California Environmental Protection Agency
Integrated Waste Management Board

Playground surface manufactured with 21,800 pounds of California waste tires (Eastgate Park, Garden Grove, California)

FIVE-YEAR PLAN
for the Waste Tire Recycling Management Program

(3rd Edition Covering Fiscal Years 2005/06–2009/10)
Report to the Legislature

Removal of tires after Westley Tire Fire (Westley, California)

Draft February 25, 2005
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Zero Waste—You Make It Happen!

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Executive Summary

California is faced with the challenge of diverting or safely managing more than 34 million reusable and waste tires generated in the state each year. Another 2 million are imported from other states annually. Despite the fact that the state more than doubled the number of waste tires diverted from landfilling in California between 1991 and 2003, the number of waste tires generated each year continues to exceed the number of tires diverted from landfill disposal and stockpiling.

California has millions of waste tires illegally dumped or legally and illegally stockpiled. The stockpiles pose potential threats to public health and safety and the environment, particularly when they are improperly maintained or catch fire. Negative environmental effects include habitat for pests and vectors, toxic smoke and residues, and contaminated air, water, and soil.

Within the last seven years, this state has experienced two devastating waste tire fires: one at the Filbin stockpile in Westley and the other at the Royster stockpile in Tracy. These two fires burned more than 12 million waste tires, resulting in considerable environmental damage to the region and significant adverse impacts to local residents. The cleanup of the Westley tire fire took three years at a cost in excess of $17 million. The Tracy tire fire site burned for over two years until the California Integrated Waste Management Board (CIWMB) suppressed it. The estimated cost for this cleanup is $15 million, with cleanup underway.

Without significant expansion of existing markets for waste tires (such as rubberized asphalt concrete, civil engineering applications, playground mats and other surfacing, and the development of new technologies that use waste tires), tire stockpiles and the environmental threat they pose, will continue to grow.

As a comprehensive measure to extend and expand California's regulatory program related to the management of waste and used tires, Senate Bill (SB) 876 (Chapter 838, Statutes of 2000, Escutia) was enacted. The measure's key provisions include the following:

1. Increasing the tire fee from $0.25 to $1.00 per tire (bringing California in line with other large states) until December 31, 2006, and reducing it to $0.75 thereafter.
2. Extending the California tire fee to tires on new motor vehicles.
3. Revising the definition of "waste tire" and adding other definitions designed to provide regulatory relief for several thousand used tire dealers and waste tire recyclers.
4. Expanding the tire manifest system.
5. Increasing funding for recycling and recovery efforts.
6. Strengthening enforcement by making changes to the Waste Tire Hauler and Waste Tire Facility Permit Programs.

7. Developing a five-year plan to implement the provisions of SB 876.[1]

One of the key provisions of the measure required the CIWMB to adopt and submit to the Legislature a five-year plan on or before July 1, 2001, including proposed budget allocations. The plan must be updated every two years. The plan shall identify the tire programs and establish a hierarchy and performance criteria that will allow evaluation of the effectiveness of these programs.

This is the biennial update of the Five-Year Plan for the Waste Tire Recycling Management Program (Plan), which covers fiscal years (FY) 2005/06 through 2009/10. This version of the Plan will concentrate on those activities that are legislatively authorized, are most cost effective, and focus on tire-derived products that use the largest number of tires. Therefore, as compared to previous versions of the Plan, there are significantly more resources proposed to be devoted to Recycled Asphalt Concrete (RAC), civil engineering (CE) and other market development activities. Research activities have been scaled back or redirected to more directly support market development initiatives. Proposed spending for long and short term remediation is commensurate with identified need and our acknowledged responsibility to reduce the threats to public health and the environment presented by waste tire piles and illegal waste tire disposal. To this end, this Plan proposes stable funding for the Local Waste Tire Enforcement Program consistent with legislative direction.

Nine major goals were established by the CIWMB for the implementation of SB 876 and for guidance in the development of this plan and CIWMB's Waste Tire Management Program:

1. To eliminate all known illegal piles of waste tires in California.
2. To identify and track the flow of used and waste tires in California.
3. To reduce the legal and illegal disposal of waste tires in California.
4. To enhance alternatives to disposal of California-only waste tires.
5. To provide excellent customer service in a responsible and cost effective manner.
6. To implement this plan in a manner consistent with the principles of environmental justice that ensures that people of all races, cultures, and incomes are treated fairly and have equitable access to environmental benefits, and that no segment of the population bears a higher share of the risks and consequences of cumulative exposures or impacts of environmental pollution.
7. To enhance existing efforts to improve the environment along the California-Mexico border through establishment of a cooperative relationship with all levels of government along both sides of the border in addressing border-specific concerns including the stockpiling of waste tires near border cities, hauling and transport of tires, and sharing and disseminating environmental education materials.

[1] The plan is referred to in this document as the "Five-Year Plan."

8. To increase State agency purchases of tire-related products, including longer-life tires, retread tires, recycled content tires, and products made from recycled tire materials.

9. To work with other states, localities, and interested parties and the tire industry on product stewardship issues related to tires in a manner similar to dialogues that have taken place or have begun for other products.

The plan is divided into program elements as they are identified in the legislation [Public Resources Code (PRC) section 42885.5(b)]. These elements are:

1. Enforcement and regulations relating to the storage of waste and used tires.

2. Cleanup, abatement, or other remedial actions related to tire stockpiles throughout the state.

3. Research directed at promoting and developing alternatives to the landfill disposal of tires.

4. Market development and new technology activities for waste and used tires.

5. The waste and used tire hauler program and manifest system.

Within each of these program elements, the plan provides:

1. A description of the current program.

2. Objectives for the expanded program.

3. A detailed program description with an accompanying budget projection.

4. A list of performance measures by which the program should be evaluated.

Overall, the CIWMB proposes a comprehensive and ambitious program for the management of waste tires that is intended to comply with both the spirit and intent of SB 876.

The updated Five-Year Plan describes performance measures for each program element. Appendix B contains the data for fiscal year 2003/04 for the performance measures that were described in the previous plan (July 2003).

Introduction

California is faced with the challenge of diverting or safely managing more than 34 million reusable and waste tires generated in the state each year. Another 2 million are imported from other states annually. Survey data reported to the CIWMB indicates that 26.3 million tires (77.2 percent) of the 34.1 million waste tires generated were diverted from landfill disposal or stockpiling. In 1990, CIWMB estimated that 9.2 million waste tires (34 percent of the 27 million tires generated) were diverted from landfill disposal and stockpiling. Despite the fact that the state more than doubled the number of waste tires recycled in California between 1991 and 2003, the number of waste tires generated each year continues to exceed the number of tires diverted from landfill disposal and stockpiling.

Management of waste tires is a growing problem throughout the world. Different approaches to the problem have emerged. The European Union's Landfill Directive banned the disposal of whole tires in July 2003 and shredded tires will be banned from landfills by July 2006. In November 2001, the United Kingdom's Environmental Agency released the Tyres Protocol, which provides guidance to improve the way cement plant operators communicate with the public over the burning of tyres in cement kilns. Eleven states in the U.S. have also banned land disposal of tires, while the rest of the states allow land disposal in some form. Many states place a priority on using tires for fuel to resolve waste tire problems, while others, such as Arizona, place very heavy emphasis on recycling tires through use as rubberized asphalt. Although California bans the disposal of whole tires in landfills, nearly 21 percent of waste tires are still buried after being cut up. In addition, 4.9 million tires are used as alternative daily cover in solid waste landfills.

California has millions of waste tires illegally dumped or legally and illegally stockpiled. These stockpiles pose potential threats to the public health and safety and the environment, particularly when they are improperly maintained or catch fire. Negative environmental effects include habitat for pests and vectors, mosquito breeding and spread of the West Nile virus, toxic smoke and residues, and contaminated air, water, and soil. Many of these tires are dumped or stockpiled in low-income and/or minority rural and urban settings, such as reservations, rancherías, and the communities along the California-Mexico border.

Within the last seven years, this state has experienced two devastating waste tire fires: one at the Filbin waste tire site in Westley and the other at the Royster waste tire site in Tracy. These two fires burned more than 12 million waste tires, resulting in considerable environmental damage to the region and significant adverse impacts to local residents.

Without significant expansion of existing markets for waste tires, such as rubberized asphalt concrete, civil engineering applications, playground mats and other surfacing, tire-derived fuel, and the development of new technologies that use waste tires, tire stockpiles and the environmental threat they pose will continue to grow.

The California Integrated Waste Management Board has established, through its 2001 Strategic Plan (*Integrated Waste Management Board Strategic Plan*, Pub. #520-01-4025), a number of priorities for addressing waste issues that are applicable to waste tires.

Sustainable markets for the use of recycled-tire products are vital to the success of recycling programs. Manufacturers can play a key role in the success of these programs through product stewardship efforts. The public can play a key role in minimizing waste and assuring that wastes are managed properly, and the CIWMB can assist through public outreach efforts.

The CIWMB's Strategic Plan also addresses issues on environmental justice, State-agency procurement of recycled-content products, and joint waste-management efforts along the California-Mexico border.

The CIWMB is increasing its efforts on applying the principles of product stewardship to reduce the environmental effects of products throughout their lifecycle. The CIWMB intends to initiate a national discussion with other states, tire industry and interested parties of product stewardship for tires next year.

Additionally, the CIWMB has an ambitious goal of a "zero waste California," where all parties strive to reduce, reuse, and recycle all solid waste back into nature or the marketplace in a manner that is protective of health and the environment and honors the principles of the solid waste hierarchy.

This Five-Year Plan describes how the CIWMB will determine a program element's effectiveness based on performance measures. These performance measures are listed at the end of each program element section. Appendix B contains performance measures that were described in the previous plan (July 2003) and data for fiscal year 2003/04.

Legislative History

The following section describes major legislation that affects the CIWMB's Waste Tire Management Program.

1989: To address the need for better waste tire management in California, the Legislature enacted Assembly Bill (AB) 1843 (Brown, Chapter 974, Statutes of 1989) known as the California Tire Recycling Act, which promoted the recycling of the annual flow of waste tires as well as stockpiled tires. The act specified that the program promote and develop markets as an alternative to landfill disposal and stockpiling of whole tires. To accomplish these provisions, the act allowed the CIWMB to award grants and loans to businesses, enterprises, and public entities involved in tire recycling activities. It also required the CIWMB to develop waste tire facility regulations for the safe storage of waste tires and established a permitting system for waste tire facilities. A $0.25 fee on waste tires left for disposal funded these programs. The fee was to be deposited in the California Tire Recycling Management Fund and appropriated to CIWMB annually by the Legislature.

1993: As an additional effort to ensure waste tires are disposed of at authorized sites, SB 744 (McCorquodale, Chapter 511, Statutes of 1993) was enacted, creating the CIWMB's Waste Tire Hauler Registration Program. This program is also financed through the California Tire Recycling Management Fund.

1996: To change the point of collection from a return fee to a fee on purchased retail tires, AB 2108 (Mazzoni, Chapter 304, Statutes of 1996) was enacted. This bill also provided for any traffic or peace officer to enforce the waste tire hauler registration requirements, thus causing further reduction of the illegal hauling and disposal of waste tires.

1998: To extend the sunset date for the California Tire Recycling Act, including fee provisions, from June 30, 1999, to January 1, 2001, AB 117 (Escutia, Chapter 1020, Statutes of 1998) was enacted. AB 117 also required the CIWMB to submit a preliminary and final waste tire report by May 1, 1999 and June 30, 1999, respectively, to the Governor and the Legislature. The resulting report, published in June 1999 and entitled *California Waste Tire Program Evaluation and Recommendations: Final Report* (Pub. #540-99-006, also referred to in this document as the "AB 117 Report"), included recommendations needed to address such waste tire issues as elimination of waste tire stockpiles; protection of public health, safety, and the environment; and an increase in sustainable economic markets for waste tires in California.

1999: To provide a means to gain access for cleanup, abatement, and remediation purposes to a property that contains unlawfully disposed of waste or used tires when the owner does not voluntarily consent to such access, SB 1055 (Bowen, Chapter 292, Statutes of 1999) was enacted, which added Public Resources Code section 42846.5. Specifically, a property owner is required to allow the CIWMB or its contractor reasonable access to perform activities necessary to clean up, abate, or otherwise remedy illegally stored, stockpiled, or accumulated waste tires on the property if an order setting civil liability has been issued and the CIWMB finds that there is a significant threat to public health or the environment.

1999: SB 115 (Solis, Chapter 690, Statutes of 1999), also known as the California Environmental Justice Act, was enacted. The California Environmental Justice Act requires the Office of Planning and Research, in consultation with State agencies, local agencies, and affected communities, to develop a State interagency environmental justice strategy that addresses any disproportionately high and adverse human and health or environmental effects of programs, policies, and activities on minority populations and low-income populations. In addition, the act requires each State agency to make the achievement of environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in California.

2000: As a comprehensive measure to extend and expand California's regulatory program related to the management of waste and used tires, SB 876 (Escutia, Chapter 838, Statutes of 2000) was enacted. The measure's key provisions include the following:

1. Increasing the tire fee from $0.25 to $1.00 per tire (bringing California in line with other large states) until December 31, 2006, and reducing it to $0.75 thereafter.
2. Extending the California tire fee to tires on new motor vehicles.
3. Revising the definition of "waste tire" and adding other definitions designed to provide regulatory relief for several thousand used tire dealers and waste tire recyclers.
4. Expanding the tire manifest system.
5. Increasing funding for recycling and recovery efforts.
6. Strengthening enforcement by making changes to the Waste Tire Hauler and Waste Tire Facility Permit Programs.
7. Developing a five-year plan to implement the provisions of SB 876.

2001: To provide cost recovery from property owners for costs and damages incurred by the CIWMB, SB 649 (Committee on Environmental Quality, Chapter 625, Statutes of 2002) was enacted.

2001: To create deadlines for the Work Group on Environmental Justice and require all boards, departments, and offices within the California Environmental Protection Agency (Cal/EPA) to review their programs, policies, and activities and identify and address any gaps related to environmental justice, SB 828 (Alarcon, Chapter 765, Statutes of 2001) was enacted.

2002: To encourage the use of rubberized asphalt concrete (RAC) in public works projects and assist with establishing markets for waste tires, SB 1346 (Kuehl, Chapter 671, Statutes of 2002) was enacted. The measure provides authority until June 30, 2006, to the CIWMB, which may implement a program, to award grants to cities, counties, districts, and other local government agencies for the funding of public works projects that use RAC. Grants shall be awarded to projects that are projected to generate between 2,500 and 20,000 tons of RAC during the life of the project and that will use 20 pounds or more of crumb rubber per ton of RAC. To the extent

possible, depending on the number of qualified applications and whether there is sufficient supply of crumb rubber, funds allocated shall be equal to 16 percent of the funds budgeted in the five-year plan for market development and new technology activities.

2003: To prohibit the CIWMB from providing support to efforts related to the use of waste tires as fuel, AB 1756 (Budget Committee, Chapter 228, Statutes of 2003) was enacted.

2003: To require the California Energy Commission, in consultation with the CIWMB, to adopt by July 1, 2007, and implement by July 1, 2008, a replacement tire efficiency program of statewide applicability for replacement tires for passenger cars and light trucks, AB 844 (Nation, Chapter 645, Statutes of 2003) was enacted. Further this program must ensure that replacement tires sold in the State are at least as energy efficient, on average, as the tires sold as original equipment on these vehicles in the State.

2004: To increase the amount every person who purchases a new tire shall pay on or after January 1, 2005 to one dollar and seventy-five cents ($1.75) and decrease on or after January 1, 2007 to one dollar and fifty cents ($1.50) AB 923 (Firebaugh, Chapter 707, Statutes of 2004) was enacted. Commencing January 1, 2005, and until December 31, 2006, seventy-five cents ($0.75) and commencing January 1, 2007 fifty cents ($0.50) per tire on which the fee is imposed shall be transferred by the State Board of Equalization to the Air Pollution Control Fund. The state board shall expend funds to the local air districts for programs and projects that mitigate or remediate air pollution caused by tires in the state, to the extent that the state board or the applicable districts determines that the program or projects remediate air pollution harms created by tires. This bill will sunset on January 1, 2015.

Summary of SB 876

SB 876 is a comprehensive measure related to the management of waste and used tires. One of the key provisions of the statute requires CIWMB to adopt and submit to the Legislature a five-year plan on or before July 1, 2001, including proposed budget allocations. The plan must be updated every two years. The plan shall identify the tire programs and establish a hierarchy and performance criteria that will allow evaluation of the effectiveness of these programs. The program elements that are identified in the legislation [Public Resources Code (PRC) section 42885.5(b)] include the following:

1. Enforcement and regulations relating to the storage of waste and used tires.
2. Cleanup, abatement, or other remedial actions related to tire stockpiles throughout the state.
3. Research directed at promoting and developing alternatives to the landfill disposal of tires.
4. Market development and new technology activities for waste and used tires.
5. The waste and used tire hauler program and manifest system.

The bill included a statement of legislative intent as follows (2000 uncodified law, SB 876):

"*(g) The purpose of this act is to do all of the following:*

(1) Implement many of the enforcement, market development, administrative, and technical recommendations outlined in the California Integrated Waste Management Board's recent report on California's waste tire recycling enhancement program. [report referred in the bill to is the AB 117 Report].

(2). Encourage tire manufacturers to promote the use of retreaded and longer-lasting tires, as well as develop recycled-content rubber tires.

(3) Stimulate waste and used tire market development activities, while cleaning up existing waste tire piles and enforcing waste and used tire laws.

(4) Improve the current tire manifest system.

(5) Increase state government's procurement and use of recycled-content tire products, such as rubberized asphalt concrete, crumb rubber products, and civil engineering applications."

Another key provision of the bill is that it identifies funding for the following specific purposes:

1. Clean up, abate, remove, or otherwise remediate tire stockpiles throughout the state. The CIWMB shall spend no less than $6.5 million dollars during each of the six inclusive fiscal years (2001/02–2006/07) on these cleanup activities [PRC section 42889(e)].

2. Develop and enforce regulations related to the storage of waste tires and used tires; evaluate the usefulness of designating a local government as the enforcement authority of regulations related to the storage of waste and used tires. If the CIWMB designates a local government for that purpose, it would also provide funding [PRC section 42889(d)].

3. Conduct studies and research directed at promoting and developing alternatives to the landfill disposal of tires [PRC section 42889(f)].

4. Assist in developing markets and new technologies for used tires and waste tires [PRC section 42889(g)].

5. Implement and operate a waste tire and used tire hauler program and manifest system tracking the movement of waste and used tires [PRC section 42889(h)].

6. Evaluate the usefulness of providing financial incentives for citizens who report the illegal disposal of waste and used tires as a means of enhancing local and statewide enforcement programs for waste and used tires [PRC section 42889(d)].

7. Assist the Office of Environmental Health Hazard Assessment (OEHHA) in preparing a report regarding health effects of smoke from burning tires. The cost of preparing the report is limited to $150,000 [PRC section 42889(k)].

8. Administer the collection, refund, and audit of revenues in the fund not to exceed 3 percent of the total annual revenue [PRC section 42889(b)].

9. Create an emergency reserve of not more than $1 million [PRC section 42889(i)].

10. Administer overhead costs not to exceed 5 percent of the total annual revenue [PRC section 42889(a)].

11. Transfer funds to Farm and Ranch Solid Waste Cleanup and Abatement Grant Program pursuant to Chapter 2.5 of Part 7 [PRC section 42889(j)].

SB 876 also allows the CIWMB, after a hearing, to revoke, suspend, or deny a waste tire facility permit for up to three years under certain circumstances. The CIWMB may also revoke, suspend, or deny a permit for a period of not more than five years for chronic offenders that pose or may pose a significant risk to public health and safety or the environment or that have not shown reasonable progress toward correction.

Five-Year Plan Development

Under PRC section 42885.5, CIWMB was required to adopt a five-year plan establishing goals and priorities for the waste tire program and submit the plan to the Legislature by July 1, 2001. The plan is to include programmatic and fiscal issues as well as performance objectives and measurement criteria for the waste tire recycling program. The plan is to be revised and resubmitted to the Legislature every two years.

Many of the programmatic issues included in the plan were the subject of the AB 117 Report. During the development of the AB 117 Report, several workshops were held to obtain public input and industry comments. The AB 117 Report was then approved by CIWMB, Cal/EPA, the Governor's Office, and the Legislature.

This report addresses the five program elements as identified in the bill [PRC section 42885.5(b)]:

1. Enforcement and regulations relating to the storage of waste and used tires.
2. Cleanup, abatement, or other remedial actions related to tire stockpiles throughout the state.
3. Research directed at promoting and developing alternatives to the landfill disposal of tires.
4. Market development and new technology activities for waste and used tires.
5. The waste and used tire hauler program and manifest system.

The Five-Year Plan is to include the hierarchy used by CIWMB to maximize productive uses of waste and used tires and the performance objectives and measurement criteria used by CIWMB to evaluate the success of its waste and used tire recycling program.

The hierarchy to be applied to the Five-Year Plan has the following order of priority:

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

This hierarchy is to be used as guidance, but not a rigid formula, in establishing priorities for the waste tire program.

In November 2001 CIWMB developed its Strategic Plan that described key areas to be addressed over the next three to five years. The Strategic Plan describes a shift in focus from the diversion goals of the Integrated Waste Management Act (AB 939, Sher, Chapter 1095, Statutes of 1989 as amended [IWMA]) to a broader, more systematic approach to managing the material used and created in manufacturing. This shift includes a commitment to work with manufacturers on product stewardship so as to achieve a sustainable society and allow for growth in ideas and methods resulting in greater protection of public health and safety and the environment by the State and its local enforcement agencies. Further, the CIWMB is committed to protecting the environment and public health and safety in a manner that does not

unfairly affect any group. The Five-Year Plan supports the efforts outlined in the CIWMB's Strategic Plan.

Additionally, the plan shall describe each program element's effectiveness, based upon performance measures developed by CIWMB.

Nine major goals have been established for CIWMB's Waste Tire Management Program:

1. To eliminate all known illegal piles of waste tires in California.
2. To identify and track the used and waste tire flow in California.
3. To reduce the legal and illegal disposal of waste tires in California by increasing the reuse, recycling, and energy recovery of, or from, waste tires while protecting public health and safety and the environment.
4. To enhance alternatives to disposal of California-only waste tires.
5. To provide excellent customer service in a responsible and cost-effective manner.
6. To implement this plan in a manner consistent with the principles of environmental justice that ensures that people of all races, cultures, and incomes are treated fairly and have equitable access to environmental benefits, and that no segment of the population bears a higher share of the risks and consequences of cumulative exposures or impacts of environmental pollution.
7. To enhance existing efforts to improve the environment along the California-Mexico border through establishment of a cooperative relationship with all levels of government along both sides of the border in addressing border-specific concerns, including the stockpiling of waste tires near border cities, hauling and transport of tires, and sharing and disseminating environmental education materials.
8. To increase State-agency purchases of tire-related products, including longer-life tires, retreaded tires, recycled-content tires, and products made from recycled tire materials.
9. To work with other states, localities, and interested parties and the tire industry on product stewardship issues related to tires in a manner similar to dialogues that have taken place or have begun for other products.

The contents of this plan include the following seven sections for each program element:

1. State of the Program.
2. Directions/Recommendations from the AB 117 Report.
3. Direction Provided by SB 876.
4. CIWMB's Strategic Plan Goals and Objectives.
5. The Plan.

6. Performance Measures.

7. Proposed Five-Year Budget.

Within the “Program Activities” portion of each section (under “The Plan”) is a funding table developed by staff and summarizing the proposed expenditures within each element. Appendix A of this plan includes a table indicating proposed total expenditures for the entire Tire Recycling Management Fund. Appendix B contains the data from fiscal year 2003/04 for the performance measures that were outlined in the previous Five-Year Plan (July 2003).

The plan also includes the following four program-wide performance measures established by the CIWMB:

1. In conjunction with other environmental justice efforts of the CIWMB, the tire program will evaluate its progress in informing the public of proposed actions, attempting to overcome barriers to meaningful participation in the decision-making process, and providing technical assistance to communities on potential health and environmental impacts of tire-related activities.

2. In concert with Cal/EPA and the U.S.-Mexico Border 2012 Program, CIWMB will develop a waste tire abatement plan with California and Mexico authorities, focusing on stockpiles posing an immediate threat of fire.

3. CIWMB will conduct periodic waste tire roundtable discussions with stakeholders to review progress of the waste tire program, solicit input from stakeholders, and answer questions.

4. CIWMB will include the principles of environmental justice as requirements in all tire program grants and contracts.

The Special Waste Committee held four public meetings in September 2004, October 2004, January 2005, and March 2005 to obtain input from stakeholders on this biennial update of the Five-Year Plan. The Committee used this input to further develop this update of the last revision of the Five-Year Plan.

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

State of the Program

At the onset of the Tire Enforcement Program (Program), the primary goal was to cleanup the numerous legacy tire piles throughout the state. Between 1994 and 2002, the Program brought 656 of the 894 sites identified during those eight years into compliance with CIWMB storage requirements or had the waste tires removed. During this period, enforcement efforts by the CIWMB resulted in the cleanup of approximately 6.1 million waste tires, with the operator or property owner removing these tires as a direct result of the enforcement action.

In fiscal year 1998/99, the CIWMB, entered into an interagency agreement with the California Highway Patrol (CHP) to assist in identifying illegal disposal of tires through aerial surveillance. Aerial photos provided by CHP enabled staff to identify 357 sites (out of the 894 sites) suspected of storing waste tires. Of these additional sites, CIWMB staff were able to confirm and investigate 199 sites (out of the 357), resulting in various enforcement actions, including letters of violation, cleanup and abatement orders, and administrative complaints.

Using historical cost data from State-funded tire cleanups, tire program staff estimates that the CIWMB's enforcement program has saved more than $8.9 million in potential State costs to remove waste tires from illegal sites. Since 1994, the CIWMB has issued 440 cleanup and abatement orders, 170 administrative complaints, and 41 criminal complaints. Additionally, since 1997 the CIWMB has imposed $808,018 in liens and $589,845 in fines against owners and operators who have failed to comply with tire program requirements and has to date collected approximately $156,368 of the imposed fines.

Since, many of the initial legacy piles have been brought into compliance, the CIWMB has redirected resources to focus more on maintenance and prevention of illegal tire piles, through our permitting, inspection, and waste tire hauler registration and manifest programs. Additionally, our ground and aerial surveillance provides ongoing identification and enforcement of remote illegal tire sites and illegal activity of tire businesses. These programs, especially inspection and surveillance programs, generate enforcement cases on an on-going basis. However, the overall illegal tire pile cases are diminishing. Since 2002, state staff investigated and took enforcement action on 62 illegal tire sites. As of November 2004, only 24 illegal tire piles are identified and pending enforcement action.

Prior to 2002, most of the inspections, investigations, and enforcement were conducted by five CIWMB field staff. Their efforts focused on enforcement of mostly known cases, through complaints and referral from other agencies. As part of a desire to provide more consistent, uniform proactive enforcement throughout the state, the Program has significantly increased the number of local enforcement agencies since 2002 to assist the Program's goals. In FY 2002/03 the program consisted of eight (8) Waste Tire Enforcement Grantees (Grantees). By FY 2003/04, the program consisted of twenty-four (24) Grantees who were responsible for remediating an additional 266 piles of tires (99,000 tires) illegally dumped as a result of inspections, surveillance, and initial enforcement activities. In FY 2004/05,

the CIWMB awarded grants to thirty-six (36) local agencies and next year staff anticipates increasing this number to thirty-nine (39).

CIWMB has a continuing responsibility to develop regulations to implement, interpret, and make specific legislation relating to the storage, disposal, and hauling of waste tires. CIWMB has recently completed the rulemaking process to establish hauler penalties and manifest requirements for the retread industry.

The CHP is currently assisting us with investigations and surveillance, conducting check points to find unregistered haulers, providing assistance in training local police departments, and providing security in situations staff needed peace officer assistance. Also, the CHP has aided the CIWMB in serving enforcement orders.

In an effort to improve our ability to identify illegal waste tire sites, the CIWMB is partnering with the California State University Foundation at San Jose/NASA Ames Research Center to use satellite imagery to locate problem areas for illegal tire piles and monitor large permitted tire piles.

CIWMB is also responsible for taking appropriate action to remediate threats to the public health or safety, or the environment. The levels of enforcement action include:

1. Notice(s) of violation.
2. Cleanup and abatement order (unpermitted waste tire facilities).
3. Legal action including filing Administrative Complaints and referring cases to the Attorney General, California District Attorney Association and / or other local districts.

Direction/Recommendations from the AB 117 Report

One of the principal concerns raised during AB117 Report meetings with stakeholders was the need for increased enforcement of the statutes and regulations. It was pointed out that failure to enforce, or inconsistent enforcement of, statutes and regulations creates major problems for legitimate businesses. Law-abiding businesses have difficulty competing with those that willfully ignore the rules and thereby avoid costs associated with the regulatory process.

Further, failure to enforce the waste tire hauling and storage regulations directly leads to the creation of illegal waste tire storage piles. The creation of illegal tire piles has led to many environmental problems, including mosquito and other vector outbreaks, and worst of all, long-lasting, uncontrolled tire fires such as those that occurred at Tracy in August 1998 and Westley in September 1999.

The following recommendations were suggested by the AB 117 Report work group (Recommendation #4 of the report):

1. Enhance Enforcement—Create a streamlined enforcement approach to the unlawful storage and transportation of waste tires, including continuing to work with CHP, and the creation of the Waste Tire Bounty Program, etc.

   Waste Tire Bounty Program**:** *SB 876 states that CIWMB may consider an incentive or "bounty" program for the general public to report unregistered haulers and illegal waste tire facilities. Board staff*

researched other state agency Bounty Programs and determined that our current complaint protocol was adequate without a fiscal incentive. In fact, most complaints received are from competitors who already have an economic incentive to report illegal activity. Furthermore, these complaints have helped staff identify illegal activity. Staff has updated the complaint form and made it available from both the CIWMB's Web site, and through any waste tire enforcement program staff. The form can be used by the public and businesses to report illegal tire disposal as well as any suspicious activities related to tire hauler registration and manifesting program. Finally, the CIWMB provides a toll-free hotline number that the public can call to report a complaint.

2. Local Agencies—Encourage local governments to more actively participate in the Local Waste Tire Enforcement Assistance Grant Program.

   Local Governments: *Staff has been working with local governments to increase the number of local governments participating in the Local Waste Tire Enforcement Assistance Grant Program.*

3. Ease Permit Requirements—Change definitions in statute to make the permitting process less demanding for stakeholders that are making tire derived products. This can be accomplished by removing tire-derived products from the permitting process after the products have been sold and physically removed from the manufacturing facility. This is similar to the tiered permitting approach that is utilized in the solid waste program.

   Regulations/Legislation: *AB 117 Report recommended tiered permitting and standardizing of tire storage measurements utilizing passenger tire equivalents (PTE).* Current statute allows for a tiered permitting system.

   Staff believes that the current tiered structure as described in this section is adequate for the regulated community and beneficial to the permitting program.

   The accumulation and final disposition of waste tires has been the subject of much discussion. One group of stakeholders has advocated the counting of individual tires as a determining factor for permitting. Another group advocated the use of PTEs, where every 20 to 25 pounds of tire rubber counts as one tire. The AB117 work group recommended that PTEs be used to determine permitting requirements for waste tire storage areas. Potential cleanup costs and environmental hazards (such as fire and vector control) are factors of the mass of tire rubber involved, not the number of tires. For example, a fire at a site with 1,000 giant earthmover tires poses a much greater risk than a fire at a site with 1,000 automobile tires.

   The final regulations adopted by the CIWMB on December 10, 2002, state that PTEs will be used to count only altered waste tires. If PTE's were used to count whole tires, numerous facilities storing a small number of large tires would be required to obtain a waste tire facility permit. For this reason, the CIWMB decided not to apply PTEs to whole tires.

Direction Provided by SB 876

PRC section 42889:

> *"Funding for the waste tire program shall be appropriated to the board in the annual Budget Act…for the following purposes:*
>
> *(d) To pay the costs associated with the development and enforcement of regulations relating to the storage of waste tires and used tires. The board shall consider designating a city, county, or city and county as the enforcement authority of regulations relating to the storage of waste tires and used tires, as provided in subdivision (c) of Section 42850. If the board designates a local entity for that purpose, the board shall provide sufficient, stable, and noncompetitive funding to that entity for that purpose, based on available resources, as provided in the five-year plan adopted and updated as provided in subdivision (a) of Section 42855.5. The board may consider and create, as appropriate, financial incentives for citizens who report the illegal disposal of waste tires and used tires as a means of enhancing local and statewide waste tire and used tire enforcement programs."*

CIWMB's Strategic Plan Goals and Objectives

Enforcement and regulation activities for waste and used tires support Goals 4 and 6 of the CIWMB's Strategic Plan (correlation of CIWMB activities to Strategic Plan in italics).

Strategic Plan, Goal 4: To manage and mitigate the impacts of solid waste on public health and safety and the environment and promote integrated and consistent permitting, inspection, and enforcement efforts.

> **Objective 1:** Through consistent and effective enforcement or other appropriate measures, ensure compliance with federal and State waste management laws and regulations.
>
> **Objective 2**: Increase efforts to identify, evaluate, and address the impacts from waste tire and solid waste management techniques.
>
> *The CIWMB requires that major permitted waste tire facilities be inspected once per year; minor permitted facilities are inspected once every 30 months. The increase in local enforcement grants to local jurisdictions has had a positive impact on identifying and evaluating the impacts of waste tire management throughout the state.*
>
> **Objective 4:** Intensify efforts to prevent illegal dumping and, where necessary, clean up illegally disposed waste and waste tire sites.
>
> *Referrals received from the CHP as part of the CIWMB/CHP Interagency Agreement have helped the CIWMB to identify and clean up previously unidentified sites throughout the state.*

Strategic Plan, Goal 6: Continuously integrate environmental justice concerns into all of the CIWMB's programs and activities, including administrative and budgetary decisions.

Objective 3: Ensure greater public and community participation, including low-income and monitory populations, in the development, adoption, and implementation of environmental regulations, policies, and programs.

Strategy B: Seek to overcome linguistic, cultural, institutional, geographic, and other barriers to meaningful participation.

Waste tire facility standards, hauler registration and manifest regulations, and waste tire permitting requirements are applied and enforced equally and uniformly to all parties throughout the State of California regardless of income, population density, race or ethnic origin.

The Plan

Objectives

1. Inspected tire business and location on a routine bases to assure compliance with all state laws and regulations.
    a. Inspect all permitted facilities within the required timeframes, annually for a major permit and every 30 months for a minor permit, and ensure all permitted facilities are operating in compliance with permit conditions, state minimum standards. (Currently, 42 permitted facilities at this time)
    b. Inspect all haulers, exempt and excluded facilities every two (2) years.
    c. Inspect all generators at least once by 2008.

2. Provide ongoing surveillance for illegal tire sites. Identify and investigate all suspected illegal sites through ground and aerial surveillance, and responding to complaints.

    The program will seek to enhance its ability to identify illegal sites by aerial surveillance and use of satellite imagery. This will support local Grantees' efforts to conduct surveillance activities where suspected illegal activity is occurring. The CHP will also be used to conduct checkpoints and assist in investigations and ground surveillance. High tech video surveillance equipment will also be employed to monitor activities that violate waste tire laws at suspicious locations.

3. 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, which includes; issuing a Notice of Violation at the time violation or illegal site is found, proceeding to a Cleanup and Abatement order when timeframes are not met and ultimately filing administrative complaints or referring the case if compliance can not be achieved through the previous enforcement steps.

    In cases where business have previous been found in violation, enforcement of additional violations will be expedited.

4. Increasing the states' coverage of the inspection, enforcement and surveillance of waste tire business (generators, haulers, and end user) in the state of California by either increasing the jurisdictions, populations and number of sites covered by

Waste Tire Enforcement Grantees and /or by increasing the states' field inspections in areas where locals are not covering these duties.

5. Support existing and new Waste Tire Enforcement Grantees by providing stable funding and ongoing assistance (including training, policy direction and enforcement and surveillance assistance) for the following Grantee duties: conducting inspections of waste tire haulers, generators and end users, issuing Notice of Violations, conducting ongoing surveillance and training in their jurisdictions. Continue a streamlined application, grant annual renewal, and reporting process for Grantees.

6. Maintain an effective and efficient Enforcement Grant Program which assures a high level of Program and Grantee performance.

   Staff will provide for ongoing program evaluation to assure its effectiveness. Yearly reviews of the Waste Tire Enforcement Grant Program will be conducted as part of the Performance Measures of the Five Year Plan, as outlined.

7. Develop a tire database that will collect and store the information necessary for effective program management and evaluation.

Program Activities

Early detection and local government participation are the keys to an effective enforcement program. The plan proposes that enforcement is most effective when it is two-pronged, involving participation from both State and local entities. This enforcement plan includes recommended funding for both State and local entities. Table 1 provides the budget relating to the storage of waste and used tires.

Table 1: Budget for Enforcement and Regulations Relating to the Storage of Waste and Used Tires

Program Area	FY 2005/06	FY 2006/07	FY 2007/08	FY 2008/09	FY 2009/010
Permitting, Enforcement, Grant Assistance Staff	$1,720,948	$1,720,948	$1,720,948	$1,720,948	$1,720,948
Surveillance and Enforcement Assistance	$350,000	$350,000	$300,000	$300,000	$300,000
CDDA Enforcement Case Assistance	$100,000	$100,000	$100,000	$100,000	$100,000
Local Waste Tire Enforcement Assistance Grants	$6,000,000	$6,000,000	$6,000,000	$6,000,000	$6,000,000
Database Development	$100,000	$100,000	$0	$0	$0
Totals	**$8,270,948**	**$8,270,948**	**$8,120,948**	**$8,120,948**	**$8,120,948**

State Used and Waste Tire Business Permitting, Inspection, Enforcement and Local Enforcement Assistance Grants

State efforts currently include investigations and inspections of waste tire facilities and waste tire haulers, generators and end users throughout the state to insure compliance with legislation and regulations.

1. Permitting, Enforcement, Grant Assistance Staff : All participants in the AB 117 and SB 876 workshops agreed that enhanced enforcement is important to bring all tire facility operators into compliance with legislative and regulatory mandates. Enforcement programs are staff-intensive; thus, hiring additional staff at the onset of the enhanced program is critical to its success.

Currently, the CIWMB's enforcement program consists of the following 14.84 positions:

- 10 staff.
- 2 supervisors.
- 1 legal staff.
- 1 legal assistant.
- .84 branch management.

Of these positions, 6½ conduct inspections and enforcement activities, 1½ are involved in the issuance of facility permits and regulations and policy development, 1½ are involved in evaluating, issuing, training and supporting waste tire enforcement grantees, and ½ manage information generated from enforcement program activities. The 6 full time enforcement inspectors conduct inspections and investigations of the storage, transportation, and disposal of waste tires throughout the state and assist grantees on enforcement and investigation of cases.

a. **Tire Facility Permitting**: The CIWMB is responsible for permitting Waste Tire Facilities, granting exemptions and regulating excluded business. Although the permitting regulations specifically provide for tiered permitting, the permitting structure provides various levels of regulator oversight and permitting bases on the risk of the facility. Facilities storing fewer than 500 tires are not be regulated by the State. Permitted solid waste landfills and transfer stations that receive fewer than 150 tires per day (averaged annually) are not required to obtain a separate permit for tire storage, but are required to meet the storage standards. Tire dealers and auto dismantlers with fewer than 1,500 waste tires and tire retreaders with fewer than 3,000 waste tires on their property may be eligible for permit exclusions.

   Cement manufacturers that burn waste tires for fuel can be exempted from waste tire facility permit requirements and are allowed to store up to a 30-day supply of fuel (tires) on their property, provided they meet specific criteria set forth in PRC 42823.5(a). Minor waste tire facilities (storing fewer than 5,000 waste tires) and major waste tire facilities (storing 5,000 or more waste tires) are required to obtain a waste tire facility permit that is issued by CIWMB.

b. **Tire Inspections**: CIWMB field staff are responsible for inspecting permitted facilities and to the extent possible waste tire haulers, and points of generation in jurisdictions where there is no Waste Tire Enforcement Grantee. Additionally, CIWMB is responsible to respond to complaints and conduct investigations of illegal sites and haulers.

c. **Tire Enforcement:** When compliance is not achieved through a Notice of Violations, the CIWMB has a progressive enforcement program where Cleanup and Abatement Orders and Administrative Complaints are prepared and issued and /or cases are referred to be handled criminally. Field staff prepare and issue Cleanup and Abatement Orders with consultation of the CIWMB's Legal Office. Additionally, field staff assist the CIWMB's Legal Office in drafting Administrative Complaints and gathering of evidence for Administrative Hearings or referrals to other agencies.

   Enforcement penalty actions are prosecuted by the CIWMB's Legal Office to ensure uniformity of enforcement and expeditious processing. These actions are held before administrative tribunals at the State Office of Administrative Hearings.

d. **Grant Management and Assistance**: Ongoing assistance and support to Waste Tire Enforcement Grantees is imperative to the success of the program. Field staff duties include: 1) Providing initial training of the Grantees' inspectors, 2) Providing ongoing direct and indirect (fielding site-specific questions) training to grantees in applying and interpreting waste tire laws and regulations and inspection procedures, 3) Assuring that the Waste Tire Management Branch programs and procedures are being implemented at a local level, 4) Preparing and coordinating waste tire facility and hauler compliance and enforcement cases referred by Grantees. These duties include consulting with the other agencies, tracking, investigating, reporting, and conducting following-up investigations and inspections to determine compliance with enforcement actions.

Other duties associated with the enhanced grant activities include the administration of the grant program. These duties include: monitoring and approving waste tire grant quarterly reports, expenditures and project milestones; maintaining grant database; closing out grants; compiling results; and evaluating the Grant program and the Grantee's effectiveness; preparing written reports of findings and conclusions.

Additionally, Program is responsible for preparing and processing applications and budgets for the grant program including but not limited to application, NOFA, instructions, procedures and requirements, and terms and conditions; assembling teams to review, analyzing and scoring application information as required by the program, and implementing grant awards.

These duties have increased fourfold over the last two grant cycles due to the passage of SB 876 and the Five-Year Plan. Therefore to maintain the existing level of oversight and support to the grantees, additional resources will be necessary**.**

Proposed Funding
FYs 2005/2006-2009/10…….$1,720,948 per fiscal year*

***Estimate of staffing and administrative costs**

2. Surveillance and Enforcement Assistance: CIWMB has taken advantage of, through interagency agreements, the resources of the CHP and ARB to conduct aerial and ground surveillance to identify illegal tire piles, and assist with investigations and surveillance activities associated with illegal dumping and illegal transportation of waste and used tires.

Historically, aerial photos provided by CHP enabled staff to identify 199 sites that have resulting in various enforcement actions, including letters of violation, cleanup and abatement orders, and administrative complaints.

Therefore, staff proposes to continue to seek the following services by the CHP or other agencies that have historically been funded under the Interagency Agreement with the CHP services:

- To assist in conducting further surveillance and investigation and perform other enforcement-related activities for CIWMB where CHP/law enforcement expertise and/ or peace office status is necessary;
- Provide aerial photographs at request, when necessary to augment other aerial surveillance activities;
- Conducting legal process service;
- Assist with waste tire hauler and manifest training and training materials;
- Assist with and conduct local policy departments trainings relating to the tire laws and regulations;
- Provide assistance from the CHP's Motor Carrier Unit to conduct enhanced vehicle checks throughout the state to ensure compliance on waste tire haulers; and
- Conduct aerial surveillance and photographs where requested.

At the first SB 876 public meeting, stakeholders identified a need for local jurisdictions to enhance their inspections and surveillance abilities through the use of high-tech surveillance equipment. In response to this request, CIWMB sought the assistance of the Air Resources Board's surveillance team, through an interagency agreement, to assist in video surveillance where illegal activity is suspected and additional evidence is needed. In approximately 15 cases**,** this program has been successful at providing locals with surveillance equipment in areas where illegal dumping has occurred.

During fiscal year 2004/05, a pilot project for Satellite imagery was approved by the CIWMB. If it is successful and resource efficient, staff will propose to continue to utilize existing Satellite imagery to locate and monitor waste tire disposal sites in California which should assist staff and save resources. It is recommended at this time, that California State University Foundation at San Jose serve as the contractor and work in conjunction with NASA Ames Research Center on this pilot project.

The CIWMB will continue to provide this assistance to local governments and state staff, either through interagency agreements or contracts.

Proposed Funding
FYs 2005/06-2006/07……..$350,000 per fiscal year
FYs 2007/08-2009/10…….…… ...$300,000 per fiscal year

3. **California District Attorney's Association (CDAA) Assistance:**
Enforcement penalty actions will be prosecuted by the CIWMB's Legal Office to ensure uniformity of enforcement and expeditious processing. However, past experience has shown the need to refer multimedia cases and severe cases to District Attorneys' Offices. Often smaller jurisdictions do not have the resources to handle lower priority cases, such as environmental cases.

So in cases where administrative actions have not shown to be effective or where a case involves other issues other than tires, the CIWMB is referring criminal and civil cases to local district attorneys through a two-year pilot grant program initiated in fiscal year 2001/02 with the California District Attorney's Association (CDAA). This effort has proved to be useful and staff proposes to continue funding to CDAA to provide an investigator and circuit prosecutor to pursue criminal and unlawful business practice actions.

Proposed Funding
FYs 2005/06-2009/10……..$100,000 per fiscal year

4. Local Waste Tire Enforcement Assistance Grants:

Public Resources Code (PRC) Section 42889(d) allows the CIWMB "to consider designating a city or county, or city and county as the enforcement authority of regulations relating to the storage of waste and used tires." This section also states that if the CIWMB designates a local entity for this purpose, it must provide sufficient, stable, and noncompetitive funding to that entity, based on available resources.

The CIWMB at its March 20-21, 2001 meeting, the CIWMB adopted the *Five-Year Plan for the Waste Tire Recycling Management Program* (Five-Year Plan) specifically expanding the role of local government in the detection, inspection, and enforcement at waste tire sites through an increase in scope and funding of its Local Government Enforcement Grant Program. The CIWMB allocated four million dollars ($4,000,000) for the FY 2002/2003 Waste Tire Enforcement Grant Program and six million dollars ($6,000,000) per year thereafter and ensured a stable source of funding through 2007. As of FY 2002/2003 (Grant Cycle June 30, 2003 through June, 30 2004), the Program has been noncompetitive.

Due to additional funding and extensive outreach, the program has increased fourfold over the last two to three years. The CIWMB approved the funding of eight (8) grant applicants in FY 2001/2002, twenty-five (25) grant applicants in FY 2002/03 and thirty-six (36) in FY 2003/2004.

The major purpose of the grant program is to provide the state with assistance with inspections and first line enforcement and surveillance activities at the local level. Eligible county and city jurisdictions perform waste tire facilities inspections; investigate illegal tire disposal activities, and survey tire dealers, auto dismantlers, tire haulers, and other points of waste tire generation to ensure compliance with all applicable laws and regulations, including the manifest system. If violations are found, the grantee issues a Notice of Violation along with an inspection report and re-inspects the site to ensure that operators are following all tire facility regulations, including storage standards, use of registered tire haulers, and manifest requirements. If compliance is not achieved at the local Notice of Violation level, the cases are referred to the state for uniform and expeditious enforcement action.

The overall goals of the program include:

- Providing a sufficient, stable, and non-competitive source of funding to these entities based on the available resources, pursuant to SB 876.

- Maintaining a cost-effective and efficient program.
- Providing consistent inspection coverage throughout the State.
- Providing ongoing program evaluation to assure its effectiveness.
- Maintaining a high level of Grantee performance.
- Continuing a streamlined application, annual grant renewal, and reporting process for Grantees.

The CIWMB is providing ongoing review and developing a program and a database in order to assess the success and efficiency of the program.

As a direct result of the Local Waste Tire Enforcement Assistance Grants, local agencies have a much more vital and expanded role in enforcement. The success of the states' overall tire enforcement program is contingent on the success of the Local Waste Tire Enforcement Assistance Program since the CIWMB does not have sufficient personnel resources (1) to conduct meaningful surveillance throughout California and (2) to ensure compliance with state requirements of haulers, tire facilities, and at points of waste tire generation. CIWMB will develop grant agreements providing for the local agencies to identify waste tire sites, conduct inspections, review waste tire hauler documents, and issue letters of violation. Working together, CIWMB and local agencies can oversee the flow of tires with greater regulatory scrutiny and greatly reduce the illegal disposal of waste tires.

Proposed Funding
FYs 2005/06 –2009/10.....$6,000,000 per fiscal year

5. Database Development:

The current database system does not support an effective and efficient way to track and manage the universe of tire information. To address SB 876 mandates and to report on the Five Year Plan's performance, there needed to be a coordination of multiple tire databases into one comprehensive database. The Waste Tire Management System (WTMS) database project is designed to combine the following databases:

- The WTMS database manages tire haulers, generators, end users, manifests, and complaints;
- Grants Management System (GMS) database manages data for all the tire grants;
- Solid Waste Information System (SWIS) tracks facility inspections (not generator and hauler inspections), enforcement actions, permits, and remediation information for all tire facilities and solid waste facilities in the state;
- Practice Master tracks enforcement action history once a tire case has been referred to legal;
- California Highway Patrol (CHP) database is used to track information from CHP flyover; and
- Other databases track various tire information including databases used for contracts, the annual report, etc.

To date, the Information Management Branch (IMB) program staff has completed the following:

- Created a scannable, standardized inspection form to be used in the field by enforcement staff and grantees. Inspection forms will be turned in monthly to be scanned into WTMS database. The forms reflect the number of inspections completed by CIWMB and individual grantees, types of violations noted, number of sites issued a Notice of Violation (6600 inspections have been scanned into the system since the July 1, 2004 start date of this form), and referrals to CIWMB;
- Developed the inspection page in WTMS database reflecting the information collected from the scanned inspection forms; and
- Developed several reports for statistical information regarding CIWMB/grantees inspections and NOV issuance.

Next Steps:

IMB and program staff will incorporate other tire related information into the WTMS database by:

- Incorporating the CHP flyover information into the current WTMS complaint module;
- Developing a module to manage remediation and a link to databases containing local cleanup grants, amnesty day information;
- Developing the permitting module in WTMS database by pulling permitting information from the SWIS database; and
- Providing a link to databases containing information on tire derived product, research, promotion of tire recycling, tire derived products.

Proposed Funding

FYs 2005/06-2006/07……..$100,000 per fiscal year

Performance Measures

To evaluate the program's success in achieving its objectives, the following measures are proposed (baseline data for measure will be from fiscal year 2003/04):

1. Track the number of inspections conducted for specific types of tire facilities within the set timeframes. For permitted facilities and haulers, once every year or 30 months; for exempt and excluded facilities, once every two years: and generators, once before 2008.

2. Track and report on identified illegal waste tire sites (through CHP surveillance or local enforcement) to determine if the number is increasing or decreasing on an annual basis.

3. Track and report the number of all tire sites/haulers; generators, end users, haulers, permitted, exempted/excluded and illegal found in violation and brought into compliance with a Notice of Violation, Cleanup and Abatement order, and administrative complaints.

4. Correlate the number of inspections for specific types of facilities and the corresponding number of documented violations to determine whether they are increasing or decreasing over time.

5. Increase the Waste Tire Enforcement Grantee coverage in the state to 80% by 2008.

6. Increase state inspections in the jurisdictions without Grantees by 50% by 2008.

7. Track the number of inspections conducted in relation to the number of program staff and number of Grantee staff.

8. Conduct an annual review of the Waste Tire Enforcement Grant Program, and report the information including:

    a. Cost effectiveness and Program Efficiency, including information on inspections, enforcement; equipment (including vehicles) costs; and
    b. Grantee Performance: The number of Grantee's meeting the terms and conditions of the Grant Agreement.

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

State of the Program

Pursuant to PRC section 42846, CIWMB may 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 as directed by CIWMB. These efforts may entail stabilizing piles until they can be removed, removal of all waste tires, and/or remediation of the site after removal of the tires. In general, these waste tire sites are referred to the Waste Tire Stabilization and Abatement Program once CIWMB's Waste Tire Enforcement Program has exhausted enforcement efforts.

Since it began in 1994, CIWMB has utilized contractors to remediate or stabilize illegal waste tire sites. To date, CIWMB has awarded six contracts totaling approximately $14.9 million. Since 1995, CIWMB has removed more than 13 million illegal waste tires from 50 sites for a total cost of nearly $ 9.2 million. However, due to several major tire fires and the complicated enforcement issues surrounding the remaining waste tire sites on the short-term remediation list, there has been a decrease in the number sites remediated. Also, due to the success of the CIWMB's enforcement efforts, several of the sites on the list have been remediated by their owners.

Beginning in 2001 through 2003, the CIWMB focused its remediation efforts on the cleanup of the Westley tire fire site. Similarly, in 2003, the CIWMB directed staff to extinguish the smoldering tires at the Tracy Waste Tire Site prior to beginning long-term remediation efforts which began in 2004. Another contributing factor is that for the past several years, the CIWMB has spent significant resources pursuing the complicated enforcement and resulting legal issues surrounding the Sonoma waste tire sites, which is the largest accumulation of waste tires remaining to be remediated. In addition, the CIWMB has been pursuing enforcement actions and site access on recalcitrant owners of waste tire sites. These efforts have resulted in 6 short-term remediation projects that will be completed in 2005.

While the number of sites remediated each year has decreased, the cost of cleanup has varied significantly depending on the number of large projects undertaken that year. Since 1995, the average cost for cleanup ranges from $0.40 to $2.82 per tire removed, depending on the complexity and legal issues associated with the remediation project.

Table 2: CIWMB Annual Remediation

Year	No. of Sites	Remediation Cost	Total No. of Tires Removed
1995	6	$870,832	2,154,400
1996	6	$389,487	411,436
1997	9	$1,367,760	2,832,916
1998	8	$2,726,196	4,488,325
1999	15	$1,568,905	1,334,500
2000	5	$1,690,000	1,920,500
2001	0	0	0
2002	2	$274,000	97,000
2003	0	0	0
2004	1	$118,000	0*
Totals	**52**	**$9,005,180**	**13,239,077**

* The tires at this site burned so this was a tire burn ash removal project

While the aim of CIWMB is to stabilize all unsafe or environmentally hazardous tire piles until abatement can be completed, three large tire pile fires and several small blazes have occurred since the beginning of the program. In 1996, approximately 1.5 million tires burned at the Choperena waste tire site in Fresno. Seven million tires were consumed in 1998 at the fire at the Royster waste tire site in Tracy. In 1999, another five million tires were consumed at the fire at the Filbin waste tire site in Westley.

All of these sites have been cleaned up or in the process of being cleaned up as CIWMB-managed remediation projects through contracts funded by the tire program.

The intent of the Local Government Waste Tire Cleanup Matching Grant Program is to create local partnerships, and partnerships with Native American reservations and rancherías, to facilitate the removal, transport, and disposal/reuse of waste tires from legacy tire piles and piles exceeding 500 tires. CIWMB has issued local government waste tire cleanup grants for four fiscal years starting in fiscal year 1997/98. During this time, CIWMB awarded 50 grants totaling $ 2,189,396. Under these grants, local governments have remediated an estimated 908,006 illegal waste tires, as indicated in the following table.

Table 3: Local Government Remediation Grants

Fiscal Year	Number of Sites	Number of Tires Remediated	Grant Award
1997/98	8	140,290	$151,410
1998/99	4	28,116	$51,323
1999/2000	6	178,400	$213,126
2000/01	0	0	No funds available due to the sunset of the tire fee.
2001/02	8	115,200*	$458,609
2002/2003	10	193,500	$602,642
2003/2004	14	252,500	$712,286
Totals	**50**	**908,006***	**$**2,189,396

* The number of tires remediated is an estimate, since the CIWMB has not received all the final reports.

Since 1992, CIWMB has provided more than $1.4 million in grant funding to support local amnesty days and public education efforts. Ninety grants have been awarded to local government for amnesty programs and used tire abatement efforts. With these grants, local governments hold amnesty days for the public to drop off waste tires, clean up small illegal tire piles, establish tire collection networks, purchase tire collection vehicles and equipment, and develop public education materials on proper maintenance and disposal of automobile tires. The following table is a summary of the Amnesty Day grants.

Table 4: Amnesty Day Grants

Fiscal Year	Number of Grants	Grant Award
1992/93	4	$74,400
1993/94	8	$177,720
1994/95	13	$316,287
1995/96	1	$12,744
1998/99	16	$176,543
1999/2000	26	$374,043
2000/01*	0	No funds available due to the sunset of the tire fee.
2001/02	22	$330,817
2002/03	11	$321,247
2003/04	29	$924,674
Totals	**130**	**$2,708,475**

Direction/Recommendations from the AB 117 Report

Remediating existing tire piles is a challenge. During the AB 117 workshops, industry representatives considered remediation second only to enforcement in priority. The costs associated with remediation are considerable, and property owners and operators are many times reluctant to expend the money for major cleanup operations. The problem is compounded because many times the tire piles are located on economically undesirable land and cleanup costs exceed the value of the land itself, making land seizure a hollow threat. In other cases, the property owners are victims of unscrupulous operators (tenants) and do not have the necessary resources to pay for cleanup.

The legal process to bring about the cleanup of waste tires by property owners or to conduct a CIWMB-managed cleanup can take years and can be expensive. This process is initiated only after direct negotiations fail and CIWMB has exhausted its administrative enforcement actions against the property owners. In addition, in some cases, CIWMB must work with the Office of the Attorney General to seek property access and conduct a CIWMB-managed cleanup.

The AB 117 workgroup recommended that CIWMB initiate an aggressive two-year cleanup program to eliminate all known major illegal waste tire piles (more than 5,000 tires in size). Completely eliminating the largest illegal piles will greatly reduce the major environmental dangers associated with waste tires and will provide a positive message to the public that progress is being made toward an overall solution. Both State and local efforts will be needed.

To prevent waste tire pile fires and deal with those that do occur, CIWMB should continue to work with the Office of the State Fire Marshall (OSFM) to update the tire fire curriculum, work with appropriate State agencies to develop a tire fire protocol, and work with the Western Fire Chiefs Association to update and amend the Uniform Fire Code. CIWMB should also take the lead in making certain the most current information is available on the nature of tire fires.

Direction Provided by SB 876

PRC section 42889:

> *"The moneys in the fund shall be expended for. . . the following purposes:*
>
> *(e) 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 CIWMB. Not less than six million five hundred thousand dollars ($6,500,000) shall be expended by the board during each of the following fiscal years for this purpose: 2001-02 to 2006-07, inclusive.*
>
> *(i) To pay the costs to create and maintain an emergency reserve, which shall not exceed one million dollars ($1,000,000).*

(j) To pay the costs of cleanup, abatement, or other remedial action related to the disposal of used whole 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."

CIWMB's Strategic Plan Goals and Objectives

Activities pertaining to cleanup, abatement, or other remedial action support Goal 4 of the CIWMB's Strategic Plan (correlation of CIWMB activities to Strategic Plan in italics).

Strategic Plan, Goal 4: To manage and mitigate the impacts of solid waste on public health and safety and the environment and promote integrated and consistent permitting, inspection, and enforcement efforts.

Objective 4: To intensify efforts to prevent illegal dumping and, where necessary, clean up illegally disposed waste and waste tire sites. This will be accomplished through the implementation of the following strategy.

Strategy C: To direct Board resources and support local efforts to ensure the timely remediation and restoration of illegal disposal sites and illegal waste tire sites that pose the greatest threat to public health and safety and the environment.

Activities pertaining to cleanup, abatement, or other remedial action are directed toward prevention of substantial pollution, nuisance, or injury to the public's health and safety at waste tire sites. Activities typically include tire-fire remediation efforts, removal of all waste tires, and/or remediation of the site after tire removal.

The Plan

Objectives

1. Continue to eliminate illegal stockpiles with more than 5,000 tires.
2. To increase local government participation in the elimination of illegal waste tire stockpiles with their jurisdictions.
3. To direct tires from cleanup to productive end use rather than landfill disposal to the extent costs are reasonable.

Program Activities

Over the next five fiscal years, starting with fiscal year 2005/06, CIWMB will fund the Waste Tire Stabilization and Abatement Program at $9,525,000 ($6,275 million, $ 5,125 million, $5.775 million, and $3.977 million per fiscal year). The program will continue to conduct remediation of sites with CIWMB-managed contractors and the awarding of grants to local governments for Amnesty Day events and cleanup of illegal piles. In addition, funding will be provided to the Farm and Ranch Solid Waste Cleanup Grant Program. Further, an emergency reserve account, which shall not exceed $1 million dollars, will be established and maintained, as directed by SB 876.

Table 5 provides the budget relating to cleanup, abatement, and waste tire remediation.

Table 5: Budget for Cleanup, Abatement, and Remedial Action

Program Area	FY 2005/06	FY 2006/07	FY 2007/08	FY 2008/09	FY 2009/10
Remediation Staff	$892,292	$892,292	$828,656	$828,656	$828,656
Long-Term Remediation Projects	$4,000,000	$1,000,000	$0	$0	$0
Short-Term Remediation Projects	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000
Local Government Waste Tire Cleanup Grant Program	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Local Government Amnesty Day Grants	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Emergency Reserve Account	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Farm and Ranch Solid Waste Cleanup and Abatement Grant Program*	$333,000	$400,000	$400,000	$400,000	$400,000
DHS/MVCAC Tire Mapping	$125,000	$125,000	$0	$0	$0
OSFM Training	$0	$0	$0	$100,000	$0
Totals	**$9,850,292**	**$6,917,292**	**$5,728,656**	**$5,828,656**	**$5,728,656**

* Funds to be transferred to CIWMB's Farm and Ranch Solid Waste Cleanup and Abatement Grant Program.

Remediation Staff

The costs for cleanup as estimated in this plan are generally higher than past cleanups. Sites yet to be remediated tend to be more remote and/or more complex than those sites that have previously been remediated. Currently, the remediation program staff consists of 5 1/3 positions. In fiscal year 2007/08 half a position will be shifted to the Tire Program's Market Development Section to manage increased marketing activities.

Proposed Funding
FYs 2005/06–2006/07.....$892,292 per fiscal year*
FYs 2007/08–2009/2010.....$828,656 per fiscal year*
***Estimate of staffing and administrative costs**

Waste Tire Stabilization and Abatement Program

CIWMB is currently funding both long- and short-term remediation of illegal waste tire sites with CIWMB-managed contracts. These contracts are awarded for a two- to three-year period. Funds allocated to remediation efforts may roll over from one fiscal year to the next

In this plan, staff proposes to complete the remediation of the Tracy tire fire site, the only remaining long-term remediation project by the end of 2006. Staff is also proposing in the plan to move aggressively to remediate the sites on the current short-term projects list within the next three years. Although the program plans to move expeditiously through this list, these enforcement efforts can take time as staff researches property ownership, issues orders, and attains access in order to conduct cleanup. The program will prioritize these sites to ensure that the most significant sites are addressed first. However, State-funded cleanup of the sites on the short-term projects list will be an ongoing process.

Long-Term Remediation Projects: CIWMB has awarded four new contracts to carry out long-term remediation of the Westley and Tracy tire fire sites. Remediation of the Westley site was completed in fall 2002 and included the removal of over 290,000 tons of debris, contaminated soil, and partially burned tires, as well as extensive site restoration. The project was allocated $11 million over a five-year period. The remediation work was completed in less than three years at a cost of approximately $17 million. The fiscal year 2001/02 allocation of $6 million was expended and the remainder of the funds came from various settlement agreements with the responsible parties. The CIWMB is still working in cooperation with the Office of the Attorney General to pursue cost recovery against the remaining responsible parties. It is anticipated that these efforts will continue at least until the middle of 2005.

Three contracts have been awarded for the Tracy site. One was for engineering and environmental services, and the other two were for site remediation. Because of the site conditions at the Tracy site and the fact that the site burned for more than two years before being suppressed, there is the potential for groundwater contamination from the residual contamination present at the site. Therefore, it may be necessary to conduct ground water monitoring and possibly implement mitigation measures after the remediation of the site is completed.

Field work at Tracy began in spring 2003. Originally the cost for the entire project was funded for $9 million over a four-year period. However, based on further investigation, it has been determined that the residual contamination is more extensive than originally estimated.

Therefore, the funding for the remediation work was increased to $11,565,154 for fiscal year 2002/03 through 2004/05 funds. An additional $5 million will be needed to complete the Tracy remediation project which will make the total remediation cost in excess of $16.5 million.

Currently, there is $3.7 million allocated for long-term remediation in the 5 year plan ($2.7 million for 2005/06 and ($1.0 million for 2006/07). However, based on current estimates, tire program staff anticipates that all the field remediation work could be completed at the Tracy site by the end of fiscal year 2005/06, but definitely by the end of FY 2006/07. Therefore, funding for long term remediation for FY 2005/06 will be increased to $4 million and the funding for FY 2006/07 will revert to $1 million. Remediation of groundwater is not included in the original $9 million estimate and may require additional funding if groundwater pollution is identified and the CIWMB chooses to fund such work.

As part of the long-term remediation of these sites, the CIWMB has entered into interagency agreements to reimburse costs incurred by the Department of Toxic Substances Control (DTSC) and the Central Valley Regional Water Quality Control Board (RWQCB) in overseeing the remedial actions at these sites.

Proposed Funding
FYs 2005/06.....$ 4,000,000
FY 2006/07……. $1,000,000

Short-Term Remediation Projects: A total of 34 sites have been identified for short-term remediation. Of these sites, 14 are in the process of being cleaned up as CIWMB-managed remediations, 16 have been approved for CIWMB-managed remediations and are awaiting site access, and enforcement actions are being pursued on the remaining four sites.

CIWMB has existing contracts to carry out short-term State-funded remediation of illegal waste tire sites. The CIWMB entered into a new contract for fiscal year 2004/05.

Proposed Funding
FYs 2005/06-2009/10 .....$1,500,000 per fiscal year

Local Government Waste Tire Cleanup Grant Program

The program proposed awarding fiscal year 2004/05 local government cleanup grants in May 2005. The grant applications were due on February 11, 2005. Due to the revisions to the program criteria in FY 2001/02, participation in the Local Government Waste Tire Cleanup Grant Program has increased for the past several fiscal years as shown in Table 3. The funding for the grants that have been awarded has increased an average of 20 percent per fiscal year. In addition, the CIWMB approved a cost recovery policy that will allow the CIWMB to recover its costs for illegal waste tire remediation where appropriate

Proposed Funding
FYs 2005/06–2009/10……..$1,000,000 per fiscal year

Local Government Amnesty Day Grants

The Public Education and Amnesty Day Grant Program is intended for local entities to develop education programs providing information on proper waste tire disposal and tire care; and to allow the public to clean up small waste tire piles through the proper disposal of unwanted tires. In fiscal year 2001/02, 22 grants were awarded totaling $330,817 and in fiscal year 2002/03, 11 grants were awarded, totaling $321,247. For FY 2003/04, 29 grants were awarded totaling $924,674. The FY 2003/04 grant cycle required no matching funds. The awarded amount exceeds the allocated amount by $524,674, due to additional funding made available through the CIWMB-approved annual reallocation process.

Proposed Funding
FYs 2005/06-2009/10……$1,000,000 per fiscal year

Emergency Reserve Account

SB 876 legislation requires that CIWMB create and maintain an emergency reserve account, which shall not exceed $1 million. These funds will be used to respond to emergencies involving waste tires, such as tire fires.

Proposed Funding
FYs 2005/06–2009/10 .....$1,000,000 per fiscal year

This emergency reserve account is subject to change depending on the need or emergencies that arise. Legislation requires CIWMB to maintain $1,000,000 in this account. However, more than $1,000,000 may be expended on a yearly basis. If allocated funds are not expended, funds will carry forward to the fund balance in the following fiscal year. A million dollar reserve must be maintained within expenditure authority for emergency purposes.

Farm and Ranch Solid Waste Cleanup and Abatement Grant Program

The purpose of the Farm and Ranch Solid Waste Cleanup and Abatement Grant Program is to remediate solid waste that has been disposed of illegally on farm and ranch property. SB 876 requires that funds be allocated to pay the costs of cleanup, abatement, or other remedial action related to the disposal of used whole tires in implementing and operating this program. Due to the increase in grant requests, funding for this program will be increased to $400,000 starting in Fiscal Year 2006/07.

Proposed Funding
FY 2005/06 .....$333,000
FYs 2006/07-2009/10……$400,000 per fiscal year

DHS/MVCAC Tire Mapping

The California Department of Health Services (DHS) and the Mosquito and Vector Control Association of California (MVCAC) are requesting funding to: 1) locate small to mid-size tire piles; 2) map the locations; and 3) provide this data to local enforcement agencies for subsequent cleanup. These partnerships between local vector control agencies and local enforcement agencies will enhance the CIWMB's ability to identify and cleanup waste tire piles.

Proposed Funding

FY 2005/06-2006/7…….$125,000 per fiscal year

Fire Marshall Training

CIWMB should continue to work with Office of State Fire Marshall to update the tire fire curriculum, work with appropriate State agencies to develop a tire fire protocol, and work with the Western Fire Chiefs Association to update and amend the Uniform Fire Code. CIWMB should also take the lead in making certain the most current information is available on the nature of tire fires.

Proposed Funding

FY 2008/09 .....$100,000

Performance Measures

To evaluate the program's success in achieving its objectives, the following measures are proposed (baseline data was collected during fiscal year 2001/02 for those that were in effect in the original five-year plan):

1. Complete the long-term waste tire remediation projects within two years.
2. Complete the short-term waste tire remediation projects referred by CIWMB's Waste Tire Enforcement Program and report status of projects to the CIWMB on an annual basis.
3. Increase the number of waste tire cleanup grants issued to local governments on an annual basis.
4. Increase the number of waste tire amnesty grants issued to local governments on an annual basis.
5. Increase the percentage of tires remediated through the farm and ranch cleanup grants issued to local governments on an annual basis.
6. With the cooperation of OSFM, assess existing tire fire response protocol and update and amend the Uniform Fire Code every five years.

Research Directed at Promoting and Developing Alternatives to the Landfill Disposal of Tires

State of the Program

CIWMB has promoted a variety of alternatives for the recycling of tires and has concluded that a mix of strategies is necessary to reduce tire disposal in landfills. To date, projects involving rubber asphalt concrete (RAC), civil engineering (CE) uses, energy recovery, molded rubber products, and projects that produce crumb rubber have been funded.

The CIWMB has expended significant resources promoting the use of Tire Derived Aggregate (TDA) in various civil engineering applications. Under two environmental services contracts with Dana Humphrey Consulting Engineering, CIWMB has provided education on, and promoted the use of, TDA as an alternative to conventional lightweight fill materials in highway construction projects. Up until now these efforts have been focused primarily toward the California Department of Transportation (Caltrans), since it is the agency responsible for developing technical standards for highway construction. The efforts have included coordinating meetings with Caltrans design engineers, giving short courses on the use of TDA in highway construction, and providing both technical and environmental information to regulatory agencies responsible for the oversight of these projects. Future efforts will continue the work with Caltrans, but more emphasis will be placed on city and county public works departments.

Through the CIWMB's previous efforts, Caltrans identified several potential highway projects in which shredded tires could be used as lightweight fill. One of these projects was the Dixon Landing/I-880 interchange project (Santa Clara County) in which tire shreds were used as lightweight fill. This project was completed in August 2001. A second project was a retaining wall that utilized TDA as a lightweight backfill material. This project was constructed in 2003 on Route 91 in Riverside County and used 84, 000 tires as TDA. CIWMB, in coordination with Caltrans, is developing conceptual designs and conducting field tests to validate a new retaining wall design which will take advantage of the reduced backfill pressure by using less concrete and steel in its designs. The second phase of this retaining study will be constructed in early 2005. This test section will use 250,000 tires worth of TDA.

In another civil engineering application, the CIWMB partnered with the Valley Transportation Authority (VTA) in San Jose to investigate the use of TDA as a vibration-dampening material in VTA’s light-rail system. The results of the investigation were very favorable and VTA used tire shreds in 2000 feet of light-rail section along its Vasona Line expansion that was constructed in the fall of 2003 and 2004.

CIWMB staff will also continue to conduct research into the environmental impacts from TDA fills to assist in the development of technical standards for civil engineering applications and tire shred monofills. This research would require actual

monitoring of pilot and field studies to demonstrate and promote civil engineering applications of waste tires.

CIWMB has partnered with Caltrans to identify potential recycled RAC formulations and to test these formulations using laboratory and field simulations. Once this first phase is completed, the second phase would be to test the recycled RAC formulations in an actual highway construction project. This could be accomplished through a project with a local government or Caltrans.

In 2003, CIWMB published its report, "*Assessment of Markets for Fiber and Steel Produced from Recycling Waste Tires.*" This report concluded that while recovered steel has market opportunities, fiber has few market outlets at this point in time. The report also recommended that CIWMB should assist in improving processor-user communication, which could help develop markets for high-quality tire-derived steel.

The study, "*Evaluation of Waste Tire Devulcanization Technologies*" was completed in 2004. This report concluded that under current and likely near-term future conditions, devulcanization faces an uphill struggle to be competitive with virgin rubber. In terms of the potential of producing high-quality devulcanized rubbers, the best technology appears to be ultrasonic devulcanization, based on the current state of the art. Another study, "*Evaluation of Pyrolysis, Gasification, and Liquefaction Technologies*" is scheduled to be complete by May 2005.

Manufacturers using scrap tires to produce mats have indicated that, in general, markets are growing and that 15 to 20 percent of their production is related to CIWMB grants. The goal is to retain the current level of usage and support research to develop additional uses. The potential for developing a significant end-use market for a multitude of molded rubber products does exist.

Recommendations from the AB 117 Report

Tire Research: This program will focus on developing new, and promoting existing, end-use applications for waste tires. Ultimately these end-use applications will provide alternatives to the landfill disposal of tires. The AB 117 Report recommendations for research are:

1. Forming a partnership with tire manufacturers to explore the development of techniques to use higher recycled content in the production of new tires (Recommendation #19).

2. Partnering with industry segments to assist in examining environmental aspects at sites engaged in energy recovery from tires (Recommendation #20).

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."*

PRC section 42889:

"Funding for the waste tire program shall be appropriated to the board in the annual Budget Act…for the following purposes:

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

Further, PRC section 42889(k) required OEHHA, in consultation with the California Air Resources Board, the California Integrated Waste Management Board, and the California Department of Health Services, (DHS) to prepare a report that includes the following: the major chemical constituents of smoke from burning tires, the toxicity of those chemicals, and the potential effects on human health from exposure to smoke from tire fires. The report (*Report to the Legislature, Tire Fire Smoke: Major Constituents and Potential for Public Health Impacts, May 2002*) was completed in fiscal year 2001/02 and submitted to the Governor and the Legislature as required.

CIWMB's Strategic Plan Goals and Objectives

Research efforts regarding alternatives to landfill disposal of tires support Goal 2 of the CIWMB's Strategic Plan (correlation of CIWMB activities to Strategic Plan in italics).

Strategic Plan, Goal 2: Assist in the creation and expansion of sustainable markets to support diversion efforts and ensure that diverted materials return to the economic mainstream.

Objective 2: Encourage the use of materials diverted from California landfills and the use of environmentally preferable practices, products, and technologies.

Strategy B: Provide financial incentives, including grants, contracts, loans, tax credits, etc.

Strategy D: Facilitate research and information transfer on new technologies and environmentally preferable product specifications.

CIWMB has supported numerous research efforts for the recycling of tires that will ultimately result in reducing tire disposal in landfills. Some of these research efforts include projects involving rubber-modified asphalt, civil engineering uses, energy recovery, and molded rubber products.

The Plan

Objectives

1. Support the development of new, or improvement of existing, markets for waste tires.
2. Establish an effective peer review system that objectively and independently evaluates research conducted.

Program Activities

Previous research has provided a solid base of knowledge on which to concentrate future efforts. CIWMB staff will focus research activities to support increased usage of RAC, civil engineering applications, and other tire derived products. Table 6 provides the budget for research regarding the promotion and development of alternatives to the landfill disposal of tires.

Revised Table 6: Budget for Research Directed at Promoting and Developing Alternatives to the Landfill Disposal of Tires

Program Area	FY 2005/06	FY 2006/07	FY 2007/08	FY 2008/09	FY 2009/10
Research Staff and Administration	$485,573	$485,573	$369,368	$369,368	$369,368
C.E.U. and Curriculum for RAC & CE	$0	$350,000	$0	$0	$0
Border Study of Tire Flow and Storage	$75,000	$75,000	$0	$0	$0
Civil Eng. Applications for Waste Tires	$0	$500,000	$0	$500,000	$0
Tire Derived Product Testing and Certification	$300,000	$300,000	$300,000	$300,000	$300,000
Life-Cycle Assessment of Waste Tire Management Methods	$150,000	$0	$0	$0	$0
Generation and Diversion Data Study	$100,000	$0	$0	$0	$0
Totals	**$1,110,573**	**$1,710,573**	**$669,368**	**$1,169,368**	**$669,368**

Research Staff and Administration

CIWMB works with other State agencies to minimize duplication of effort when appropriate. Currently, 3 1/2 positions support the CIWMB's research efforts. In fiscal years 2007/08 – 2009/10 one position will be shifted to the Tire Program's Market Development Section to manage increased marketing activities.

Proposed Funding
FYs 2005/06-2006/07…….$485,573 per fiscal year*
FYs 2007/08-2009/10…….$369,368 per fiscal year*
*** Estimate of staffing and administrative costs**

1. C.E.U. and Curriculum for RAC & CE

This contract will develop a program for awarding Continuing Education Units (C.E.U.) to engineers and others for taking new or refresher courses regarding RAC and civil engineering applications for waste tires. The contract will also develop course curriculum and materials for Engineering Students at University of California and California Community College (as appropriate) locations regarding RAC (and possibly civil engineering applications).

This activity has been identified by stakeholders as a cost-effective option to expose new students to RAC and civil engineering and to effectively reach out to existing engineering professionals as part of their continuing education and professional development.

Proposed Funding
FY 2006/07…….$350,000

2. Border Outreach Activities

Large numbers of tires flow into Mexico each year through both legal and illegal routes. Many of these tires eventually end up being stored near border regions creating stockpiles that have the potential to cause great environmental damage both within Mexico and California border communities. This potential environmental threat became apparent when over 200,000 tires caught fire in Calexico in 2003, and because of concerns about fire spreading, California's Imperial County Fire Department was sent in to help.

The CIWMB has provided tire-related technical information exchange through participation in the US – Mexico Border 2012 Program. The Border 2012 Program is a 10-year, bi-national program designed to protect the environment and public health in a way that is consistent with the principles of sustainable development. Bilateral information exchange and networking to establish and maintain cooperative working relationships has also occurred through Mexican officials' attendance at CIWMB Tire Conferences and meetings attended by CIWMB and CalEPA officials at similar venues in Mexico. The CIWMB has developed and implemented a training program to assist Mexican waste and used tire haulers to meet legal requirements for hauling tires in California as part of the Manifest and tire Enforcement programs. CIWMB staff has also worked with other CalEPA boards to provide K-12 environmental education training within the border region. Staff proposes to continue these aforementioned activities and current level of effort for technical outreach and support utilizing existing staff resources.

In recognition of the potential serious threat to the health and safety and the environment of border communities caused by the stockpiles of tires in Mexico, enhanced technical outreach efforts by staff and through the use of contractors is appropriate. Such efforts could include a study to address and quantify to the extent possible, both legal and illegal tire flow across the border. The goal of the study would be to identify modes of egress and ultimate destinations and to recommend changes or improvements as may be necessary in current California and Mexican waste tire policy, regulations and procedures to address this problem. CIWMB would conduct this study in conjunction with the US-Mexico Border 2012 Program.

Proposed Funding
FYs 2005/06-2006/07……..$75,000

3. Civil Engineering Applications for Waste Tires

This activity will continue CIWMB's program of investigating new civil engineering uses for waste tires and will also continue education of State, local, and private sector engineers on the use of TDA in civil engineering projects. For research projects focusing on specific civil engineering uses for waste tires, project-specific contracts may be implemented. These projects could include, but are not limited to, erosion control, earthquake dampening, vibration mitigation, and sound walls. Although we have made significant progress promoting civil engineering applications, there is still much work that needs to be done to establish this use of waste tires as an accepted civil engineering material. This program will be coordinated with the Targeted Outreach for RAC & CE Project activity.

Proposed Funding
FYs 2006/07 and 2008/09…….$500,000 per fiscal year

4. Tire Derived Products Testing and Certification

The time and money required for testing and certification are often mentioned obstacles to introducing new products or receiving approval from Caltrans and others. This contract would provide testing and certification for new products consistent with specifications and requirements provided by Caltrans and other agencies and local governments. These monies may also be used to acquire appropriate testing equipment for a state agency or University of California (and applicable institutions) and provide for any technology evaluation (such as devulcanization) and tire residuals (such as steel).

Proposed Funding
FYs 2005/06-2009/10……$300,000 per fiscal year

5. Life-Cycle Assessment of Waste Tire Management Methods

This life-cycle assessment (LCA) would be conducted through an Interagency Agreement with the Department of Toxic Substances Control (DTSC). Recently, CIWMB contracted for an LCA study of biomass conversion technologies. This would be a similar LCA study of waste tire management methods. Specifically, an LCA would quantify the mass flow of materials and energy in and out, emissions and wastes of each process, and the benefits from products produced for each management method. Unit processes would include transportation, processing (shredding, grinding, etc.) end product manufacture (molded products, asphalt etc.), electricity production, waste treatment and disposal.

This study would provide the environmental and human impacts of major waste tire management methods that would be characterized and presented comparatively to landfilling. DTSC would review three major tire management methods determined by the CIWMB. Each scenario would include the impacts of transporting and processing tires into end products, with offset credits given for products produced that offset virgin manufacture or virgin resources (or secondary resources if appropriate).

DTSC will compare three major waste tire management methods used in California to landfilling by: constructing appropriate and balanced scenarios for comparison, making site visits and gathering pertinent data, assembling a life cycle inventory for each method, and developing an impact assessment. This program will be coordinated with the Targeted Outreach for RAC & CE Project activity.

Proposed Funding
FY 2005/06……$150,000

6. Generation and Diversion Data Study

This study will examine the correlations among the various methods that the CIWMB uses to determine the number of tires generated, diverted, and disposed. The results of the study will address any discrepancies found between generation and disposal numbers, BOE collection data, Department of Motor Vehicle data, and manifest data. Additionally, more accurate data collection methods will be identified to assure that traditionally 'soft' numbers (i.e. retread and used tire information) are estimated as precisely as possible. Staff will use this information to recalculate the diversion and disposal data, which is used in the CIWMB's Annual Waste Tire Generation, Markets, and Disposal Staff Report.

Proposed Funding
FY 2005/06……..$100,000

Performance Measures

To evaluate the program's success in achieving its objectives, the following measures are proposed (baseline data was collected during fiscal year 2001/02 for those that were in effect in the original five-year plan):

1. Through work on procurement and through direct work with tire manufacturers, seek to increase the amount of recycled content in new tires.
2. Increase the number of projects awarded to promote civil engineering applications of waste tires.
3. Investigate and evaluate potential methods within three years that could increase the life span of tires.
4. Increase the percentage of RAC used in highway projects in California over the next five years.
5. Assure that third-party peer review is conducted on all research activities.

Market Development and New Technology Activities for Waste and Used Tires

State of the Program

In 2003, CIWMB estimated that California had a 77.2 percent diversion rate for waste tires. The diversion rate in 1990 was only 34 percent. In 2003, of the estimated 34.1 million reusable and waste tires generated in California, an estimated 26.3 million California tires and 2 million imported waste tires (from other states) were diverted from landfill disposal, as follows:

- 1.8 million were reused.
- 2.3 million were retreaded.
- 15.4 million were used for various shredded, crumb rubber, cut or stamped applications, including RAC, playground cover and other surfacing, civil engineering, ADC, railroad crossing levelers, and other molded products.
- 1.8 million were exported.
- 7.1 million tires were combusted as fuel (1.3 million were combusted for energy production, the cement manufacturing industry consumed 5.8 million waste tires).

In the early years of the Waste Tire Management Program (fiscal years 1992/93–1994/95), CIWMB put more emphasis on business development and innovative research grants. From fiscal year 1995/96 to the present, CIWMB has emphasized grants to local governments as well as interagency agreements and contracts to promote waste tire recycling and market development.

During fiscal year 1998/99, CIWMB expended significant resources promoting the use of shredded tires in various civil engineering applications. Under two environmental service contracts, CIWMB has provided education on, and promoted the use of, tire shreds as an alternative to conventional lightweight fill materials. Information in Table 8 provides an indicator of potential market development uses in use of waste tire chips in highway engineering projects, levee reinforcement projects, and leach field projects.

The civil engineering application projects as shown in Table 8 have the potential to reuse millions of tires when replicated in other projects throughout California. The method used in the levee reinforcement project (which was completed in 1999) has the potential to reuse a large quantity of waste tires and was tested in the levee of an irrigation canal adjacent to the Feather River. Tires used in the project came from CIWMB remediation projects in Oroville. The levee will continue to be monitored under carefully controlled water flow and pressure conditions.

The purpose of the research and demonstration septic tank leach field project (interagency agreement with Caltrans) is to demonstrate the beneficial reuse of waste tires in septic tank leach field construction, instead of using aggregate as the drainage and filter medium. The field demonstration portion of this project is now complete and the CIWMB is analyzing the data to determine the viability of this application.

The CIWMB partnered with the Valley Transportation Authority (VTA) in San Jose to investigate the use of TDA as a vibration-dampening material in VTA's light-rail system in an actual field application. At their own expense, VTA used tire shreds in 2000 feet of light-rail section along its Vasona Line expansion that was constructed in the fall of 2003 and 2004. Although the initial results are favorable, Board staff is assisting VTA in monitoring the performance of this project. Using waste tire shreds as lightweight fill in highway projects is a common practice and has been the technology employed in numerous highway projects on the East Coast. The purpose of the Dixon Landing Project was to introduce the technology to Caltrans in an actual highway application and to demonstrate that the material's properties allow it to replace conventional lightweight fill material and be used at a substantially reduced cost. At the same time, the technology provides a beneficial reuse of waste tires. For this project, which was completed in August 2001, CIWMB supplied the shredded tire material. A second proposed project in Southern California is a retaining wall that utilized tire shreds as a lightweight fill material. This project was constructed in 2003 on Route 91 in Riverside County and used 84,000 tires as TDA. CIWMB, in coordination with Caltrans, is developing conceptual designs and conducting field tests to validate a new retaining wall design which will take advantage of the reduced backfill pressure by using less concrete and steel in its designs. The second phase of this retaining wall study will be constructed in early 2005. This test section will use 250,000 tires worth of TDA.

Table 8: Waste Tire Civil Engineering Projects

Year	Item	Cost	Number of Tires Used
1997	Levee reinforcement project	$660,000	45,000
1998	Research of tire shreds in septic leach fields	$169,400	20,000
2001	Lightweight fill for the Dixon Landing Interchange	$350,000	600,000
2001	Sound and Vibration Attenuation for Light Rail Transportation System	0*	100,000
2003	Lightweight fill for the Route 91 Retaining Wall	$100,000	84,000
Totals		**$1,279,400**	**849,000**

*After an initial consultation by Board staff and Consultants, Valley Transportation Authority paid the cost for the material and construction for this project.

Another potential market is molded rubber products. It is not projected to consume large numbers of waste tires; however, the potential for developing end-use products does exist and should be nurtured. Manufacturers who use waste tires to produce mats have indicated that, in general, a market growth of 15 to 20 percent may be attributed to CIWMB grants. Furthermore, other molded rubber products may be purchased as part of existing market development contracts and grant programs, such as Tire-Derived Product Grants, the Waste Tire Sustainable Building Program, and Business Assistance Programs. These programs will consider the number of waste tires used per project, costs per tire, and feasibility to determine funding opportunities.

RAC grants, contracts, and interagency agreements can fund equipment, which in the long run will lead to greater use of RAC in California. Again, funding for these purchases can be directly correlated with the number of waste tires used. Some of the funding was used to purchase equipment for research and testing of RAC pavement projects. Finally, CIWMB will work closely with not only Caltrans, but also with communities, business leaders, and local government to increase the use of RAC statewide.

Barriers to Market Development: Low Tipping Fees and End-Use Incentives

Waste tires "flow" to the lowest cost, be it for disposal, stockpiling, generating energy, or manufacturing products made from waste tires. Businesses that produce waste tire products find it difficult to compete with low tire disposal costs. Further, SB 876 stakeholders (California businesses) have expressed concern over unfair competition from businesses receiving subsidies on waste tires coming from other states or countries.

Recommendations from the AB 117 Report

The following recommendations in the AB 117 Report involve market development:

1. Technology transfer and grants to local governments for civil engineering projects (Recommendation #12).
2. Development of RAC guidelines with Caltrans (Recommendation #14).
3. Grants for molded rubber products (Recommendation #15).
4. Expansion of Scrap Tire Management Council (STMC) product catalog (Recommendation #16).
5. Procurement of tire-derived products by the State Department of General Services (DGS) (Recommendation #17).
6. Procurement of retreaded tire by DGS (Recommendation #18).
7. Public education/information program on tire care, disposal, high mileage tires (Recommendation #19).
8. A universal end-use incentive program should not be established; CIWMB should have the option of providing specific incentives to individual projects (Recommendation #21).

As indicated in the AB 117 Report, CIWMB decided to focus on market development activities, not use of subsidies. If an end-use incentive or subsidy program were developed, all segments of the market would have to be supported, making the program expensive to implement. Such incentives foster the creation of marginal businesses that compete with and threaten the viability of established businesses. Further, end-use incentive programs created in other states have not provided sustainable markets for used tires and, to the contrary, have actually damaged the existing permanent market development infrastructure.

Although not recommended by the AB 117 Report, stakeholder input at public meetings and CIWMB Board meetings resulted in the establishment of an interagency agreement for $80,000 with Robert W. Wassmer, Professor, Public Policy and Administration at California State University, Sacramento (CSUS), to develop the report *An Analysis of Subsidies and Other Options to Expand the Product End Use of Scrap Tires in California.* An August 15, 2002, workshop was held to discuss recommendations in the report. At its November 2002 meeting, the CIWMB's Special Waste Committee accepted the report by CSUS as completion of the contract obligation.

Direction Provided by SB 876

PRC section 42889:

> *"Funding for the waste tire program shall be appropriated to the board in the annual Budget Act…for the following purposes:*
>
> *(g) 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."*

CIWMB's Strategic Plan Goals and Objectives

Market development and new technology activities for waste and used tires support goals 2 and 6 of Strategic Plan (correlation of CIWMB activities to Strategic Plan in italics).

Strategic Plan, Goal 2: Assist in the creation and expansion of sustainable markets to support diversion efforts and ensure that diverted materials return to the economic mainstream.

> **Objective 2:** Encourage the use of materials diverted from California landfills and the use of environmentally preferable practices, products, and technologies.
>
> > **Strategy B:** Provide financial incentives, including grants, contracts, loans, tax credits, etc. The Waste Tire Track and Other Recreational Surfacing Grant Program is directly related in its entirety to this goal, objective, and strategy.
> >
> > **Strategy D:** Require recipients of grants, contracts, loans, and other financial incentives to meet CIWMB criteria such as purchasing environmentally preferable products, constructing sustainable buildings, and practicing sustainable landscaping.
> >
> > *CIWMB's review of grant applications includes criteria giving preference to applicants that purchase recycled-content or recycled/reused products or that engage in other waste reduction activities.*

Strategic Plan, Goal 6: Continuously integrate environmental justice concerns into all of the CIWMB's programs and activities, including administrative and budgetary decisions.

Objective 3: Ensure greater public and community participation, including low-income and minority populations, in the development, adoption, and implementation of environmental regulations, policies, and programs.

Strategy B: Seek to overcome linguistic, cultural, institutional, geographic, and other barriers to meaningful participation.

The CIWMB requires that grant application review include criteria giving preference to projects in low income and/or underserved communities.

The Plan

Objectives

1. Increase public awareness on the proper use and maintenance of tires and of reuse techniques for used or waste tires.
2. Increase the diversion of waste tires to 80 percent by 2006.
3. Increase use of waste tires in energy recovery applications.

Program Activities

Activities described in this section will focus on tire-derived products that use the largest number of tires. Therefore, significantly more resources will be devoted to Recycled Asphalt Concrete (RAC), civil engineering, and other market development activities. In addition, a focused outreach effort will promote the use of RAC and civil engineering projects to local jurisdictions. Moreover, the CIWMB will work with the University of California and community colleges to develop course curriculum to ensure that future generations of engineers will consider using RAC and civil engineering projects that will divert waste tire from landfilling.

Table 9 provides the budget for market development and new technology activities for waste and used tires.

Revised Table 9: Budget for Market Development and New Technology Activities for Waste and Used Tires

Program Area	FY 2005/06	FY 2006/07	FY 2007/08	FY 2008/09	FY 2009/10
Waste Tire Market Development Staff and Administration	$780,237	$780,237	$960,079	$960,079	$960,079
National Product Stewardship Dialog for Tires	$75,000	$75,000	$50,000	$30,000	$30,000
Social Marketing Campaign to Promote Sustainable Practices	$300,000	$300,000	$300,000	$300,000	$300,000
Targeted RAC Incentive Program	$1,400,000	$1,307,818	$2,757,817	$2,552,817	$3,042,817
Continuation of RAC Use Grant Program	$0	$1,500,000	$1,500,000	$1,500,000	$1,500,000
Civil Engineering Grants and Contracts	$500,000	$1,500,000	$2,500,000	$2,500,000	$2,500,000
Tire-Derived Product Grants	$1,792,818	$2,400,000	$2,400,000	$2,400,000	$2,400,000
Assistance for Tire Derived Product Businesses	$500,000	$750,000	$1,000,000	$1,000,000	$1,000,000
Targeted Outreach for RAC & Civil Engineering Projects	$400,000	$400,000	$400,000	$400,000	$400,000
Support of Other CIWMB Market Development Activities	$515,000	$650,000	$500,000	$500,000	$500,000
Tire Recycling Conference	$100,000	$0	$125,000	$0	$110,000
RACTC	$350,000	$350,000	$350,000	$350,000	$350,000
State Agency Partnerships to Promote the Use of Tire-Derived Products	$400,000	$1,000,000	$300,000	$300,000	$300,000
Business Assistance Program	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Subtotal	$8,113,055				
RAC Grants (Kuehl Bill)	$1,300,000	$0	$0	$0	$0
Totals	**$9,413,055**	**$12,013,055**	**$14,142,896**	**$13,792,896**	**$14,392,896**

1. Waste Tire Market Development Staff and Administration

The existing five staff positions, one supervisor, and one branch management position will continue to conduct the program, and 1 ½ additional positions will be shifted from the Remediation and Research Sections starting in fiscal year 2006/07 to manage the increased marketing activities.

Proposed Funding
FYs 2005/06-2006/07 .....$780,237 per fiscal year*
FYs 2007/08-2009/10 .....$960,079 per fiscal year*

***Estimate of staffing and administrative costs**

Source Reduction

2. National Product Stewardship Dialog for Tires

This contract will facilitate implementation of a national product stewardship dialog and a sustained collaborative effort for effective management of tires. A national dialog and collaborative effort will leverage limited stakeholder resources and provide a consistent national approach to tire management. Approaches may include: increased recycled content, rolling resistance, tire longevity, smart tire technology, and other similar items.

Proposed Funding
FYs 2005/06 and 2006/07……$75,000 per fiscal year
FY 2007/08……...$50,000
FYs 2008/09 and 2009/10…… $30,000 per fiscal year

3. Social Marketing Campaign to Promote Sustainable Practices

To follow-up on the tire care survey conducted by California State University, Chico and the Community Based Social Marketing Pilot conducted by the California State University San Marcos Foundation, this effort will develop a non-traditional media campaign, based in whole or part, on techniques developed to primarily reach the underserved minority communities statewide. Findings revealed in the San Marcos Foundation study show, that providing a prompt in the form of a windshield decal, tire pressure gauge, or both, yielded an increase in intentions to check tire pressure. Using non-traditional media based marketing concepts; the contractor will educate the public on proper tire care, use, and disposal, and promote other tire-derived products such as rubberized recreational surfacing and the use of RAC. This project will be conducted in conjunction with the Targeted Outreach for RAC and CE Projects activity.

Proposed Funding
FYs 2005/06-2009/10……..$300,000 per fiscal year

Recycling Programs

4. ***RAC Grants***

Targeted RAC Incentive Program

This program will be for 1st time users of RAC and will involve incentive grants to influence local government agencies to use RAC**.** In addition, the CIWMB will contract for a RAC technical expert to provide support to local governments and Caltrans. This program will be conducted in conjunction with the Targeted Outreach for RAC & CE Projects activity.

Proposed Funding

FY 2005/06……..……..…….$1,400,000
FY 2006/07…….…….$1,307,818
FY 2007/08…….…….$2,757,817
FY 2008/09…….…….$2,552,817
FY 2009/10…….…….$3,042,817

Continuation of RAC Use Grant Program

This program will be similar in scope to the SB 1346 grants for using RAC in local government paving projects; however, the CIWMB will have the ability to set criteria for this program to address changing market issues.

Proposed Funding

FYs 2006/07-2009/10…….$1,500,000 per fiscal year

5. Civil Engineering

These contracts and/or grants to state and local governments will be used for project engineering, materials, and other costs associated with civil engineering projects. Projects in which Tire Derived Aggregate (TDA) is used in applications such as lightweight fill, drainage layers, erosion control, or vibration dampening layers in light rail applications will be targeted.

Proposed Funding

FY 2005/06……..$500,000
FY 2006/07……..…….$1,500,000
FYs 2007/08-2009/10……$2,500,000 per fiscal year

6. Tire-Derived Products Grants

These grants replace the Playground Cover, Track and Other Recreational Surfacing programs by providing a per tire grant based on actual usage of California tires. Grants would be provided to local government entities for playground covers, tracks, recreational surfaces and other rubberized products such as, sidewalks, top hats (used in the transportation field), landscape covers, weed abatement, tree wells, mulch, etc.

This new grant program would involve a very streamlined grant process. Local government entities would submit an application that would be used to determine their eligibility to receive a grant. Eligibility would be based on whether an applicant is an official government entity that is authorized to purchase products for their particular jurisdiction.

Grant award amounts would be determined based on the number of tires diverted by the proposed project. A cap amount would be set per tire used (e.g. $10 per tire diverted). In this way, projects that would divert the most tires per dollar spent would receive the most benefit from the program.

Individual grant awards would be limited to $100,000 per applicant. All eligible applicants would be funded unless the program is over-subscribed. At that point, a lottery system would be used to determine who would receive funding from that specific eligible applicant pool. If more monies become available through the May reallocation, applicants who did not receive funding in the first round would be placed in the lottery system again for a second chance at funding.

Proposed Funding
FY 2005/06…….$1,792,818
FYs 2006/07-2009/10…….…$2,400,000

7. Assistance for Tire-Derived Businesses

An essential element in increasing demand for tire-derived products is to build the capacity of those businesses. Businesses often have experience/expertise in one or two major areas, but may lack the depth of management found in larger organizations and need additional assistance. This assistance program will use a two-phase approach to fund services through an awards process, and will be awarded on a first-come first-serve basis. The first phase will include a general business assessment conducted by a consultant chosen by the CIWMB from the Master Services Agreement list. This consultant will perform a comprehensive analysis of the business and prepare/revise the applicant's business plan. Among other things, the consultant-prepared business plan will identify specific areas for additional assistance/opportunity and an estimate of costs.

During phase two, the information gathered in phase one will be used to award grants (not to exceed $100,000) to businesses empowering them to directly contract with appropriate consultants/specialists to address areas of need/opportunity identified in the business plan. Business information collected as part of this program shall be considered a "trade secret" and protected from disclosure consistent with Public Resource Code 40062.

Assistance for eligible businesses shall include, but are not limited to:

- General Business Assistance (developing/adjusting a business plan, personnel issues, suppliers, business/capital structure, accounting systems and controls, web site, etc.)
- Technical Assistance (efficient plant design, manufacturing process improvement/optimization, inventory control systems, etc.)
- Marketing Assistance (developing/adjusting marketing plan, pricing, promotion, packaging, distribution, cooperative marketing, ad placement, trade shows, etc.)
- Product Testing and Certification (Caltrans, Underwriters Laboratory, etc.)

This program will be run in conjunction the Recycling Market Development Zone Loan Program (RMDZ Program) assistance. The RMDZ Program will provide assistance to tire businesses within Recycling Market Development Zones, while the services described in this activity will be available to tire businesses outside of these Zones.

Proposed Funding:
FY 2005/06…….$500,000
FY 2006/07.....$750,000
FY 2007/08-2009/10……...….$1,000,000

8. Targeted Outreach for RAC and Civil Engineering Projects

This is an integral component of the strategy to influence state and local government entities to increase the number of RAC and civil engineering projects within their jurisdictions specifically, and to purchase tire-derived products generally.

The CIWMB will contract with a public relations firm to do specific outreach tasks and to coordinate other related efforts designed to promote the use of RAC, TDA, and other tire-derived products. To initiate this program, the CIWMB will establish a RAC/Civil Engineering Advisory Group comprised of local government associations (e.g. League of California Cities and California State Association of Counties), industry associations, academia, technical experts, and CIWMB staff. This group would identify areas of the state that have not used RAC or TDA for civil engineering. Then, within those areas, they would identify proposed conventional projects that could be replaced with RAC/TDA civil engineering projects. At that point, a team of technical experts (including RAC Technical Centers), public relations specialists, and Board members and staff would meet with decision makers within the jurisdiction to provide information on why RAC/TDA civil engineering projects would be a longer term, more cost-effective alternative to more conventional projects. This team would also provide information on other incentive programs that would make their RAC/TDA civil engineering project even more cost-effective. CIWMB technical experts (contracted as well as in-house staff) and RAC Technical Center representatives would also provide ongoing support. This program will be conducted in conjunction with the RAC and CE technical expert consultants and Social Marketing Campaign to Promote Sustainable Practices activity.

Proposed Funding
FYs 2005/06-2009/10……..$400,000 per fiscal year

9. Support of Other CIWMB Market Development Activities

This is a combination of various activities (Sustainable Building, Recycled Product Trade Show, CalMAX and WRAP) into a single item. This will provide flexibility regarding program funding to management while demonstrating an ongoing commitment to other CIWMB activities. Funds will be allocated to the following projects:

Environmental Preferable & Recycled Product Trade Show
Annual RCP/EPP Trade Show - This annual baseline funding will continue to support the show aimed at increasing markets for recycled-content and environmentally preferable products of all kinds, including tire-derived products and materials.

Cal/Max
CalMAX is a free service designed to help businesses find markets for nonhazardous materials they may have traditionally discarded. CalMAX helps businesses, industries, and institutions save resources and money.

WRAP
The State of California's Waste Reduction Awards Program (WRAP) provides an opportunity for California businesses to gain public recognition for their outstanding efforts to reduce waste through efficient use of resources and other waste prevention practices. All businesses and private nonprofit organizations with California facilities are encouraged to apply. A question is included in the WRAP application that addresses vehicles including tires as follows:
Other Special Wastes

13. [i] Company cars and vehicle fleets can be hidden generators of solid waste and other special wastes—everything from tires and trim to fluids and filters. What consideration does your organization give to managing the vehicles in a more environmentally sound manner? Describe how your organization uses recycled-content products or extends the life of tires and oil. For example, the use of retread or high-mileage tires, re-refined oil, high-efficiency oil filters, and non-mercury switches are more environmentally sound considerations.

Sustainable Building Projects
The green building projects funded through contracts and grants will promote the use and design of building products containing (California derived) recycled rubber through the purchase of tire products (for construction projects) or the implementation/expansion of an existing green building program to include a tire aspect (funds used only for the tire aspect). The projects will be administered through CIWMB's existing Sustainable Building Program.

Green Lodging Certifications
As part of the CIWMB's Greening of Government effort to ensure that the Hotels associated with the annual Tire Conference are certified under the California Green Lodging Program.

Proposed Funding
FY 2005/06……$515,000
FY 2006/07……..$650,000
FYs 2007/08-2009/10…….$500,000 per fiscal year

10. Tire Recycling Conferences

CIWMB will continue to hold the biennial tire recycling conferences. Tire conferences provide attendees with up-to-date information on CIWMB's waste tire management processes. They provide a forum to discuss all aspects of waste tire management, including hauling, manifests, cleanup, proper disposal, recycling technologies, and research and market development activities. The conferences offer a venue for Board Members, staff, and stakeholders to meet and focus on issues of common concern.

Proposed Funding
FY 2005/06 .....$100,000
FY 2007/08 .....$125,000
FY 2009/10……$110,000

11. Rubberized Asphalt Concrete Technology Centers (RACTC)

The RACTCs are located in Los Angeles and Sacramento and provide state-wide technical assistance to local governments through direct consultation, conducting local and regional workshops, providing informational materials, and an Internet Web site.

Proposed Funding
FYs 2005/06-2009/10…….$225,000 per fiscal year for the Southern CA RACTC
FYs 2005/06-2009/10…….$125,000 per fiscal year for the Northern CA RACTC

12. State Agency Partnerships to Promote the Use of Tire-Derived Products

CIWMB will partner with other state agencies to identify cost effective tire-derived products that can replace existing products purchased. As part of this effort, these state agencies will be required to provide follow-up reports that detail how successful any replacement products perform, and also whether the product would be purchased in the future. Additionally, any rubber product purchased or manufactured would have to be made with 100 percent California waste tire rubber.

For fiscal year 2006/07, the CIWMB will enter into an agreement with the Prison Industry Authority to purchase equipment that would be used to make a specific tire-derived product for use by Caltrans and other local jurisdictions to control weeds along guardrails.

Proposed Funding
FY 2005/06……$400,000
FY 2006/07…….……..$1,000,000
FYs 2007/08 and 2009/10……..$300,000 per fiscal year

13. Business Assistance Program

Staff collected data from the Roundtable Discussion; the U.S. Scrap Tire Markets 2003 Edition (published July 2004 by the Rubber Manufacturers Association (RMA)) and various Five-Year Plan Meetings. Additionally, the Tire Product Commercialization Grant program was evaluated through surveys of previous and current grantees. From these suggestions we conclude that many more tires would be diverted if those businesses in the waste tire recycling industry "vertically integrated" their business operations and/or upgraded their current equipment to increase their waste tire processing and save on processing costs. Additionally, it is also important to support the existing and new ground rubber markets that produce value-added rubber products. Thus, an additional focus of this grant program will be to support end markets for rubber products.

Existing Businesses: Businesses that want to improve their equipment and vertically integrate their businesses would be offered this grant program. This program would refund a percentage the costs for equipment purchased to improve capacity and efficiency. Funds would be available on a "first come, first serve" basis. The maximum amount of these grants would be $250,000. This grant application process would be streamlined, and would include an application to reserve funds for a project, and a follow up request for payment.

Value-Added Rubber Products: These grants will only be available for businesses that have new and innovative ideas and haven't had a grant in the last three fiscal years. This will allow start-up businesses with new ideas to have a healthy financial incentive. A maximum of $100,000 will be available in funding. The match will be reduced to fifty percent (50%). To be eligible, grant applicants would provide a description of their project under the "Need" criterion and document that the technology is beyond the research stage and that a demonstration process has indicated the proposed project is technically and industrially feasible. The narrative would include whether there are similar products/projects already in existence, why the applicant's project is new or innovative, including why their product will prosper in the current marketplace.

Proposed Funding
FY 2005/06 – 2009/10…….$1,000,000

14. Kuehl RAC Grant Program

Chapter 671, Statutes of 2002 (Kuehl, SB 1346) directs CIWMB to offer grants to local governments for use of rubberized asphalt concrete. PRC section 42872.5 sets a subsidy of $2.50 per ton of asphalt using a minimum of 20 pounds of crumb rubber per ton of asphalt and prescribes that eligible projects range in size from 2,500 to 20,000 tons for grant awards equal to $6,250 to $50,000. (In comparison, conventional asphalt costs approximately $40 per ton, while RAC ranges from $35 to $90 per ton.)

Proposed Funding
FY 2005/06……. $1,300,000

Performance Measures

The performance measures for market development directly relate to the objectives stated under "The Plan" in this section on market development and new technology activities. Baseline data was collected during fiscal year 2001/02 for the quantitative measures that were in effect in the original Five-Year Plan, using the annual waste tire survey, grant and contract results, and end uses reported in the enhanced manifest system.

1. Increase public awareness of proper care, use, and purchase of tires, products made from recycled waste tires, retreaded tires, and proper disposal of waste tires.

2. Increase public and private sector awareness of the availability of recycled-content and longer-lived tires and implement a program to encourage their purchase and use. In regard to lower-rolling-resistance tires, work with the CEC to assure that longer-lived and recycled-content tires are simultaneously encouraged, while keeping tire safety paramount.

3. Percent of increase in level of recycling as described in the "Objectives" section, as measured from the survey and data from the enhanced manifest system.

4. Percent of increase of appropriated grant funds that are used by the end of the grant term, obtained by conducting an analysis after all grants are closed.

5. Percent of increase in use of waste tire products by public agencies and Indian tribes, including RAC, measured by analyzing annual reporting requirements and grant/contract final reports to CIWMB. Quantify the estimated use of recycled-tire products by public agencies and Indian tribes and work to achieve an annual increase of at least 5 percent.

   Achieve a 5 percent annual reduction in the number of waste tires disposed in landfills annually, based on data collected for the annual report and from the enhanced manifest system.

6. Level of satisfaction with grant or contract management based on staff surveys conducted when the grants or contracts close.

7. Improve grant administration by streamlining the grant administration process by identifying time-consuming and/or unnecessary steps.

8. Begin a program to implement SB1346. Educate potential recipients on the availability of the program and seek to distribute a minimum of 22 grants in fiscal year 2003/04 and at least 24 grants starting in fiscal year 2004/05 and beyond.

9. Review and follow up on RACTC program evaluation. Establish a more visible and publicized Web-based presence for the services of the RACTCs and related use of RAC.

10. Work with Caltrans to ensure the effective implementation of SB 1346.

11. In the next two years, CalMAX will increase the promotion of tire related resources and haulers listed in the CalMAX publication and website by conducting focused outreach. CALMAX will include listers with wanted or available tire by-products, crumb rubber or waste tires, a new Resources Section that includes tire haulers. CalMAX will feature waste tire related articles such as Creative Reuse or CalMAX Connections articles two times per year. Catalog distribution averages about 7,500 per quarter. The articles also appear on the CalMAX website, which is receiving about 33,000 hits per month.

12. Within the next two years, the WRAP program will measure the number of businesses applying for the WRAP award that are using auto and tire-related resources (ex. Company cars, vehicle fleets, etc.). Information would be collected detailing business policies in this area. Efforts would also include an increase in outreach efforts to automotive and tire-related businesses through WRAP.

13. Maintain 10 percent of the number of vendors that display waste tire products at the Recycled Product Trade Show.

14. Establish a baseline for number of tires used in each Green Building grant.

15. Each year increase by 10 percent the amount of tire-derived products purchased by public agencies.

16. CIWMB shall continue to participate in the Cal/EPA environmental indicators program to track waste tire disposal and diversion. Staff will report on the success and challenges facing the waste tire industry in the marketplace, including issues such as competition from importing tire crumb rubber and costs of energy.

17. Establish baseline for night stays by conference attendees at certified Green Lodgings and increase 50% in subsequent years.

The Waste and Used Tire Hauler Program and Manifest System

State of the Program

Beginning January 1, 2001, SB 876 legislation required every person who transports 10 or more waste tires to hold a valid tire hauler registration and use State-issued decals and manifests. Prior to obtaining registration, a prospective hauler must post a $10,000 bond. Registered tire haulers must register annually with CIWMB, possess manifests during the transport of waste or used tires, transport only to legally authorized end-use facilities, and return the completed manifest to the generator of the waste tires, if so requested. State law requires that persons receiving tires from unregistered haulers report the unregistered hauler to CIWMB by providing the name, address, phone number, and license plate number of the unregistered hauler. The hauler program consists of two separate components: (1) registration and manifesting and (2) enforcement. Enforcement efforts against haulers during fiscal year 2003/04 resulted in significant fines summarized in the enforcement section.

In a typical year, CIWMB registers more than 800 California waste and used tire haulers and more than 7,000 vehicles. Registrations expire at the end of each calendar year. CIWMB sends renewal packages to registered haulers so they can renew their registrations in a timely manner. Those haulers who do not renew by the end of the calendar year are cancelled. CIWMB distributes manifests at no charge to registered haulers upon request.

Current law allows exemptions from waste tire registration under certain conditions:

- Hauling nine or fewer tires.
- The person hauling is in a government vehicle and employed by either local, State, or federal government and is not hauling tires for hire.
- Hauling tires through the state without loading or unloading tires.
- Hauling tires for agricultural purposes (defined).
- A common carrier hauling tires on a back-haul.
- The tires are inadvertently commingled with solid waste and it is not economically feasible or safe to remove the tires.
- The individual receives a letter from the local enforcement agency (LEA) for a one-time haul to the landfills or permitted destination site.

Direction/Recommendations From the AB 117 Report

Recommendation #4 in the AB 117 Report calls for reform of the manifest system. The report recommended that the existing manifest system be continued with five modifications, as follows:

1. "Close the loop" on accountability by having copies of manifests returned to CIWMB for monitoring.

2. Account for imported scrap and used tires.

3. Provide for "one-time hauls" to support amnesty days and individual cleanup of small tire piles:

4. Increase from 5 to 10 the maximum number of waste and used tires that can be transported without having to obtain a waste tire hauler permit.

5. Develop a process to allow a hauler to temporarily substitute a replacement vehicle for a permanently registered vehicle.

Direction Provided by SB 876

SB 876 legislation mandated changes to the tire hauler program. In particular, it provides for a reform to the manifest system and the development of a new manifest form. SB 876 mandated the following:

1. "Close the loop" on accountability by requiring that copies of each manifest are returned to CIWMB for monitoring.

2. Increase from four to nine the maximum number of waste and used tires that can be transported without having to obtain a waste tire hauler permit.

3. Provide for "one-time hauls" to support amnesty days and individual cleanup of small tire piles.

4. Enhance the manifest system and make the manifest available in electronic format, which would make it possible to submit information to the CIWMB electronically.

5. Change the placement of the decal from the driver's side door to the lower right-hand corner of the windshield.

6. Increases the penalties levied for violations of the PRC pertaining to waste and used tire hauling from $5,000 to $25,000.

Under PRC section 42961.5, the manifest is referred to as the "California Uniform Waste and Used Tire Manifest" and must be originated by the generator. In the past, the manifest was distributed to registered haulers and it was their responsibility to provide a copy to the generator when the tires were picked up and after the tires reached the end-use destination (if the generator requested a copy).

With the new mandates in SB 876, the California Uniform Waste and Used Tire Manifest is currently being distributed to generators and end use facilities, in addition to haulers. One of the first tasks accomplished in this mandate, was to identify waste and used tire generators, haulers, and end use facilities; despite the fact that this number is always in a state of flux as waste tire locations are constantly opening and closing during the year. Another major change to the manifest system is that the completed manifest copies are now sent to CIWMB by the generator, hauler, and end user in order to "complete the loop".

CIWMB's Strategic Plan Goals and Objectives

Activities pertaining to waste and used tire hauling and the manifest system support Goal 4 of CIWMB's Strategic Plan (correlation of CIWMB activities to Strategic Plan in italics).

Strategic Plan, Goal 4: Manage and mitigate the impacts of solid waste on public health and safety and the environment and promote integrated and consistent permitting, inspection, and enforcement efforts.

Objective 3: Promote increased development and use of effective waste management technologies.

The new manifest system soon to be implemented will increase CIWMB's ability to track the movement, use, and disposal of used and waste tires throughout the state.

Objective 4: Intensify efforts to prevent illegal dumping and, where necessary, clean up illegally disposed waste tire sites.

Strategy A: Use the Board's authority to ensure effective enforcement against parties responsible for illegal disposal of illegal waste tire sites.

The Plan

Objectives

1. To complement and support the CIWMB's waste tire enforcement program by providing comprehensive and auditable data on waste tire transactions between tire generators, haulers and end use facilities, thereby reinforcing compliance with waste tire statute and regulation and reducing the incidence of illegal waste tire disposal.

2. To provide information on tire movements within the state and across borders to support tire diversion and market development activities.

Program Activities

The 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. A copy of the manifest form was left with each of the respective parties as proof of the tire transaction which was to be retained at the place of business for three (3) years so that it could be reviewed by Board staff or authorized representatives. However, Board staff members received no information from the respective parties on tire transactions and therefore were unable to track tire movement through the state.

In 2000, SB 876 provided statutory change that initiated the current California Uniform Waste and Used Tire Manifest System, which went into full scale operation in July 2003. Although the system does provide useful information on the movement of tires within the state including the importation and exportation of tires, and has

proven a useful enforcement tools to investigate potential violators of the waste tire statutes, the full promise of the system to enable and facilitate "cradle to grave" accountability has not been realized to date. Among the problems encountered is voluminous paperwork which has prompted complaints from the regulated community and strained limited staff's ability to compile and integrate this information in a computerized database.

Staff was requested by the CIWMB to re-evaluate the current Manifest and Trip Log forms to determine their feasibility. As a result, staff developed a revised Comprehensive Trip Log (CTL), which was approved by the CIWMB in February 2005. The CTL contains the same information as the previous Manifest and Trip Log forms; however, it condenses this information onto a single form for reporting purposes. Staff anticipates that the CTL will reduce the total volume of paperwork by up to 60% and simplify process for the haulers.

In addition, further expansion of the EDT process allowing Web-based data entry capabilities, were presented at the January 24, 2005 Manifest workshop. Comments were gathered at this workshop which suggested the regulated community endorsed the CTL and Web Based Data Entry for the regulated community. The CIWMB endorsed the proposed revisions to the manifest program at its February 2005 meeting.

Table 10: Budget for the Waste and Used Tire Hauler Program and Manifest System

Program Area	FY 2005/06	FY 2006/07	FY 2007/08	FY 2008/09	FY 2009/10
Hauler/Manifest Staff	$326,482	$326,482	$326,482	$326,482	$326,482
Hauler Program and Manifesting	$700,000	$500,000	$500,000	$500,000	$500,000
Totals	**$1,026,482**	**$826,482**	**$826,482**	**$826,482**	**$826,482**

Hauler/Manifest Staff

The Waste Tire Hauler Program is currently staffed with 2 2/3 full-time permanent positions. Of these, 1 2/3 positions are located in the Special Waste Division, and the other one is in the Administration and Finance Division to support the data management needs of the program.

Proposed Funding:
FYs 2005/2006–2009/10.....$326,482 per fiscal year

Manifest System

With the CIWMB approval of the CTL form, the overall cost factor for the manifest program will be reduced as less printing, postage, and processing time will be necessary; however, the initial outlay of expenditures will be near that of the original projected 05/06 manifest funds as training and outreach will be needed, printing of forms, and re-development for the Waste Tire Management System to accommodate

changes for the CTL. The numbers presented in Table 10 for the "Hauler Program and Manifesting" adequately reflect this revision. This line item may be lower depending on the initial development of this form.

Proposed Funding
Proposed funding for ongoing program costs are approximately $700,000 for fiscal year 2005/06 and $500,000 for fiscal years 2006/07-2009/10.

Performance Measures

To evaluate the program's success in achieving its objectives, the following measures are proposed. Initially, baseline data was to be collected during the 2004 calendar year; however, with the current manifest system being modified information should be collected in 2006; after a modified version of the manifests can be implemented:

1. Percent of identified used and waste tires generated, using CIWMB's historical data that are reported under the paper manifest system in 2006.
2. Percent of identified used and waste tires generated, using CIWMB's historical data that are reported under the paper and electronic manifest systems in 2006.
3. Amount of penalties levied for violation of the PRC pertaining to waste and used tire hauling.

CIWMB Administration

CIWMB administration refers to the accounting of central management costs such as Executive Management, Accounting, Human Resources, Grants, Business Services, small-office support, and statewide Pro Rata assessments that generally serve the whole CIWMB (i.e., indirect or overhead costs). Administration represents the distribution of indirect costs to the direct program activities of the CIWMB that includes the Tire program.

Proposed Funding
FY 2005/06-2009/10……....$1,500,000

Mandatory Contracts

Mandatory Contracts includes allocation for the following: Attorney General's Office, Board of Equalization, Department of Finance, Foundation of California Community Colleges, Governor's Office of Planning and Research, Office of Administrative Hearings, Peters Shorthand Reporting, Professional Recovery Systems, and the University of California, Davis.

Proposed Funding
FY 2005/06-2009/10…….$1,384,000

Program Evaluation

During FY 2007/08 a third party will conduct a performance review of the Waste Tire Recycling Management Program to determine whether adjustments should be made to enhance project selection and dissemination of results.

Proposed Funding
FY 2007/08…….……$250,000

Appendix A: Total Waste Tire Management Proposed Funding

Table 11: Total Waste Tire Management Proposed Funding for Fiscal Years 2005/06-2009/10

Program Areas	FY 2005/06	FY 2006/07	FY 2007/08	FY 2008/09	FY 2009/10	Totals for All Fiscal Years
Enforcement	$8,270,948	$8,270,948	$8,120,948	$8,120,948	$8,120,948	$40,904,740
Cleanup*	$9,850,292	$6,917,292	$5,728,656	$5,828,656	$5,728,656	$34,053,552
Research	$1,110,573	$1,710,573	$669,368	$1,169,368	$669,368	$5,329,250
Markets	$8,113,055	$12,013,055	$14,142,896	$13,792,896	$14,392,896	$62,454,798
Kuehl RAC Grant Program	$1,300,000	$0	$0	$0	$0	$1,187,238
Hauler and Manifest	$1,026,482	$826,482	$826,482	$826,482	$826,482	$4,332,410
Administration	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$7,500,000
Mandatory Contracts	$1,373,650	$1,373,650	$1,373,650	$1,373,650	$1,373,650	$6,868,250
Program Evaluation	$0	$0	$250,000	$0	$0	$250,000
Totals	$32,545,000	$32,612,000	$32,612,000	$32,612,000	$32,612,000	$162,880,238

*In the Farm and Ranch Solid Waste Cleanup and Abatement Grant Program, spending authority is separate from the Tire Fund's spending authority.

Appendix B: Accomplishments Based on Performance Measures from July 2003 Five-Year Plan

Note: Data collected is for fiscal year 2003/2004.

Program-Wide Performance Measures

This plan includes the following seven program-wide performance measures:

1. **In conjunction with other environmental justice efforts of the CIWMB, the tire program will evaluate its progress in informing the public of proposed actions, attempting to overcome barriers to meaningful participation in the decision-making process, and providing technical assistance to communities on potential health and environmental impacts of tire-related activities.**

   The Waste Tire Management Program has made significant progress in its Environmental Justice efforts. In particular, Program management and staff have conducted numerous workshops, open forums, and mass mailings designed specifically to inform stakeholders and the public of any proposed actions the Board may take regarding waste tire management issues. In November of 2003, the Board published a study conducted by California State University, Chico, which explored consumers' tire purchase decision processes and behaviors and determined consumers' general knowledge about tires, tire maintenance, recycling, and disposal. To better gather input from California's diverse population, this study was conducted in five languages: 1) English, 2) Spanish, 3) Vietnamese, 4) Mandarin and, 5) Tagalog. Finally, the Waste Tire Management Program oversees grant programs and other technical services (like the Rubberized Asphalt Concrete Technical Centers) that are designed to help the general public and local jurisdictions deal with and avoid the problems associated with improper waste tire management. In many instances, local governments print outreach materials in the appropriate languages for their jurisdictions.

   In addition, through the Board's local governments waste tire enforcement, cleanup and amnesty day grant programs, we are working with cities and counties to assist us in identifying illegal transport and disposal of waste tires and to cleanup illegal waste tire piles. This is accomplished through coordination, training and outreach with staff of the various local enforcement agencies (i.e., local health departments, code enforcement, fire departments, and law enforcement) and the stakeholders participating in the waste tire program (i.e., generators, haulers, and end-users).

   Finally, waste tire facility standards, hauler registration, and manifest regulations enforced pursuant to this grant program are applied equally

and uniformly to all parties throughout the State of California regardless of income, population density, race or ethnic origin. In recognition of the importance of Environmental Justice (EJ) and pursuant to Board direction, compliance with EJ principles is a grant program eligibility requirement and is a term and condition of the grant application and Grant Agreement.

2. **In concert with Cal/EPA and the U.S.-Mexico Border 2012 Program, CIWMB will develop a waste tire abatement plan with California and Mexico authorities, focusing on stockpiles posing an immediate threat of fire**.

   A workgroup was formed to coordinate with the U.S.-Mexico Border 2012 Program to help develop objectives and an implementation strategy, which respects each country's own resources and sovereignty. This ad hoc workgroup consists of members representing U.S. EPA, Cal/EPA, California's Integrated Waste Management Board, the U.S. Border Patrol, the U.S. Customs Service, PROFEPA, and the Servicio de Aduanas (Mexico's Customs Service) to remove tires that had been illegally dumped in Mexico. The workgroup strengthens bi-national cooperation between institutions in Mexico and those in the United States that are responsible for enforcing their respective environmental laws.

   Members have been working to increase efforts on solid waste issues, especially focusing on waste tires and creating a national tire recycling program in Mexico. This program would promote policies that minimize generation at the source. Further efforts would be made to persuade border region companies to apply the same environmental standards and control systems.

3. **By January 2004, CIWMB will develop a training program/tracking system focusing on cross-border waste tire hauling. The program will include CIWMB conducting tire hauler training workshops with stakeholders from California and Mexico.**

   Since the inception of the Waste Tire Manifest program, special attention has been given to the Mexican haulers. Cal/EPA representatives held two workshops in Tijuana and Mexicali, Mexico. In addition, hauler-training sessions in Spanish were conducted in San Diego and Los Angeles. The CIWMB in conjunction with the California Highway Patrol used border checkpoints to provide assistance to Mexican haulers by explaining the program requirements.

4. **By January 2005, CIWMB will develop a plan to encourage greater use by State and local agencies of recycled-content tire products and assure that this plan aligns with the work of the State Agency Buy Recycled Campaign.**

   Staff of the Waste Tire Diversion Section assisted the State Agency Buy Recycled Campaign staff in developing a plan to enhance the State Contract and Procurement Registration System (operated by the

Department of General Services), which tracks and records contract purchases. The plan is described in the agenda item, "Scope of Work and Interagency Agreement with the Department Of General Services for the Development and Integration of State Contract and Procurement Registration System and the Electronic State Agency Buy Recycled Campaign Reporting System", which was approved by the CIWMB at its February 2005 meeting. Furthermore, the Waste Tire Diversion Section developed a set of plans to encourage greater use by State and local agencies of tire-derived products. This set of plans is embedded within the upcoming biennial update of the Five-Year Plan for the Waste Tire Recycling Management Program. Specifically, the plans include the activities entitled: Social Marketing Campaign to Promote Sustainable Practices, Targeted RAC Incentive Program, Continuation of RAC Use Grant Program, Civil Engineering Grants and Contracts, Tire-Derived Product Grants, Targeted Outreach for RAC & Civil Engineering Projects, and State Agency Partnerships to Promote the Use of Tire-Derived Products. If approved by the CIWMB, these planned activities will be implemented in close cooperation with the State Agency Buy Recycled Campaign as well as other appropriate Waste Prevention and Market Development Division programs.

5. **CIWMB will conduct periodic waste tire roundtable discussions with stakeholders to review progress of the waste tire program, solicit input from stakeholders, and answer questions.**

   Roundtables were held in the summer of 2004 for the following topics:

   - Commercialization Grants
   - Product Stewardship
   - Tire Manifest
   - Five-Year Plan
   - Rubberized Asphalt Concrete Technology Centers

6. **CIWMB will include the principles of environmental justice as requirements in all tire program grants and contracts.**

   All Grantees are contractually required to perform their grants in a manner that is consistent with the principles of Environmental Justice as defined in Government Code § 65040.12.

   The terms and conditions of all the contracts include a provision that the contractor is to abide by the principles of environmental justice.

7. **CIWMB will develop and submit a biennial report on product stewardship issues for adoption by the Board.**

   CIWMB commissioned the Product Stewardship Institute (PSI) to conduct a tire product stewardship project for the State of California. The objective of the project is to engage key stakeholders involved in the manufacture,

sale, use, and disposal of tires to find solutions that would ultimately result in the reduction of tire disposal in landfills. PSI takes a life cycle approach and identifies opportunities that will include both front-end solutions (e.g., the use of tires with longer operational life) and those at a product's "end of life" (e.g., developing new or expanding existing end-use applications).

PSI facilitated a Tire Product Stewardship Dialogue Meeting in Sacramento on July 28, 2004 to bring key stakeholders together to take a product stewardship approach to jointly solve management problems related to tires. The meeting included stakeholders from federal and state government, tire manufacturers, tire distributors and retailers, recyclers, waste management companies, and others as appropriate. PSI emphasized the benefits of reaching a voluntary consensus as an incentive for key groups to participate in this meeting.

PSI has developed the Tire Stewardship Draft Plan based on over 20 interviews with key stakeholders, as well as background research. The Draft Plan outlined the context for the dialogue meeting, a draft problem statement, proposed dialogue goals, and key issues and potential strategies that were discussed at the meeting. A final report will be submitted to CIWMB in early 2005.

Enforcement

To evaluate the program's success in achieving its objectives, the following measures are proposed (baseline data was collected during fiscal year 2001/02 for those performance measures that were in effect in the original Five-Year Plan):

1. **Increase the number of inspections conducted by program staff and local agency staff by 30 percent over the next three years.**

   Fiscal year 2003/2004 will be the base year for this performance measure. CIWMB staff conducted 124 inspections of permitted and unpermitted waste tire facilities and sites, which resulted in the issuance of 21 letters of violation, 15 cleanup and abatement orders, 8 administrative complaints, and 1 criminal complaint referral.

   During this same period, 24 local jurisdictions conducted 6,611 inspections (5704 initial inspections and 907 re-inspections) that resulted in the issuance of 438 letters of violations and 14 referrals to the Board. Additionally Grantee inspections resulted in 266 illegal sites being remediate or cleaned up and totaling the cleanup of over 99,000 tires.

2. **Increase the proportion of successful legal actions (those resulting in fines or penalties awarded).**

   Legal action is almost entirely dependent upon potential cases being referred by inspection staff. Legislation passed in 2001 (SB 649) gave the Board the right to attach a lien for recovery costs, thereby ensuring that any legal action taken will be "successful." Therefore, this is not a relevant performance measure.

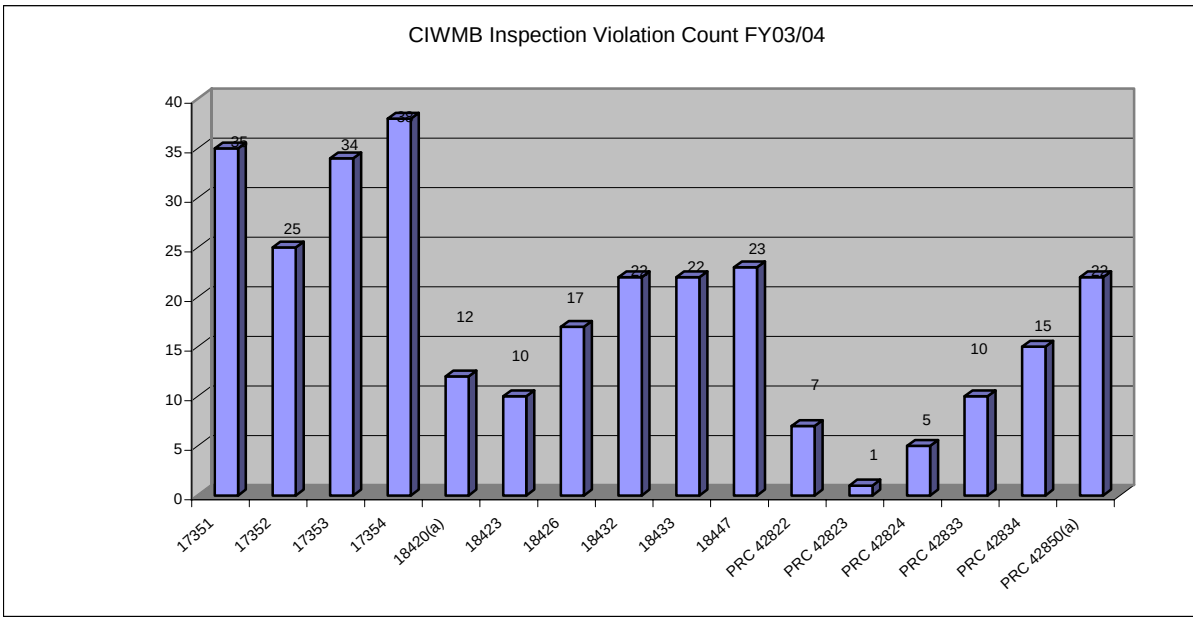
Formal delivery of pleadings for legal action is what enables CIWMB to start the legal process. A performance standard, therefore, could call for increasing effectiveness in remediating sites and placing liens on properties where the responsible party is unable to be located and/or served.

The Legal Office has implemented a system whereby CIWMB takes a number of concrete steps to expeditiously establish its "due diligence" in attempting to locate responsible parties. The CIWMB is now in a strong position to obtain a judicial order permitting the service of legal action upon a responsible party that cannot be located to be effected "by publication" (for example, in newspapers). Once the party fails to respond, CIWMB can obtain access to the property for remediation, and thereafter lien the property for the cost of the remediation.

This new system is expected to increase the number of sites CIWMB is able to expeditiously process from the initial inspection stage through remediation, regardless of the difficulties encountered in serving the responsible party.

3. **Track the number of documented violations to determine whether they are increasing or decreasing over time.**

In fiscal year 2003/04, CIWMB staff documented 298 violations of waste tire statutes and regulations. These are broken down as shown in Figure C.



4. **Track and report annually the number of illegal sites that are closed or become permitted.**

During fiscal year 2003/04, Grantee inspections and LOVs resulted in 266 illegal sites being remediated or cleaned up and totaling the cleanup of over 99,000 tires. Additionally, 15 illegal sites were brought into

compliance by Board staff; 13 sites after the issuance of letters of violations; one (1) site after the issuance of cleanup and abatement orders and one (1) site after the issuance of administrative complaints.

5. **Track number of newly discovered illegal sites to determine if occurrence is decreasing (through CHP surveillance or local enforcement) on an annual basis.**

   In fiscal year 2002/03, the number of sites discovered slightly decreased to 20 sites and in fiscal year 2003/04 they decreased to 18 sites.

6. **Increase the number of applications submitted in local government enforcement grant programs.**

   The grant program continued to grow this year. In FY 2002/03, the Board awarded grants to 24 local jurisdictions. In FY 2003/04, 39 local jurisdictions applied for a Local Government Enforcement Grant, of which 36 were awarded grants in the spring of 2004. The grants will reimburse the locals for costs accrued during fiscal year 2004/05.

7. **Before the next biennial update of the Five-Year Plan, conduct a performance review of enforcement efforts to determine whether adjustments should be made to enhance project selection and dissemination of results.**

   Board staff continues an internal review of enforcement efforts as directed by the Board in June 2004. During that meeting, the Board also asked staff to explore the idea of a third party evaluation of the enforcement program as a whole. The Board focused on the evaluation of the grant program since it was such a large portion of the enforcement budget. Elements of the program that the Board wanted reviewed included 1) that money and the coverage throughout the state be equitable and fair; 2) number of inspections / enforcement actions taken by Grantees; 3) the outcome of the enforcement actions; 4) data on vehicle purchases and consistency with state policy; 5) our measurement of the effectiveness of these grants; and 6) the cost effectiveness of the grants.

   Review of the Program:
   The goals of the program summarized below:
   - Providing a sufficient, stable, and non-competitive source of funding to these entities based on the available resources, pursuant to SB 876.
   - Maintaining a cost effective and efficient program.
   - Providing consistent inspection coverage throughout the State.
   - Providing an ongoing program evaluation to assure its effectiveness.
   - Maintaining a high level of Grantee performance.
   - Continuing a streamlined application, grant annual renewal, and reporting process for Grantees.

   Staffs review of the program revealed the following:

- **Consistent Inspection Coverage & Cost Effective**: Multiple cities and/or agencies within one county could apply for a grant without covering the entire county. Currently, if an LEA applied for a grant to cover the entire county where multiple cities and/or agencies already have a grant, it could create an overlap in coverage. Additionally, it is expensive and staff intensive to manage several smaller grants and such an approach results in spotty service.

- **Cost effective and efficient program**: Currently, the grant does not set a cap on hourly rates, overall inspection, or surveillance costs. The grant also allows two inspections per site per year, even if there are no compliance problems.

- **Data on Vehicle Purchasing**: Currently, the grant instructions specify that all equipment, including office equipment, field equipment, and vehicle and mileage expenses cannot exceed 20% of the requested grant amount. Vehicle expenses, including mileage and other related expenses are capped at $25,000 per grant cycle. These requirements could allow a Grantee to purchase a vehicle one year and leave the program the next year and keep the vehicle for use in other programs other than the Waste Tire Program.

In addition, Board members have raised concerns and questions regarding: number of vehicles purchased under the grant, whether Grantees have continued in the program after purchasing a vehicle, and whether the purchase of the vehicles was consistent with the Department of General Services' (DGS) directives for street vehicle purchases.

To date, ten (10) vehicles have been purchased by nine (9) Grantees who are still currently active in the program. The vehicles are dedicated to the Tire Enforcement Program.

In response to concerns raised as to whether vehicles were purchased in a consistent manner with DGS directives, staff conducted a survey of Grantees. Since it was not a requirement of the grant, Grantees had difficulty providing information as to whether they met all the DGS requirements. Only one out of nine Grantees was able to state that they met all the State vehicle purchasing requirements of DGS. Few were able to comment on specific aspects of DGS requirements, such as California emission requirements. However, two out of five Grantees that purchased SUV or truck and/or 4WD vehicles did justify their need for such vehicles, consistent with DGS requirements. Of

the ten (10) vehicles purchased, two are alternative fuel vehicles, four (4) are sedans, five (5) are SUV or truck and/or 4WD vehicles.

- **Consistent Inspection Coverage & Cost Effective**: Currently, if the program becomes over-subscribed, existing Grantees receive priority resulting in the possibility that new Grantees could receive no funding. This is contrary to the goal of increasing inspection coverage throughout the State until all parts of the State are being serviced equally. In order to accomplish these two goals with the current funding, work will need to be prioritized in each jurisdiction as more Grantees come into the program and need resources.

- **Grant Effectiveness & Enforcement Data**: A preliminary review of FY 2002/2003 (TEA8) Grant Cycle (Grant Term June 30, 2003 to June 30, 2004) final reports revealed the following:
    - 5,704 Inspections conducted
    - 907 Re-inspections conducted
      (To assure compliance with previously found violations)
    - 438 Letters of Violation (LOV) issued
    - 276 Letters of Violation mitigated
    - 14 Enforcement Referrals
      (Made to the CIWMB, 4 of which have been mitigated, and 10 of which Cleanup and Abatement Orders have been or will be issued)
    - 266 Illegal Sites Remediated
      (As a result of inspections, surveillance, and initial enforcement activities)
    - 99,000+ Tires Cleaned Up
      (As a result of inspections, surveillance, and initial enforcement activities)

  The following table shows the CIWMB's historical inspection and enforcement activity during the grant terms from FY 1996/1997 to 2001/2002. Grantees inspected approximately 2000 waste tire sites from 1997 through 2001.

Agency	CIWMB					
FY	**1996/1997**	**1997/1998**	**1998/1999**	**1999/2000**	**2000/2001**	**2001/2002**
# Inspections	52	97	180	435	336	245
# LOVs	0	0	0	0	0	0
# CAOs	40	53	99	56	66	22
# ACs	11	34	46	26	19	10

Note: Cleanup and Abatement Orders (CAO) Administrative Complaints (AC)

The following table shows CIWMB and Grantee inspection and enforcement data for grant terms from FY 2002/2003 and FY 2003/2004.

Agency	CIWMB	Grantee	CIWMB	Grantee
Grant Term/FY	**2002/2003**		**2003/2004**	
# Inspections	188	1475	124	6611
# LOVs	50	162	21	438
# CAOs	21	N/A	15	N/A
# ACs	9	N/A	8	N/A
Sites Remediated or Clean Closed	12	Unknown	15	266

In grant term FY 2002/2003, 1,475 Grantee inspections were conducted and 162 LOVs were issued by Grantees. In grant term FY 2003/2004, 6,611 Grantee inspections were conducted and 438 LOVs were issued by Grantees. Therefore, the number of Grantee inspections increased more than fourfold and the LOVs that were issued more than doubled in one year.

In FY 2003/2004 grant term, 266 illegal sites were remediated or clean closed by the Grantee's inspection and enforcement efforts alone. In addition, data from FY 2003/2004 indicates an increasing number of sites are being inspected by Grantees and more compliance issues are being resolved by grantees at the LOV enforcement stage, which is more time and cost effective than higher levels of CIWMB enforcement such as Cleanup and Abatement Orders (CAO), Administrative Complaints and Hearings. A successful enforcement program is one where compliance is maintained and/or achieved quickly by industry. Grantees have the ability, both because of their staffing levels and their close proximity, to follow up on compliance issues in a prompt manner.

- **Measurement of the Effectiveness of Grants and Grantee Performance**: Currently, satisfactory performance is determined by reviewing quarterly and final reports to determine if the Grantee is meeting the terms and conditions of the grant. Staff considers the following:
    - Submittal of on-time and complete progress and final reports.
    - Completion of a reasonable number of inspections of sites and a significant amount of other tasks identified in the grant application.
    - Inspection forms completed with necessary information.
    - Use of a majority of their approved grant funds.
    - Complaints and referrals followed up on within required or reasonable timeframes.
    - Work cooperatively with CIWMB staff in submitting requested program information.
    - Make applicable enforcement referrals to the CIWMB in a timely manner.
    - Participation in joint training inspections with state field staff.
    - Through joint field inspections, CIWMB field staff's assessment of Grantee's ability to assure that waste tire statutes and regulations are being applied consistently to businesses in their jurisdictions.

  Staff considered Grantee's payment requests from the previous year to determine whether their subsequent grant proposal and funding request is reasonable. For large discrepancies in the Grantee's use of previously approved funds, staff may request that the Grantee provide further justification of their proposed budget for next year to ensure it is accurate and reasonable. Staff recognizes that a new Grantee's proposed budget will usually become more accurate in subsequent years of being in the program.

  If a grantee is not meeting the above criteria, staff will work with the Grantee, and if necessary, determine costs to be ineligible, or recommend to the Board that they not be considered for next year's funding. During the grant award of TEA9, staff did recommend and the Board agreed to deny funding for a Grantee that had failed to perform any inspections in the first three quarters of their previous grant term.

  <u>Changes to the Program as a result of the Review</u>
  As a result of the review the Board made the below changes to the Grant program:

- **Consistent Inspection Coverage & Cost Effective program**: The Board limited applicant eligibility criteria to: 1) California city and county LEAs; and/or 2) Environmental Health and Code Enforcement Agencies with a

minimum of 50 sites, including generators, end users, haulers and permitted facilities, to be eligible to apply for this grant and with experience in the enforcement of laws and regulations and the protection of public health and safety and the environment may apply for a grant.

- **Cost effective and efficient program**: The Board supported a cap on the hourly rate at $125/hour, four hours per inspection or a maximum of $500 per inspection. After a maximum of one routine inspection and two re-inspections to resolve a compliance issue, Grantees are required to refer any sites still found in violation to the CIWMB for further enforcement action, unless otherwise approved by the Grant Manager.

- **Cost effective and efficient program**: The Board supported implementing a cap for enforcement and surveillance costs at fifty percent (50%) of their inspection cost. Additionally, Grantees will be asked to prioritize their workload based on the following priorities: unpermitted illegal tire piles; violations that pose an immediate risk to public health and safety and environmental threats will be given higher priority; sites found in violation; and complaints and referrals from the public and the CIWMB.

- **Data on Vehicle Purchasing & Cost effective Program**: The Board directed staff to add language in the Grant Procedures and Requirements (P&Rs) for grant applicants that wish to use funds to purchase vehicles. The Grantees will be required to consider the guidelines included in the State Department of General Services (DGS) Management Memorandum related to Vehicle Purchase and Lease Policy (MM 04-20), issued July 6, 2004 covering alternative fuels, gasoline and hybrid-electric vehicles, SUV's, four wheel drive vehicles and low emission vehicles. In addition, language will be added to the P&Rs regarding a new requirement for Grantees that purchase or lease-to-own vehicles with grant funds to execute required documents to give the CIWMB a security interest in the vehicle for up to 5 years.

- **Consistent Inspection Coverage & Cost Effective**: If the grant program is over-subscribed, CIWMB staff will consider a county's population, total number of priority sites, and any known threats to public health and safety or the environment to modify grant requests as necessary to bring the total recommended awards within the grant funds allocated (six million dollars).

Cleanup

To evaluate the program's success in achieving its objectives, the following measures are proposed (baseline data was collected during fiscal year 2001/02 for those that were in effect in the original five-year plan):

1. **Complete the long-term waste tire remediation projects within five years.**

   The contract for the Tracy tire fire remediation was awarded in January 2003 and removal began in November 2003. To date the CIWMB's contractor has excavated and removed 130,000 tons of California Hazardous Waste at a cost of $8 million. The second of the three cleanup phases will be completed by December 2004. It is anticipated that the final remediation will be completed by December 2005 at a total cost of $16.5 million.

2. **Complete the short-term remediation projects referred by the CIWMB's Waste Tire Enforcement Program and report status of projects to the Board on an annual basis.**

   In FY 03/04, The Board approved 8 sites in Sonoma County and entered into agreements with the landowners to satisfy the environmental compliance issues in order to remediation these sites. The Board will begin remediation of the first of these sites in June, 2005.

3. **Increase the number of waste tire cleanup grants issued to local governments on an annual basis.**

   In Fiscal year 2002/03, the Board awarded 10 grants for a total of $606.642. For fiscal year 2003/04, the Board awarded 14 grants for a total of $712,286.

4. **Increase the number of waste tire amnesty grants issued to local governments on an annual basis.**

   For FY 2003/04, 29 grants were awarded totaling $924,674. The grant required no matching funds. The awarded amount exceeds the allocated amount by $524,674, due to additional funding made available through the Board approved annual reallocation process. Staff will recommend that the FY 2004/2005 cycle, applicants must provide at least a 25 % matching fund to better ensure requested fund are more in line with available funding.

5. **Increase the percentage of tires remediated through the farm and ranch cleanup grants issued to local governments on an annual basis.**

   During FY 2003/04, 2,994 tires were collected compared to 1,112 tires collected in the pervious fiscal year, which is a 169% increase.

6. **With the cooperation of OSFM, develop a tire fire response protocol and update and amend the Uniform Fire Code.**

In January 2002, the Board entered into an interagency agreement with OSFM to update the tire fire-training program. As of August 2004, tire fire-training program has been updated and training by the OSFM has commenced throughout the state. The OSFM continues to work towards promulgating changes to the California Fire Code pertaining to waste tire storage for enforcement consistency with the Public Resources Code and the California Code of Regulations.

7. **Track the CIWMB's tire site remediation efforts to determine the percentage of sites remediated in low-income or minority neighborhoods.**

   Reconsideration of this performance measure is indicated. Tire staff experience is that with some exception (e.g., Sonoma waste tire cleanup sites), a large percentage of cleanups occur in low income or low property value areas (e.g., rural desert) or on impacted public areas or rights of ways in and around urban areas with significant minority populations. Although no statistics have been compiled to date, staff has firm conviction that environmental justice considerations which are ostensibly addressed with this performance measure are being met. Staff feels that waste tire remediation efforts are properly based upon the potential threat to public health or safety and the proximity to sensitive receptors (schools, residences) or environmentally sensitive areas. To this end, the other enforcement related performance measures listed herein more properly and appropriately provide for evaluation and tracking of program effectiveness.

Research

To evaluate the program's success in achieving its objectives, the following measures are proposed (baseline data was collected during fiscal year 2001/02 for those that were in effect in the original five-year plan):

1. **Through work on procurement and through direct work with tire manufacturers, seek to increase the amount of recycled content in new tires.**

   The CIWMB awarded a contract for $228,770 to Nevada Automotive Testing Center (NATC). NATC presented their findings at the May 11, 2004 Board Meeting. The publication *Increasing the Recycled Content in New Tires* has been finalized and is available to our stakeholders and the general public. The report concluded that to increase crumb rubber use in new-tire production would require technological advances and strong market incentives, which don't currently exist. Future efforts will include addressing technological feasibilities and market incentives through a nation product stewardship dialogue that will begin in mid 2005.

2. **Determine the viability of pyrolysis-type conversion processes.**

   In May 2003, the Board awarded a contract to the University of California at Riverside to determine the viability of pyrolysis-type conversion processes by identifying technology changes and how the current

economic environment for tires affects this technology. As part of this investigation, the contractor will update the report prepared by CalRecovery Inc., which was funded by the Board in July 1995, *Environmental Factors of Waste Tire Pyrolysis, Gasification, and Liquefaction*. However, since there are no commercially operating pyrolysis systems in the United States, the proposed technology evaluation and economic analysis report will help to establish a baseline for evaluating future proposals received by staff. The final report for this study will be available by May 2005.

3. **Determine the viability of energy recovery from waste tires and establish optimum operational parameters.**

   Recent legislative changes have precluded the Board from funding energy recovery from the combustion of tires. AB 1756 (Committee on Budget, Chapter 228, Statutes of 2003) stated in part "The plan may not propose financial or other support that promotes, or provides for research for the incineration of Tires."

4. **Determine the viability of devulcanization.**

   The study, "*Evaluation of Waste Tire Devulcanization Technologies*" was completed in 2004. This report concluded that under current and likely near-term future conditions, devulcanization faces an uphill struggle to be competitive with virgin rubber. In terms of the potential of producing high-quality devulcanized rubbers, the best technology appears to be ultrasonic devulcanization, based on the current state of the art.

5. **Increase the number of projects awarded to promote civil engineering applications of waste tires.**

   As part of the Board's effort to develop and promote Civil Engineering Applications for waste tires, the Board has provided technical oversight and the shredded tires material for two Caltrans project. The first project to use tire shreds in a civil engineering application was located on Hwy 880 and the Dixon Landing interchange. That project used 660,000 waste tires and saved the State of California approximately $240,000 dollars over using conventional lightweight fill material. The second project the Board has supplied technical assistance on and supplied the tire shred material for is on Route 91 in Riverside County. This pilot project was done to demonstrate how using tire shreds as lightweight fill behind a retaining wall can reduce the pressure on the wall therefore saving money, this is because tire shreds will exert about half the pressure on a wall as conventionally placed soil would. By reducing the pressure on the wall Caltrans would be able to reduce the size of the wall required to hold back the embalmment, therefore using less steel and concrete. This project used 80,000 tires. It is estimated that these projects have the potential to use 1 million tires for every mile of wall constructed.

   In another civil engineering application, the CIWMB partnered with the Valley Transportation Authority (VTA) in San Jose to investigate the use of tire shreds as a vibration-dampening material in VTA's light-rail

system. The results of the investigation were very favorable and VTA used tire shreds in a section of its light-rail section that was constructed in the fall of 2002. The Board is continuing to explore this technology with other local governments that use light rail systems (i.e., Sacramento Regional Transit and San Francisco Muni).

To date, the Board has focused the majority of their efforts to promote the Board's RAC and Civil engineering programs working with Caltrans. While there has been some success from their efforts, the Board is proposing to more aggressively promote these programs with local governments. This will be accomplished with focused out reach efforts that might include: a marketing campaign, technical assistance, pilot projects, and award of grants to first time users.

6. Investigate and evaluate potential methods within three years that could increase the life span of tires.

In October 2001, Senate Bill 1170 authorized the California Energy Commission (Commission) to investigate opportunities for increasing the usage of low rolling resistance (LRR) tires in the State. It has been common knowledge in the auto industry that Original Equipment (OE) tires have significantly lower rolling resistance and better fuel economy than the average replacement tires. In February 2004 the Board approved a two-year contract with the Commission for this task. The objective of the interagency agreement was to provide for the testing of replacement tires to determine any relationships between tire rolling resistance and other tire characteristics, and to make recommendations regarding environmentally sound tire purchasing decisions.

New opportunities with University of California at Davis to investigate and evaluate additional methods of increasing the life span of tire now exist within the UC Davis Institute of Transportation Studies. Those opportunities include,

- Identify potential opportunities for the use of waste tires in new products and other rubberized products.
- Investigate the use of tire rubber in noise absorbing structures.
- Develop an undergraduate/graduate program for asphalt mixtures containing recycled tire rubber and civil engineering.
- Engage with the UC Davis Mechanical Engineering and Business School to offer technical advice and support to Board grantees.

7. Investigate and identify potential methods to recycle and reuse byproducts created from the processing of crumb rubber.

The Board awarded a contract for $99,567 to CalRecovery Inc. The contractor presented findings to the Board in August 2003 and at the 5th Annual Waste Tire Conference in September of 2003. The publication on

Assessing the Markets for Fiber and Steel By-Products of Waste Tires has been finalized and is available to our stakeholders and the general public. This contract has been completed. Future efforts may include grants to further markets of fiber and steel.

8. **Increase the percentage of RAC used in highway projects in California over the next five years.**

   In June 2003, the Board entered into an interagency agreement with Caltrans to evaluate the performance of various RAC application processes. This performance information will assist in promoting the use of RAC in future projects. The final report for this study is due in May 2005.

   In addition, the board has begun the implementation of the SB1346 grant program in which grant are awarded to local governments for the actual use of RAC in their road projects. The Board awarded 70 grants for this program for FY 2003/04.

9. **Assure that third-party peer review is conducted on all research activities.**

   Third-party peer review has been incorporated into the scopes of work of all research contracts. In addition, Cal/EPA has an Interagency Master Agreement (IMA 98-004) with the University of California to conduct third-party peer reviews. All Boards and Departments within Cal/EPA are eligible to use this agreement at no cost.

10. **Before the next biennial update of the Five-Year Plan, conduct a performance review of research efforts to determine whether adjustments should be made to enhance project selection and dissemination of results.**

    The CIWMB has researched various areas and aspects related to tires and used tire management. This research has enabled the CIWMB to answer many questions and focus its future efforts. The CIWMB believes that, with a few exceptions noted below, sufficient research has been completed at this time on tires and used tires management. Efforts should now be focused on assisting the private sector in developing self-sustaining markets for waste tires.

    Sufficient research and testing has been completed to validate the use of rubberized asphalt concrete (RAC) on streets and highways. The only areas that may benefit from additional research are the recyclability of RAC and specialty uses (i.e. street repairs).

    Sufficient research has been done on pyrolysis, gasification and liquefaction. Any additional issues or questions should be resolved within the context of the Board's conversion technology effort.

Sufficient research and testing has been completed to demonstrate the effectiveness of using tire shreds as lightweight fill and sound wall material. However, the CIWMB should continue to provide engineering and construction support (including incentives) for civil engineering applications. Additional research may be necessary to determine any potential long-term effects on the environment of tire shreds as lightweight fill. Research and testing may be needed to determine the effectiveness of civil engineering applications such as vibration dampening material in light-rail applications and seismic dampening in bridge abutments.

Market Development

The performance measures for market development directly relate to the objectives stated under "The Plan" in this section on market development and new technology activities. Baseline data was collected during fiscal year 2001/02 for the quantitative measures that were in effect in the original Five-Year Plan, using the annual waste tire survey, grant and contract results, and end uses reported in the enhanced manifest system.

1. **Percent of increase in public awareness of proper care and purchase of tires, use of products made from recycled waste tires or purchase of retreaded tires, and proper disposal of waste tires. These educational attributes will be measured by contracting with an organization to conduct a survey of California residents every few years and comparing the results with baseline data obtained from the survey conducted during fiscal year 2001/02.**

   Increase public awareness of proper care, use, and purchase of tires, products made from recycled waste tires, and retreaded tires and increase awareness of proper disposal of waste tires. Establish a baseline for public knowledge of these areas. Update and continue implementation of a marketing plan to reach the public on these issues.

   Chico State University accomplished the literature review; tire survey, and marketing research contract. Produced a report "Consumers' Tire Buying Habits and Their Knowledge of Tire Maintenance, Recycling, and Disposal", CIWMB Publication #622-03-004 and presented the report to the Board in May 2003.

   In addition, the program has contributed funding towards the State's Flex Your Power campaign. Flex Your Power is California's statewide energy efficiency marketing and outreach campaign. Initiated in 2001, Flex Your Power is a partnership of California's utilities, residents, businesses, institutions, government agencies and nonprofit organizations working to save energy. The campaign includes retail promotions, a comprehensive website, an electronic newsletter, educational materials and advertising. Flex Your Power has received national and international recognition, including an ENERGY STAR Award for excellence. The Keep California

Rolling segment of the campaign educates the public on keeping their tires inflated to the recommended pressure.

2. **Increase public and private sector awareness of the availability of recycled-content and longer-lived tires and implement a program to encourage their purchase and use. In regard to lower-rolling-resistance tires, work with the CEC to assure that longer-lived and recycled-content tires are simultaneously encouraged, while keeping tire safety paramount.**

   At its May 2003 meeting, the Board reallocated funding remaining from the FY 2002/2003 allocation and directed staff to join with the Board's Used Oil program by means of a contract that focused on social marketing. As a result, staff developed a media campaign, to educate the public on proper tire care to encourage a longer-lived tire. In addition, at its September 2003 the Board contracted with the California Department of Transportation (CalTrans) to purchase molded rubber landscape mats as part of CalTrans' Integrated Vegetation Management program for roadsides. This will enable CalTrans to develop and approve specifications for landscape mats, demonstrate its efficiency for weed control, and evaluate the aesthetics of the mats on a typical project scale. If successful, the project could provide significant opportunities for recycling of California waste tires and purchases of rubber molded products. Further, in February 2004 the Board entered into a contract with the California Energy Commission to study the characteristics of rolling resistance in tires.

3. **Percent of increase in level of recycling as described in the "Objectives" section, as measured from the survey and data from the enhanced manifest system.**

   In 2002, the diversion rate was calculated at 74.6% and in 2003 was 77.2%, which is an increase of 2.6%.

4. **Percent of increase of appropriated grant funds that are used by the end of the grant term, obtained by conducting an analysis after all grants are closed.**

Table 1: Local Government Amnesty Day Grants

Fiscal Year	Total Funds Allocated	Total Funds Awarded	Total Funds Spent	Percent of Grant Funds Spent
2001/02	$500,000	$330,817	$287,157	86.8%
2002/03	$500,000	$321,247	To Be Determined	To Be Determined
2003/04	$400,000	$400,000	To Be Determined	To Be Determined
2003/04	Reallocation Item	$524,675	To Be Determined	To Be Determined

Table 2: Playground Cover Grants

Fiscal Year	Total Funds Allocated	Total Funds Awarded	Total Funds Spent	Percent of Grant Funds Spent
2001/02	$800,000	$565,648	$470,304.75	83.1%

2002/03	$800,000	$752,791	To Be Determined	To Be Determined
2003/04	$800,000	$791,843	To Be Determined	To Be Determined
2003/04	Reallocation Item	$124,020	To Be Determined	To Be Determined

Table 3: Track and Other Recreational Surfacing Grants

Fiscal Year	Total Funds Allocated	Total Funds Awarded	Total Funds Spent	Percent of Grant Funds Spent
2001/02	$1,000,000	$954,879.66	$752,050.50	78.7%
2001/02	Reallocation Item	$894,409	$688,948.45	77%
2002/03	$1,000,000	$1,000,000	To Be Determined	To Be Determined
2002/03	Reallocation Item	$948,545	To Be Determined	To Be Determined
2003/04	$800,000	$800,000	To Be Determined	To Be Determined
2003/04	Reallocation Item	$700,125	To Be Determined	To Be Determined

Table 4: Product Commercialization Grants

Fiscal Year	Total Funds Allocated	Total Funds Awarded	Total Funds Spent	Percent of Grant Funds Spent
2001/02	$2,000,0000	$1,929,389	$1,524,143.41	79%
2001/02	Reallocation Item	$250,000	$250,000	100%
2002/03	$2,000,000	$1,964,799	To Be Determined	To Be Determined
2002/03	Reallocation Item	$1,250,000	To Be Determined	To Be Determined
2003/04	$1,600,000	$1,482,780	To Be Determined	To Be Determined
2003/04	Reallocation Item	$1,000,000	To Be Determined	To Be Determined

5. **Percent of increase in use of waste tire products by public agencies and Indian tribes, including RAC, measured by analyzing annual reporting requirements and grant/contract final reports to CIWMB. Quantify the estimated use of recycled-tire products by public agencies and Indian tribes and work to achieve an annual increase of at least 5 percent.**

   Achieve a 5 percent annual reduction in the number of waste tires disposed in landfills annually, based on data collected for the annual report and from the enhanced manifest system.

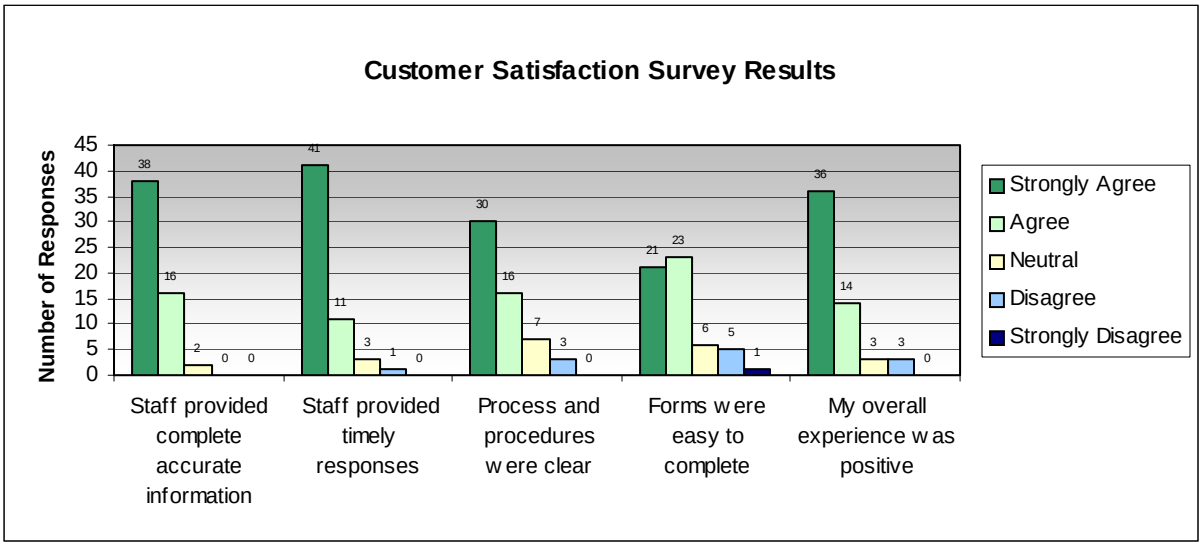
   Waste Tire Recycling Management Program reported for its grants that in fiscal year 03/04, $1,833,010 was spent on tire-derived products; compared to only $312,333 that was reported during FY 2002/03, which is approximately a 487% increase.

   The Waste Tire Management Program reported no data for its contracts during fiscal year 03/04.

Caltrans reported 766,196 tires were used for RAC in 2003 compared to 500,000 in 2002, which is a 53% increase.

6. **Level of satisfaction with grant or contract management based on staff surveys conducted when the grants or contracts close.**

   On June 1, 2004, a Customer Satisfaction Survey (CIWMB 187) was sent out to 139 closed grants and contracts ending fiscal year 2003/2004. As of August 10, 2004 we have received 63 surveys. Customers were asked to share their opinion about complete and accurate service, timely responses, process and procedure clearness, form easiness, and overall experience. Below is a chart that reflects their responses.



7. **Improve grant administration by streamlining the grant administration process by identifying time-consuming and/or unnecessary steps.**

   During fiscal year 2003/04, staff participated in the newly created Grants Policy and Documentation Team (GPAD), which focused on documenting the Board's current grant policies, and identifying and implementing streamlining possibilities. Program Staff and/or the Grants Administration Unit have implemented all streamlining opportunities that could be adopted without Board or Executive staff involvement. Opportunities where Executive Staff's approval was required have been presented to the Grants Executive Office Committee (GEOC), a committee created by the Executive Office, consisting of executive level staff from every division within the Board. All approved streamlining opportunities were implemented such as combining grant programs, conducting multi-year grant awards, and simplified grant applications.

8. **Begin a program to implement SB 1346. Educate potential recipients on the availability of the program and seek to distribute a minimum**

of 22 grants in fiscal year 2003/04 and at least 24 grants starting in fiscal year 2004/05 and beyond.

In FY 2003/04, the Board awarded 70 grants totaling $1,189,480. The NOFA for the FY 2004/05 cycle was distributed by the end of September 2004.

9. **Review and follow up on RACTC program evaluation. Establish a more visible and publicized Web-based presence for the services of the RACTCs and related use of RAC.**

   Board staff conducted a roundtable discussion with stakeholders of the Board's RAC program with the intent to use ideas generated at the roundtable in shaping the RAC program services offered in the future. In the process of developing the future RAC program a determination was made regarding the role, if any, that the RACTC's will play in assisting the Board's delivery of RAC services.

10. **Work with Caltrans to ensure the effective implementation of SB 1346.**

    This does not appear to be necessary at this time since the grant program was over-subscribed.

11. **In the next two years, increase the advertisement of tire products listed in the CalMax publication by conducting additional outreach.**

    CalMAX is a free service designed to help businesses find markets for nonhazardous materials they have traditionally discarded. CalMAX helps businesses, industries, and institutions save resources and money. Since items are placed into the CalMAX database activity is conducted on-line with businesses interacting with other businesses; therefore, it is impossible to track the number of tire related material that is exchanged.

    Examples of recent ads:

    USED TIRES (Wanted)
    We continue to buy used tires from fleets that have been told they have to pay to have them removed. We are licensed & bonded in CA as a Waste Tire Hauler & a Waste Tire Facility, permits #'s 11 & 36-TI-098). Call for an appointment.
    Carl Atkinson - Southern California, - 909-350-8200 hubcap-kid@wheels-etc.com County: San Bernardino Listing ID: 19456-2

    SCRAP ROAD TIRES (Wanted)
    Very large scrap tires, no fees, no tipping. 5 foot diameter with an 24 inch tread width or bigger. Ranch Rubber Resources.
    Tracy Kelley - King City, CA - 831-385-5383
    County: Monterey Listing ID: 26606-1

CRUMB RUBBER (Available)
30 minus crumb rubber used for injection molding, golf courses, putting greens. Call for pricing and delivery dates.
Cameron Wright - Gilroy, CA - 408-842-2401 sales@groundrubber.com
County: Santa Clara Listing ID: 26261-2

RUBBER CRUMB RUBBER (Available)
Crumb rubber available for use in concrete, asphalt, new rubber compounds, polymeric paints, elastomeric coatings.
Robert Konopke - Los Angeles, CA - 602-670-2556 sales@egomain.com
County: San Diego Listing ID: 27528-1

12. **In the next two years, increase by 10 percent the number of successful applicants receiving WRAP awards from waste tire companies**.

The Waste Reduction Awards Program (WRAP) is a voluntary program to demonstrate what successes they have made in reducing, reusing, recycling, as well as buying recycled. Examples of recent recipients:

2003
Nissan Motor Corporation, USA, is the sales, marketing, and distribution affiliate for Nissan automobiles and products in the United States. In addition to recycling paper, cardboard, plastics, aluminum, toner cartridges, and auto parts for over seven years, Nissan recently began a program to eliminate used tires from being landfilled. The tires are taken to a recycler who grinds the tires into fine particles, which are added to construction materials to build roads.

2002
U.S. Rubber Recycling, Inc. makes unique and useful flooring from recycled crumb rubber. Nearly 900 tons of automotive tires were diverted in 2001 from the area landfills.
Mitsubishi Cement Corporation manufactures Portland cement for the construction industry in southern California and Nevada. In 1999 Mitsubishi Cement Corp. recycled 16,451 tons of waste tires and 18,456 tons of treated biosolids. The waste tires provided an energy supplement and both wastes provided significant nitrous oxide emissions reductions.

Ecology Tire, Inc. is a small company specializing in recycling of used car and truck tires. Each year, Ecology Tire diverts over 6,462,000 pounds of waste tires from southern California landfills by collecting and shipping the tires, tubes, and liners to specialized recyclers. These companies turn the unwanted tires and tubes into such diverse products as bowling ball cores, playground mats, and indoor/outdoor carpet tiles, or reuse them as retreads or slow moving equipment tires.

13. Increase by 10 percent each year the number and variety of vendors that display waste tire products at the Recycled Product Trade Show.

The Board's annual Environmental and Recycled Product Trade Show is a unique opportunity for product suppliers, government staff, and private sector buyers to meet and discuss recycled-content products (RCP) and other environmentally preferable products (EPP).

During the April 10-11, 2003 show at the Sacramento Convention Center 17 (13 Companies and entities, 4 CIWMB) out of 101 booths exhibited tire related material.

During the March 10-11, 2004 show at Sacramento Convention Center 16 (12 Companies and entities, 4 CIWMB) out of 112 booths exhibited tire related material.

14. During the next five years, increase the use of waste tire products in green buildings that are purchased and installed without CIWMB funding.

Since June 2003, the Sustainable Building Program has dispersed $300,000 in the form of 2 Contracts. Both contracts are for the purchase, installation and measurement of tire products. It is impossible to quantify the impacts that our grants and contracts have on the building community. We are only able to track the projects that we are either directly involved with, or those that we fund.

Since this is a fairly new market, we are definitely encountering some challenges. Some of those challenges we can work through with time, while others require more research. One challenge that we are finding is that there are not many building products made from tire-derived materials, and even fewer made from California waste tires, currently a Board requirement for receiving tire funding. One option to mitigate this challenge is for the Board to be more flexible in the California waste tire requirement until the market expands to meet the needs of California builders.

Another challenge is the concern over the indoor air quality when incorporating tire-derived materials into the interior building space. This issue is a big concern to those involved in the building industry, and most recently discussed again in the Building Material Emissions Study (BMES), funded by the Board. To address these concerns, and the recommendations in the BMES, we have entered into a new contract with the Office of Environmental Health Hazards Assessment (OEHHA) to look into acceptable Indoor Reference Exposure Levels (IRELs) and how they relate to incorporating tire-derived materials indoors.

15. **During the next three years, increase the amount of successful waste tire businesses that receive RMDZ loans.**

    The Recycling Market Development Zone program combines recycling with economic development to fuel new businesses, expand existing ones, create jobs, and divert waste from landfills.

    During FY 2002/03, $2,000,000 was allocated for the RMDZ loans. Two waste tire businesses applied for loans and two were awarded totaling $1,745,000.

    During FY 2003/04, $1,500,000 was allocated for RMDZ loans. Three waste tire businesses applied for loans and two were awarded totaling $1,500,000.

16. **Each year increase by 10 percent the amount of tire-derived products purchased by public agencies.**

    The State Agency Buy Recycled Campaign (SABRC) is a joint effort between the California Integrated Waste Management Board (CIWMB) and the Department of General Services (DGS) to implement State law requiring State agencies and the Legislature to purchase products with recycled content. It complements the efforts of the Integrated Waste Management Act (AB 939, Sher, Chapter 1095, Statutes of 1989), which was enacted to reduce the amount of waste going to California's landfills.

    Fiscal Year 2003/04 is the baseline year. During this period, public agencies reported that of the $2,292,840.40 spent on tire-derived products Public agencies also reported spending $636,085.42 on tires 15" or smaller of which $24,429.37 (0.9%) was spent on retreaded tires, and $2,906,716.97 on tires larger than 15" of which $616,102.78 (15.4%) was spent on retreaded tires.

17. **CIWMB shall continue to participate in the Cal/EPA environmental indicators program to track waste tire disposal and diversion. Staff will report on the success and challenges facing the waste tire industry in the marketplace, including issues such as competition from importing tire crumb rubber and costs of energy.**

    Staff continues to participate in the Cal/EPA Environmental Indicators Program (EPIC). During FY 2003/04 staff provided information to EPIC regarding the tire cleanup projects.

Hauler and Manifest System

To evaluate the program's success in achieving its objectives, the following measures are proposed (baseline data will be collected during calendar year 2004):

1. **Percent of generators identified and contacted by program staff by March through June 2003.**

In May and June 2003, CIWMB staff contacted 13,866 known waste tire generators, haulers, and end-use facilities. Staff mailed out contact letters, guidance manuals, and manifest and/or log forms to these participants. In addition, a second mailing was conducted in May 2004 for Tire Program Identification Number (TPID) certificates to more than 16,000 participants. It is anticipated that through attrition, some businesses may close but others will open, keeping this number somewhat fluid. Through inspections and manifest collection, closed locations or duplicative TPID numbers will be removed from this list.

Originally, 12,000 business locations were known to the CIWMB for waste tire handling. With the current number exceeding 16,000 locations; this is a 33% increase over the projected contacts.

2. **Percent of identified and contacted generators trained on registration and manifest requirements by December 2003.**

By December 2003, more than 13,866, or approximately 115.5 percent of the waste tire generators, waste tire haulers, and waste tire end-use facilities initially identified, were sent Waste Tire Manifest Guidance manuals, Tire Program Identification Numbers and manifest and/or trip log forms in an effort to notify and train all parties concerning the new manifest system.

In addition to the manuals and training materials being sent out to the participants, staff held one to two training sessions (some sessions in both English and Spanish) at eight locations throughout the state during May and June 2003 in an effort to reach out to as many potential users of this manifest system as possible. Approximately 436 individuals, or 3 percent, of the known participants attended these training sessions.

In addition, starting in January 2003, the Waste Tire Hauler Program established a quarterly newsletter to waste tire haulers in an effort to educate the hauler population, which is the pivotal point of the manifest system, so that they can educate their customer base.

Changes to the California Uniform Waste and Used Tire Manifest System are currently being made in order to simplify the reporting requirements for all parties and to implement an electronic web based report for haulers who are able to meet the criteria for Electronic Data Transfer (EDT). It is anticipated that in the summer of 2005, these changes will be implemented and extensive training will be initiated, once again.

3. **Percent of identified used and waste tires generated, using CIWMB's historical data that are reported under the paper manifest system in 2004.**

Since the inception of the new manifest program in July 2003, more than 27,337,505 PTEs (Passenger Tire Equivalency) have been generated according to the paper manifest documentation. A 2004 baseline of

27,481,364 PTEs is established by the projection of 13,740,682 PTEs generated between January and June 2004, then multiplying that number by 2.

4. **Percent of identified used and waste tires generated, using CIWMB's historical data that are reported under the paper and electronic manifest systems in 2005.**

   Since the inception of the new manifest program in July 2003, EDT was pushed ahead of the projected time frame, as two large haulers were ready and able to implement this system. From the beginning of the program in July 2003, more than 12,731,557 PTEs have been generated according to the EDT documentation. A 2004 baseline of 6,759,244 PTEs, reported by EDT, is established by the projection of 3,379,622 PTEs generated between January and June 2004, then multiplying that number by 2.

   In total, 2004 baseline results for both paper and EDT documentation are as follows:

Tires Generated	Paper Manifest	EDT reported	**Total Reported**
2004 (baseline)	27,481,364	6,759,244	34,240,608

5. **Amount of penalties levied for violation of the PRC pertaining to waste and used tire hauling**.

   Penalties levied against two haulers in FY 03/04 totaled $2,000. In addition, CIWMB recently issued two Administrative Complaints against haulers for penalties. Judgment for penalties will not be obtained until FY 04/05.

Table 1: Fiscal Year 2003/2004 Funding Allocated and Amounts Spent

NOTES: Some amounts are projections. Items in italics were not listed in the Five-Year Plan.

	Allocated	Remaining*	Re-Allocated**	Total Spent
Enforcement				
LEA Grants	$ 6,000,000	1,287,450		$ 4,712,550
Totals	**$ 6,000,000**	**1,287,450**		**$ 4,712,550**
				$ -
CA District Attorney Assoc.			*$ 100,000*	***$ 100,000***
				$ -
Remediation				
Long Term Remediation	$ 4,000,000		*$ 1,865,154*	$ 5,865,154
Short Term Remediation	$ 1,200,000	1,200,000		**$ -**
Cleanup Grants	$ 800,000	87,713		$ 712,287
Amnesty Grants	$ 400,000		*$ 524,675*	**$ 924,675**
Emergency Reserve	$ 1,000,000	1,000,000		$ -
Farm & Ranch Grants	$ 333,000			**$ 333,000**
Totals	**$ 7,733,000**	**2,287,713**		**$ 5,445,287**
				$ -
LRF, Inc. Contract			$ 250,000	$ 250,000
Research				
Pyrolysis	$ 300,000	300,000		**$ -**
Energy Recovery	$ 300,000	300,000		$ -
Civil Engineering Uses	$ 500,000			$ 500,000
Increasing Tire Lifespan	$ 200,000			**$ 200,000**
Fire Responder Health Effects	$ 200,000	200,000		$ -
Third Party Peer Review	$ 75,000	75,000		**$ -**
Caltrans Support	$ 1,100,000			$ 1,100,000
Totals	**$ 2,675,000**	**875,000**		**$ 1,800,000**
Markets				
Tire Recycling Conference	$ 100,000			**$ 100,000**
Social Marketing Campaign	$ 250,000			**$ 250,000**
Playground Cover Grants	$ 800,000	8,157	*$ 124,020*	**$ 915,863**
Track Grants	$ 800,000		*$ 700,125*	$ 1,500,125
Commercialization Grants	$ 1,600,000	117,220	*$ 1,000,000*	**$ 2,482,780**
Green Buildings	$ 300,000			$ 300,000
RACTC	$ 500,000	500,000		**$ -**
RMDZ Loan	$ 1,500,000			**$ 1,500,000**
State Agency Purchasing	$ 300,000			$ 300,000
Buy Recycled Conference	$ 80,000			**$ 80,000**
CalMAX & WRAP	$ 40,000			$ 40,000
Tires Database	$ 100,000			$ 100,000
Buy Recycled Cert Audits	$ 50,000			**$ 50,000**
Product Stewardship	$ 100,000	100,000		**$ -**

RAC Grants	$	1,100,000		*$*	*89,480*	$	1,189,480
Totals	**$**	**7,620,000**	**725,377**			**$**	**6,894,623**
Eval of Playground & Track				*$*	*120,000*	*$*	*120,000*
Kid Ease Child Care Center Inc.				*$*	*32,000*	*$*	*32,000*
DGS State Fleet Management				*$*	*250,000*	*$*	*250,000*
OEHHA - Sustainable Buildings				*$*	*400,000*	*$*	*400,000*
Manifest							
CHP Contract	$	400,000	400,000			**$**	**-**
Manifest Contract	$	1,110,000				$	1,110,000
Totals	**$**	**1,510,000**	**400,000**			**$**	**1,110,000**
Student Contract				$	120,000	**$**	**120,000**
Grand Totals	**$**	**25,538,000**	**5,575,540**	**$**	**5,575,454**	**$**	**25,537,914**

Managed by other Divisions

*$86 of this amount cannot be spent for C&P Services

**Reallocation of Fiscal Year 2003/2004 Funding: In May 2004, the Board approved the reallocation of $5,575,454 of fiscal year 2003/2004 funding that remained unencumbered. The Board reallocated funding to 13 projects. Of these, eight had been listed in the original Five-Year Plan and received additional funding, and five were new projects not listed in the Five-Year Plan.