CEQA compliance, technical support, and could be provided directly or through a contractor(s).
7	Consolidate minor and major permit into one permit	Proposed long-term; requires legislation.
8	Study of the financial assurance requirements to determine the appropriate level and types of mechanisms needed, including pooling funds	Such a study could assess if there is adequate financial protection to the state for tire storage facilities and if there is a need for additional types of financial assurance mechanisms. Currently the industry relies heavily on bonds to cover the financial assurance for tire facilities. Furthermore, this effort could offer options to reduce the potential cleanup cost
9	Refine waste tire tracking and manifest system	Expanding the current hauler manifest system would take regulatory changes, would require extensive industry and TEA training. However, research on the utilization of newer technology to track tires may result in discovering a more efficient and more reliable method to ensure safe handling, storage, processing and end use/ disposal of tires than the current manifest system.
10	Surcharge on exports	Proposed long-term; requires legislation
11	Ban exports	
12	No exporting of whole tires—material must go through a processor first	Proposed long-term; requires legislation
13	Prohibit tire disposal and ADC	Proposed long-term; requires legislation
14	Research for CalTrans PG-5 spec	Proposed

	CONCEPT	COMMENTS
15	Research end-of-life for TDPs	Proposed
16	Eliminate TDA, TDP, Pavement, and Local Government Cleanup and Amnesty grants	Proposed in part
17	Research and technical assistance/reports for local jurisdictions	Already being done
18	Continue education of architects and engineers for TDPs	Ongoing and proposed
19	Transit modernization - link to Cal/Trade rail modernization projects	Could work with agencies to include criteria re: TDA use in for transportation projects funded with Cap and Trade funds; also continue work with BART, etc.
20	Research on carbon black; update research on pyrolysis, thermals and gasification.	Currently CalRecycle is prohibited from providing support related to use of tires for energy recovery (AB 1756 – Budget Committee, Chapter 228, Statutes of 2003). This section would need to be repealed to allow incentive payments for such use, as well as conduct research on byproducts such as carbon black.
21	Research on GHGs at landfills with and without tire disposal and shredded ADC	Proposed
22	\$5M for Local Conservation Corps (LCCs)	Included
23	More focus on market trends	Ongoing and proposed (market analysis)
24	Require schools and universities to use TDPs	Proposed long-term; requires legislation
25	Require CalTrans and local agencies to use TDPs; link with SABRC enhancements (also see #41)	Proposed long-term; requires legislation
26	Mandate State agencies to buy TDPs; link with SABRC enhancements	Proposed long-term; requires legislation
27	Used tires for California fleet	DGS has already determined that this is not feasible
28	Engage US EPA on Green Government	CalRecycle already works with US EPA Region 9 and headquarters on a variety of procurement-related issues.
29	Recycled content in tires	Would require legislation and would have to address manufacturer concerns re: safety and other issues.
30	Combine F&R and small cleanups if LCCs can provide this service	Proposed elimination of some cleanup programs. Already working with LCCs on this
31	City/County payment program for cleanups	Consider as part of consolidated cleanup programs
32	Evaluation of TEA grantees	Evaluation of the TEAs is an intrinsic part of the program and enhancements to this element would be handled through the TEA grant criteria.
33	Continuous appropriation	Proposed
34	Just Check it – free air, education/access; reducing waste tire generation via education and outreach on proper tire maintenance.	Outreach contract for \geq \$100,000 requires agency approval; previous outreach programs have been denied. “Just Check It” campaign was conducted over 2-year period with \$2.2 million, which was not enough for a statewide campaign. Fully integrated statewide campaign to change behavior would run \geq \$10 million annually at very low end.
35	Air-filling stations at rest stops	LCC’s could support this function at government

	CONCEPT	COMMENTS
		rest stops, parking lots, buildings. However, costs of installing and maintaining air-filling stations at numerous rest stops could not be absorbed by LCCs; costs would likely be prohibitive and would require multi-year contracts with state agencies responsible for highway maintenance.
36	Lifecycle analysis of tires	A life cycle analysis would be very expensive and difficult to complete (several million \$\$ and 2-3 years), and results may not be conclusive.
37	Expand research contracts for market to universities	Already done frequently on research contracts
38	Allow for temporary tire shredding sites to increase feedstock stockpiling for a specific project in an environmentally safe.	This would require a regulatory or statutory change to allow for temporary permits or exclusions for these types of operations, but may provide a methodology to provide public health and safety oversight and increase the recycling of tires for beneficial projects in California.
39	Repeal AB 1756	Proposed long-term; requires legislation
40	Expand eligibility of TDA, TDP, and Rubberized Pavement Grants to private companies, including for TDP/RAC equipment, and provide priorities rural entities.	These can be discussed during development of criteria for the respective TDA, TDP, and rubber pavement grants.
41	Grant Program to maintain air-filling stations	LCC's could support this at government rest stops, parking lots, buildings. However, gas stations are already required to provide air filling for free. While educating operators and customers may be worthwhile, CalRecycle cannot contract for broad education campaign and does not consider grants for already-required free services as a worthwhile expenditure of tire funds.
42	Retreads – research options to increase % of truck tire retreads and increase number of times truck tires may be retreaded; develop BMPs and targeted outreach	Industry has safety concerns. Potentially small overall impact on market.
43	Research used tire market to determine whether that market segment can be improved and what role CalRecycle could play. Assess whether used tires can be “certified” with shearography equipment at retreaders, and whether manufacturers can be “held harmless.”	Public perception and safety concerns regarding retreads unknown. Potentially small overall impact on market.
44	Explore consumer-based “instant” rebates for various TDPs.	Would probably require legislation and would be complicated to administer. Would not be needed if broad incentive payment approach is implemented.
45	Reduce GHG emissions by 50% by 2020 and 75% by 2025 (by use of renewables): necessary changes may be funded by loan from Tire Fund	Use renewable energy in processing, manufacturing or transportation related to recycling tires. Could consider building GHG criteria into all RMDZ loans, including for tire facilities.

