

*“Progress Through
Partnership”*

1994 Annual Report
of the California
Integrated Waste
Management Board

V i s i o n

The California Integrated Waste Management

Board is committed to the vision of a

California that protects the public health and

natural environment by minimizing waste

generation and disposal and facilitating the

development of industries that use recyclable

materials. The vision will be realized by

establishing sustainable markets for recyclable

materials, reducing reliance on land disposal,

and effectively educating the public.

State of California

Pete Wilson

Governor

James M. Strock

Secretary for Environmental
Protection

California Environmental
Protection Agency

California Integrated
Waste Management Board

Jesse R. Huff*
Chair
Board Member

Wesley Chesbro
Vice Chair
Board Member

Sam A. Egigian
Board Member

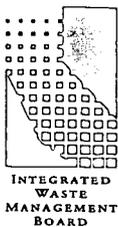
Janet Gotch
Board Member

Edward G. Heidig*
Board Member

Kathy Neal*
Board Member

Paul Relis
Board Member

Ralph E. Chandler
Executive Director



March 31, 1995

To the Senate and the Assembly of the California Legislature:

On behalf of the California Integrated Waste Management Board, I am very pleased to submit our Annual Report on the progress achieved last year. The theme of this report is *progress through partnership*.

During 1994, California attained unprecedented rates of waste diversion. The Board projects that we will be successful in accomplishing our first major statutory diversion milestone in 1995: the reduction of waste going to landfills by 25%. California is on track toward meeting our next goal of a 50% diversion of waste by the year 2000.

This achievement is significant, but there are other accomplishments in 1994 presented in this report that have contributed to the reduction of 12 million tons of garbage annually, including:

- outstanding efforts by local governments to achieve 25% reduction in waste;
- creation of nearly 700 new jobs as a direct result of recycling efforts undertaken since 1989;
- reduced state and local regulatory burden on business and stream lined permitting practices;
- waste prevention education programs designed to avoid creation of waste at its source; and
- innovative programs that link recyclable material feedstocks with remanufacturing businesses, promote purchase of recycled content products, and other market development efforts that make recycling good business.

The Governor and the Legislature placed great expectations for creative approaches to solving our solid waste management problem when they adopted the Integrated Waste Management Act. By building partnerships that involve the public, local government, and industry, we have clearly demonstrated the Board's commitment to *progress through partnership*.

Sincerely,


Wesley Chesbro
Vice Chair

1994 Annual Report

Executive Summary	i
I. Introduction and Overview	1
The Legacy of Waste	1
The California Response: A New Waste Management Philosophy	2
Report Organization	2
Legislative Mandates	2
IWMB Organizational Overview	3
II. IWMB Programs	7
A. Public Perceptions and Practices	8
Waste Prevention Education Partnership	8
Waste Reduction Award Program	9
Teacher Training and School Programs	10
Recycling Information Hotline	12
Southern California Outreach Services	13
B. Waste Prevention	13
Waste Prevention Information Exchange	13
Grasscycling	14
Business Kits	15
California Materials Exchange — CALMAX SM	15
C. Markets for Recyclable Materials	15
Recycling Market Development Zone Program	16
Compost Market Development Project	19
Agriculture Committee on Compost Quality Standards	21
Public Agency Buy Recycled Program	21
D. Waste Stream Diversion	22
Tire Recycling Program	22

Used Oil Program	25
Household Hazardous Waste Program	28
E. Partnerships with Local Government and Industry	30
Communication	32
Technical Assistance	33
Model Programs	34
Regulation Development in Dialogue with the Regulated Community	35
F. Regulation and Solid Waste Facility Management	37
Solid Waste Disposal and Codisposal Cleanup Program	38
Local Enforcement Agency Certification and Performance Evaluations	40
Waste Tire Management	41
Solid Waste Facility Management Research	42
III. Local Government Highlights	45
IV. Future Efforts	57
A. Recycling Market Development and Waste Reduction	58
California Recycling Business Assistance Team	58
Private Sector Buy Recycled Program	59
Waste Prevention Business Training Assistance	59
B. Regulatory Reform	60
The Solid Waste Disposal Regulatory Reform Act of 1993	60
Regulatory Tiers	60
Waste Characterization Methodology Development	61
C. Protecting Public Health and Safety and the Environment	61
Composting Regulations, Enforcement, Inspection	61
Regulation of Asbestos-Containing Waste at Solid Waste Facilities and Disposal Sites	61
Disaster Response Plan	62
Appendix A: Mandated Reports Highlights and Activities	A-1
Appendix B: Publications List	B-1
Appendix C: 1993-1994 Legislative Session Final Status of Priority Bills	C-1

Mission of the California Integrated Waste Management Board

The mission of the Integrated Waste Management Board is to protect public health and safety and the environment through waste prevention, waste diversion, and safe waste processing and disposal. The Integrated Waste Management Board accomplishes this mission by:

- developing effective relationships with local governments and private industry to develop and implement integrated waste management programs;
- educating the public about the value of resource conservation and the economic and environmental costs of waste disposal;
- facilitating the development of markets for recyclable materials and the treatment of solid waste as a resource;
- conducting focused research in support of the waste management hierarchy;
- facilitating the development of facilities required to divert waste from disposal and provide disposal capacity for materials that cannot feasibly be diverted;
- and aggressively seeking means to protect public health and safety and the environment.

EXECUTIVE SUMMARY

If one theme could define the year 1994 for the Integrated Waste Management Board (IWMB), it would be *progress through partnership*. The progress is historic: 1994 brought the first evidence that California will succeed in diverting 25% of waste from our state's landfills in 1995 (See figure ES.1.) The partnership fueling this success is the resilient alliance of the IWMB, local government, private industry, and an involved public. Reaching 25 percent diversion will mark the achievement of California's first major waste reduction mandate and signals the challenge as we move toward achievement of the next waste reduction mandate: 50 percent by the year 2000.

Our success in waste diversion has brought additional benefits for California. First, with 25 percent less trash going to landfills—roughly 12 million tons of garbage annually—less landfill space is required to manage the state's solid waste. It would take a landfill four times the size of the state's largest to accommodate the amount of trash California has now reduced.

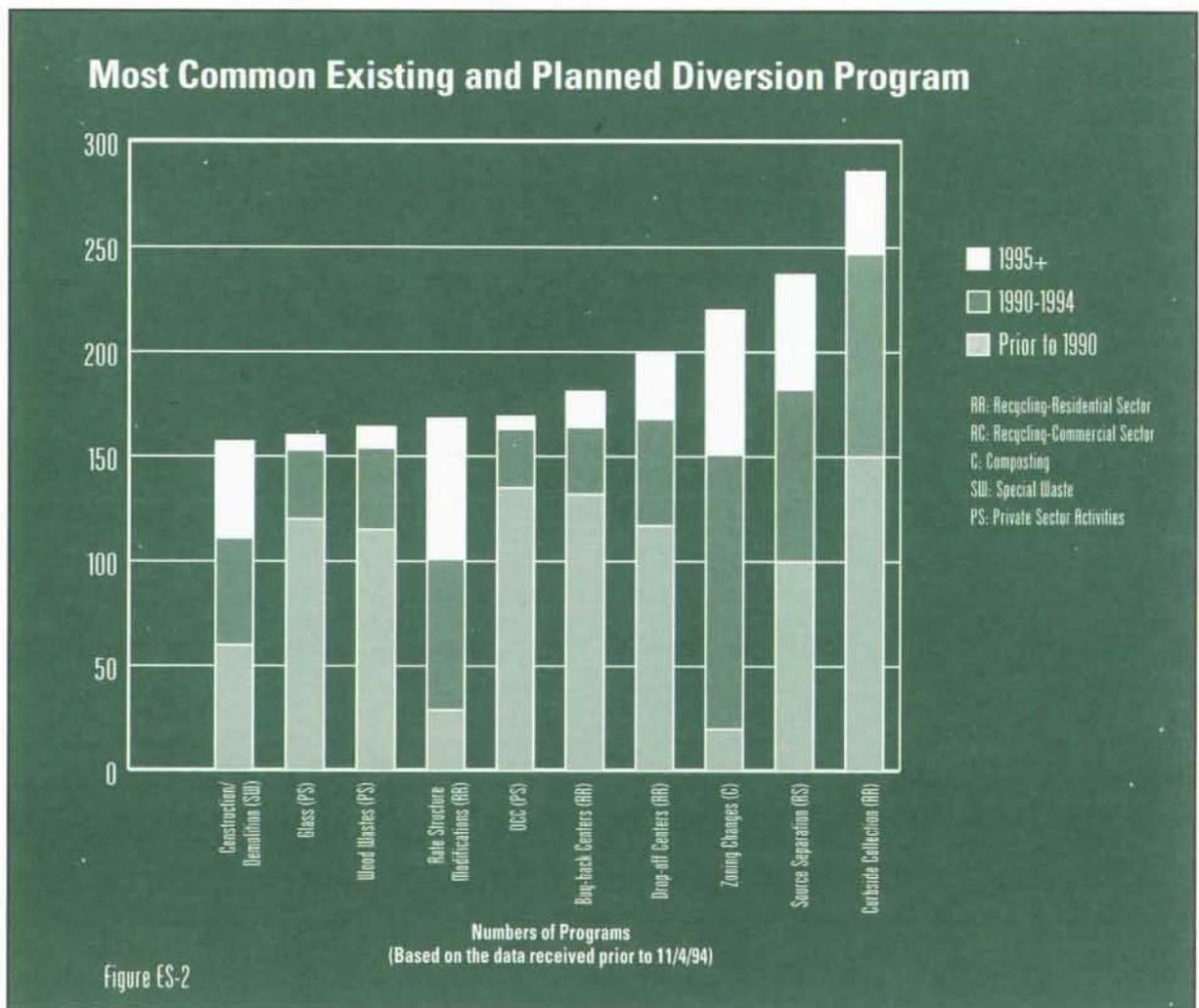


Figure ES-1

EXECUTIVE SUMMARY

Second, because the IWMB's market development approach is making recycling good business, a 25 percent reduction in waste is spurring the creation of new jobs in California, particularly in the manufacturing and environmental technology sectors.

These benefits come from partnership as well. The investment, commitment, and hard work of local government and industry to create a new infrastructure for solid waste management have been central to our success.



EXECUTIVE SUMMARY

A New Course for California. When the Governor and the Legislature enacted the Integrated Waste Management (IWM) Act in 1989, they anticipated creative new approaches to managing the state's solid waste. In 1994, the IWMB undertook a number of programs and initiatives to fulfill this expectation. We worked in cooperation with local government and industry on critical areas such as reducing the regulatory burden on these constituencies, and strengthening efforts to develop sustainable markets for recyclable materials.

A 25 by 95: LOCAL EFFORTS LEAD THE WAY

Attaining the 25 percent diversion rate in 1995 will result from a concerted effort of the private sector and local and state government officials. The work of this team has been marked by aggressive implementation of diversion programs and recycling market development efforts. Without the full cooperation of local jurisdictions and businesses, this goal would be an elusive one. Residential curbside collection and commercial source separation of recyclables, zoning changes for composting, and residential drop-off and buyback centers are the most common local programs in effect or on the drawing board. (See figure ES.2.) Hundreds of communities have responded to the IWM Act with these kinds of programs, and the results are dramatic.

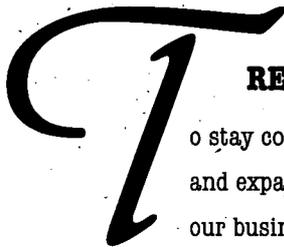
The City of Redding, for example, began in 1989 with three programs for diversion of waste. Now, through cooperative efforts such as commercial waste audits, they began 1995 with a total of seven programs, and most importantly, expected achievement of the 25 percent mandate.

Ventura County is also on track to reach the 25 percent mandate this year after diverting only 11 percent of their waste in 1989. Their success is fueled by local economic partnerships that have paved the way for greater use of recycled feedstocks by businesses. One such partnership has spurred cooperation between the agriculture industry and the county with the result of new markets for compost products.

EXECUTIVE SUMMARY

The City of Sunnyvale is another community that has responded to the call to reduce waste. Since 1989, their waste diversion has doubled, going from about 18 percent in 1989 to nearly 40 percent today. Their efforts to invest in new waste management technologies and expand their education programs for the public are just a part of their formula for success.

It is this kind of local government leadership that is making waste reduction a reality, and carving the way for important solid waste reforms. Indeed, they are proof that we are in the midst of a waste management revolution.



REGULATORY REFORM: RELIEVING THE BURDEN

To stay competitive in a national market where states continually vie for new and expanding business, California must enact regulatory reforms to improve our business climate. In 1994, the IWMB built upon its ongoing effort to streamline the permit process, eliminate costly duplication, and solidify its customer service approach to environmental regulation.

We had set two goals for regulatory reform: (1) provide a predictable, efficient, and reliable regulatory structure; and (2) do so by working directly with local government, industry and the environmental community early in the regulatory process. We sought this approach in order to provide for maximum input and expertise for the safe, environmentally sound and effective operation of all solid waste facilities in California. In 1994, we took the initiative in a number of areas to achieve regulatory relief.

Tiered Permitting. Prior to 1994, all solid waste facilities in California were required to have a full solid waste facilities permit—regardless of size or potential risk posed by the operation. This permitting process had endured years of criticism by both large and small businesses in the waste industry. We streamlined the permitting process by establishing a new, flexible regulatory structure

E X E C U T I V E S U M M A R Y

that makes the level of permit more commensurate with the type of operation conducted by the facility. Our effort was in response to the recognition that "one-size-fits-all" doesn't work when it comes to solid waste facilities in California. This framework was created with extensive input and suggestions from both the regulated and environmental communities.

Composting Regulations. The IWMB ushered in the new tiered approach by creating its composting regulations. Targeted specifically at facilities for composting, these new regulations took a segment of the solid waste industry that previously had only one permit option—a full solid waste facility permit—and eased this burden by creating new options such as simple notification or registration as alternatives to the full permit. Again, participation and guidance from industry and environmental organizations made this new streamlined approach possible.

New Ways to Measure Disposal. More efficient solid waste planning was another 1994 accomplishment. Responding to a recent law passed by the Legislature and signed by Governor Wilson, we developed a new solid waste disposal reporting method that gives local jurisdictions better tools to calculate the amount of waste disposal. This method has resulted in less paperwork and more consistent application of waste disposal accounting on a statewide basis as communities make their annual waste reduction measurements.

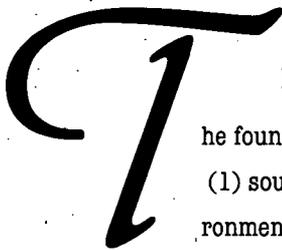
Continued Environmental Protection. While we have been successful in achieving a sensible regulatory framework, we have also maintained our commitment to ensuring the highest degree of environmental protection. For example, the IWMB adopted a new process in 1994 for evaluating Local Enforcement Agencies that serve as the state's front-line landfill inspectors. This new policy provides top level accountability while guaranteeing that we don't sacrifice enforcement for the benefit of reform.

EXECUTIVE SUMMARY

Further, meeting the new and unprecedented federal Subtitle D standards for safe and efficient operation of landfills continues to be a foremost role for the IWMB. Our 1994 activities provided further safeguards to ensure that these new landfill standards are met.

And finally, thanks to a new protection program authorized by the Legislature and approved by Governor Wilson, we are able to provide funds on an annual basis for the cleanup of abandoned dump sites. Under this "Orphan Site" Program, the IWMB to date has approved 16 sites for cleanup with a \$5.5 million investment.

A new pollution prevention program for waste tires was also implemented. Of the 11 million tires disposed annually in California, over half will be disposed illegally. The Tire Hauler Registration Program took the first steps in 1994 to significantly reduce this number by establishing a system to track the flow of tires for disposal.



ENLISTING MARKETS IN THE WAR ON WASTE

The foundation of the IWM Act is a new waste management hierarchy of (1) source reduction (waste prevention), (2) reuse and recycling, and (3) environmentally safe landfilling and transformation. The first two levels of the hierarchy were critical to reaching the 25 percent waste reduction mandate.

Waste Prevention: Good for Business, Good for the Environment

To further waste prevention in 1994, the IWMB intensified its comprehensive public education program, targeting everyone from local governments to school kids in order to encourage an ethic of waste prevention in California. These education efforts have received considerable recognition for their creativity and innovation, and are featured in detail later in the report.

We also undertook creative new approaches in 1994 to assist businesses in waste reduction efforts. The Peer Match program was initiated to team companies using established waste reduction programs with those just starting out,

EXECUTIVE SUMMARY

to demonstrate how to improve the environment and still improve their profit line. And to recruit families and individuals on our team, we expanded efforts to help Californians establish backyard composting programs and other residential means to reduce waste.

Making the Market Our Ally

To foster reuse and recycling of solid waste resources, the IWMB has placed a premium on aggressive market development efforts. These efforts have taken shape through a variety of programs.

RMDZs Expand. The flagship component of the IWMB's campaign to stimulate markets is its Recycling Market Development Zone (RMDZ) program. This program represents another cooperative partnership with business and local government. We offer low-interest loans and other incentives to businesses that establish recycled product manufacturing operations in zones administered by local governments and located throughout the state. During 1994, we quickly responded to the high level of interest of local governments in the RMDZs by reviewing applications for 45 loans, and closing 12 loans worth almost \$4 million.

As a result of these loans, a total of \$8 million in private and state matching funds were invested in recycled-product manufacturing, diverting almost 400,000 tons annually from landfills, and creating or saving over 200 jobs in 1994. This flurry of activity brings the total number of RMDZs in the state to 29, representing jurisdictions where more than 15 million people reside, and making a home for almost 700 recycling-related jobs since the program began. Before the close of 1994, we also allocated supplemental funding to the RMDZ program of almost \$700,000, and began investigating the feasibility of issuing bonds and selling program loans on the secondary market that will enable us to leverage program loan funds beyond the \$5 million annual allocation.

The "R-Team" Means Business. Thanks to a \$500,000 grant award from the U.S. Environmental Protection Agency and the federal 1994 Jobs Through Recycling Initiative, the IWMB established the California Recycling Business Assistance Team in 1994. Known as the "R-Team", it will develop an 18-month self-sustaining

EXECUTIVE SUMMARY

resource network to deliver assistance to businesses involved in recycling. By this mechanism, we will expand service to a larger number of recycling-based businesses throughout California.

Private Buy Recycled Program. Considering that approximately 80 percent of all goods and services are consumed by the private sector, it makes sense to focus on purchase of recycled-content products by private industry and commerce. To that end, the IWMB initiated a Private Buy Recycled Program in 1994 with the goal of further developing reliable, stable, and competitive markets for all products made with materials diverted from the California waste stream.

CALMAXSM. The California Materials Exchange (CALMAXSM) offers business, industry, and institutions in the state an avenue for reusing materials among themselves and for recycling materials into the manufacture of new products. Since its inception in 1991, CALMAXSM has diverted over 185,000 tons of materials from landfills, and in the process, saved California businesses over \$1.5 million.

These programs touch on a sample of the IWMB's market development efforts for 1994. More detail follows later in the report.

FORGING AHEAD: 50% BY THE YEAR 2000

In 1994, California made tremendous progress in making safe, sensible solid waste practices a way of life, and the IWMB was proud to offer leadership to this concerted effort. We launched significant market development programs, established additional diversion activities, and spurred innovative waste prevention techniques. Meeting a 50% diversion rate by the year 2000 will require even greater resourcefulness and creativity by local jurisdictions, with assistance from us, the private sector, and the people of California.

EXECUTIVE SUMMARY

There are critics who believe reaching 50 percent is an unattainable goal. However, we remain committed to this mandate and are preparing to meet the challenges it presents. Our approach to reaching 50 percent will include greater emphasis on cost effectiveness through better assistance to local jurisdictions on collection and processing systems, continuing to help businesses save money as they reduce waste, expanding public education initiatives, and further augmenting our market development efforts.

All material types will require more attention to maximize diversion. But with nearly 25 percent of the waste stream comprised of green and yard waste, the IWMB will be putting greater focus on programs to divert organic materials, including the smooth implementation of the new composting regulations that will make creation and operation of compost facilities more flexible and effective. In addition, projects like those initiated in 1994 to team us with agriculture will help demonstrate the quality and benefits of compost products, which in turn will be critical to success in meeting the next mandate level.

To be sure, achieving 50 percent reduction in waste by the year 2000 will be a challenge. It is, however, a challenge that can be met with the continued support of local governments, industry, and California's citizens. Through greater communication of the successful programs that have made 25 percent waste reduction possible, and with the continuing support and assistance of the IWMB, California will further its role as a national leader in solid waste management. In expanding on the achievements we have enjoyed thus far, the success story of California's waste management revolution will ultimately be known best for its *progress through partnership*.

I . I N T R O D U C T I O N
A N D O V E R V I E W

T

he Legacy of Waste. Californians generate about 45 million tons of solid waste annually. That is more than one ton of trash every second of every day, and enough to bury a four-lane freeway under six feet of refuse, stretching from Oregon to the Mexican border.

All of this waste affords a dubious legacy to each Californian. Unless habits change, a person who lives to be 70 years old will leave behind over 100 tons of waste for future generations. As California's population grows, so does the strain on our waste management infrastructure. It has become imperative for us to be less wasteful so that we may conserve precious natural resources, landfill space, and the quality of life we seek for ourselves and our children.

"Cost savings from our recycling program have been dramatic: 35% for municipal trash and 60% for industrial."

*-Richard Luchini
Maintenance Services
Supervisor
UNOCAL San Francisco
Refinery
Rodeo, California*

"We started printing the WRAP logo on our product's packaging last year. We are very proud to display it; this is one way to show our customers that we are an environmentally conscious company."

*-Douglas Parker
Safety and Environmental
Coordinator
Cap Snap Co.
San Jose, CA
Plastic bottle cap
manufacturer*

The California Response: A New Waste Management Philosophy

In 1989 and 1990, legislation creating the California Integrated Waste Management (IWM) Act ushered in a new era of waste management. The new law, also referred to as Assembly Bill (AB) 939, emphasizes conservation of natural resources through a hierarchy of management methods to reduce, reuse, and recycle solid waste. Ambitious waste diversion goals of 25 percent by 1995 and 50 percent by the year 2000 were set. To handle materials that cannot be diverted, the planning process requires local communities to identify future landfill capacity to ensure environmentally safe disposal.

To provide effective management of the state's solid waste stream—and leadership for our historic diversion efforts—the Integrated Waste Management Board (IWMB) was established. Full-time board members represent both the Executive and Legislative branches of State government, in a cooperative partnership to develop and direct a proactive waste management infrastructure.

Report Organization

Statements from IWMB Waste Reduction Award recipients featured throughout this report demonstrate that the mutual goals of these businesses, their customers, and the IWMB create a successful voluntary partnership for the environment and the economy. Collectively, commercial waste reduction programs saved these businesses over \$10 million. Many types of businesses rose to the waste reduction challenge and they continue to shine as models for others in their industries; they represent the diversity of California's economy, from agricul-

ture to aerospace. Statewide and local solid waste management achievements are featured in the *1994 Annual Report*, which is organized into four sections. Descriptions of the IWMB's organizational structure and legislative mandates are included in the Introduction and Overview. Major contributions to California's integrated waste management objectives are presented in the second section, IWMB Programs. Accomplishments of ten local government jurisdictions are reported in the third section, Local Government Highlights, to recognize the major progress which has occurred since enactment of the IWM Act. Future actions that are planned to meet the year 2000 goal of a 50 percent diversion of waste from California's landfills rely on continued successful partnerships with local government and industry and are described in the final section of this report.

In addition, highlights from the IWMB's legislatively mandated reports are presented in tabular form in Appendix A. Appendix B contains a comprehensive listing of IWMB publications. Priority bills from the 1993-94 legislative session are summarized in Appendix C.

Legislative Mandates

The Integrated Waste Management (IWM) Act, related laws, and associated mandates have placed many important responsibilities before the IWMB. The following are leading examples of these mandates.

- Establish a statewide hierarchy with priorities of (1) waste prevention, (2) recycling and composting, and (3) environmentally safe transformation and land disposal.

- Assist cities and counties in meeting their requirement to divert 25 percent of their solid waste from landfills through waste prevention, recycling, and composting by 1995. Fifty percent diversion is required by the year 2000. Transformation may account for up to 10 percent of the mandated 50 percent.
- Provide oversight and assistance to cities and counties in plan development and program implementation to meet these goals. The IWMB reviews and approves Countywide Integrated Waste Management Plans which include plans for waste prevention and recycling of solid waste; safe collection, recycling, treatment, and disposal of household hazardous waste; and siting of solid waste facilities such as large transfer stations and landfills.
- Develop a statewide public information and education program to gain public support for, and increased participation in, the priorities and goals of IWM.
- Implement programs to stimulate the use of postconsumer and secondary waste materials generated in California as feedstock by private business, industry, and commerce.
- Require local enforcement agencies (LEA) to monitor solid waste handling and disposal facilities to meet certification criteria developed by the IWMB. Review and revise statewide standards for solid waste handling and disposal, and evaluate LEA performance every 18 months.

IWMB Organizational Overview

The Board is vested with policy and regulatory authority to ensure reduction in waste generation and compliance with environmental regulations. To facilitate the open discussion of the IWM issues, assist in implementing the mandates, and provide a public forum for careful examination of information from all points of view, the IWMB has established six three-member committees [Public Resources Code (PRC) Section 40500]. These committees provide a framework to allow full review of issues and proposals prior to a public hearing by the full Board; this process facilitates the consideration of noncontroversial items, as well as provides an opportunity for discussion of issues requiring careful review. The committees are listed below.

- 1. Administration Committee** oversees the IWMB's management responsibilities and operational requirements.
- 2. Local Assistance and Planning Committee** oversees local implementation of IWM priorities and goals.
- 3. Legislation and Public Education Committee** oversees legislative proposals and development and implementation of public information and education programs to promote IWM goals.
- 4. Market Development Committee** oversees the IWMB's aggressive market development mandates, which provide for the development and expansion of markets for recycled materials.

5. Permitting and Enforcement Committee

oversees procedures for issuing and enforcing solid waste facilities permits; enforcement of State minimum standards as well as development of new standards and regulations; and the pursuit of local government and private sector compliance with State standards for solid waste facilities.

6. Policy, Research, and Technical Assistance Committee

oversees development and implementation of the IWMB's short- and long-term research needs, including the expansion of existing and development of new technologies for handling and processing solid wastes.

The IWMB's staff functions were realigned this year to better reflect the IWMB's strategic plan priorities, the relationships between many of the IWMB's programs, and the constituents served by those programs. An office and division contact list is located on the inside back cover. Staff are organized into four divisions as described below.

1. Diversion, Planning, and Local Assistance

Division oversees and assists local governments in the preparation and implementation of local plans to meet the disposal reduction requirements of the IWM Act, as amended. The division develops model planning documents, workbooks, and catalogues to make it easier for local jurisdictions to comply with these requirements. The division responds to public inquiries through a customer service referral system and helps school districts incorporate waste reduction teaching materials. The division also educates public sector organizations in all

aspects of waste reduction, including waste prevention, reuse, recycling and composting, as well as the safe disposal of used oil and household hazardous waste. The division administers the IWMB's Used Oil Recycling Fund to facilitate the collection and recycling of used oil. The division has four branches: Office of Local Assistance; Waste Characterization and Analysis Branch; Used Oil and Household Hazardous Waste Branch; and Public Education and Programs Implementation Branch.

2. Waste Prevention and Market Development

Division implements the IWMB's *Statewide Waste Prevention Plan* and *Market Development Plan*: assessing secondary materials markets; providing technical assistance in the collection and use of secondary materials; promoting procurement of recycled-content products by state and local governments and private industry; assisting in the development of public/private partnerships for the production of recycled-content products; and encouraging the use of secondary materials in manufacturing through the IWMB's Recycling Market Development Zones Program. Waste prevention and market development initiatives implemented by the division are key to landfill capacity conservation in California. The division has four branches: Waste Prevention, Business Education and Assistance Branch; Market Development and Zone Assistance Branch; Secondary Materials Compliance and Technology Branch; and Secondary Materials Assistance Branch.

3. Permitting and Enforcement Division

reviews and recommends operating permits not only for specific solid waste facilities, but also for solid waste handling, processing, and disposal technologies. The division reviews permitted solid waste facilities for compliance with State standards and operational/closure conditions. The division evaluates and certifies LEAs to administer provisions of the permitting, inspection, and enforcement programs and works closely with LEAs to ensure environmentally safe disposal and handling of solid wastes. The division reviews and approves closure and postclosure maintenance plans for active solid waste landfills for compliance with statutory and regulatory requirements. For permitted, unpermitted, or inactive sites, the division evaluates the need for remediation for compliance with statutory and regulatory requirements. The division has five branches: Local Enforcement Agency/Enforcement Agency Branch; Enforcement Branch; Permits Branch; Closure and Remediation Branch; and Solid Waste Facilities Management Branch.

4. Administration and Finance Division

handles the IWMB's administrative functions, providing financial, accounting, personnel, data processing, and equipment and maintenance functions. The division has four branches: Financial Assistance Branch; Human Resources Branch; Information Management Branch; and Business Services Branch.

The Board and Executive support functions are handled by the following four offices which report to the Executive Director.

- 1. Public Affairs Office** is responsible for public outreach, information, media relations, and publications-support services.
- 2. Policy and Analysis Office** handles the development of long-term program emphasis under the direction of the Board and develops proposed policy on intra-IWMB issues, as well as interagency environmental issues.
- 3. Legislative and Regulatory Affairs Office** analyzes all legislation related to IWM activities, pursuing positions and amendments as directed by the Board, and develops legislative proposals.
- 4. Legal Office** provides Board and staff support on legal history, actions, and analysis, and directly handles all litigation and other legal actions entered into by the IWMB.



I I . I W M B P R O G R A M S

Landmark legislation passed in California in 1989 and 1990 reflected a dramatic change in the State's approach to waste management. Emphasis is now on a waste management "hierarchy" of waste prevention, recycling and composting, and safe transformation and land disposal. Toward meeting the landfill disposal reduction mandates of 25 percent by 1995 and 50 percent by 2000, the IWMB engages in outreach activities to improve public perceptions and practices. It educates both public and private sectors on waste prevention opportunities, stimulates markets for recyclable materials, and provides technical assistance and funding for waste diversion programs. Working in partnership with local government and industry, the

Waste Prevention Education Partnership Funding Allocation

- Research
- Planning
- Implementation
- Reporting, training, media monitoring
- Creative campaign development
- Multicultural information materials development
- Partnership solicitation with retailers and/or manufactureres
- Evaluation and post program options development
- Air time

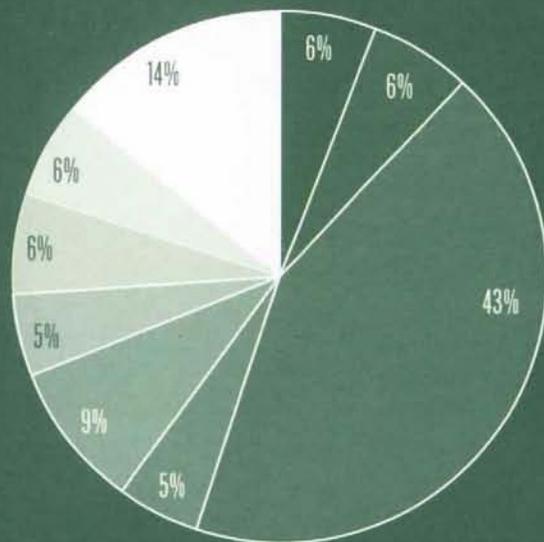


Figure A-1

IWMB regulates solid waste facility management and works to maintain sufficient landfill disposal capacity.

A. Public Perceptions and Practices

With the goal of measurably improving public understanding and practice of resource conservation, the IWMB has become a leading innovator in the development and use of educational tools as a means to that end. The IWM's outreach programs are designed to reduce municipal solid waste generation by changing the way people think about their own garbage. Successful past programs have been expanded and improved this year to provide widespread coverage and enduring transformations in both public and private sector purchasing, use, and disposal practices. Programs include the Waste Prevention Education Partnership to assist local governments, the Waste Reduction Awards Program to assist and applaud businesses, the Teacher Training and Schools Programs, the Recycling Information Hotline, and Southern California Outreach Services.

Waste Prevention Education Partnership

The IWMB is launching a unique partnership to facilitate a coordinated, consistent, and customized approach to assist all cities and counties in California with their waste prevention education efforts. This project is an outgrowth of the previously produced "Leave Less Behind" waste prevention education campaign. The IWMB has executed contracts with the California State Association of Counties (CSAC), the League of California Cities (League), the California Broadcasters' Association (CBA), and DDB Needham Worldwide Advertising to work collaboratively over the next 18 months to

customize waste prevention programs for all local jurisdictions.

Cities and counties are being surveyed by CSAC and the League to identify the kind of materials and assistance they need to implement local waste prevention education campaigns. CSAC and the League will provide consulting services and coordinate the creation of new educational materials where necessary. CBA secured air time during January and February 1995, on a minimum of 140 television and radio stations, to air the IWMB-produced commercials that previously were shown only in Sacramento and Bakersfield. Jurisdictions will follow up with their own publicity and promotions.

The four major media markets (Sacramento, San Diego, Los Angeles, and San Francisco) will be targeted. Also, outreach to smaller markets (Fresno, Bakersfield, Eureka, Chico/Redding, Santa Barbara/Santa Maria) is planned.

Over \$1.8 million worth of air time was secured for only a half million dollars due to the public service nature of the campaign. Allocation of the \$3.5 million funding is shown in Figure A.1. The funding was part of a larger allocation from AB 1220 (Chapter 656, Statutes of 1993), which designated \$5.75 million for the IWMB to use for waste prevention and public education programs as well as market development.

With direction from IWMB, the League will take the lead in developing a Reference Center, accessible to all cities and counties, to house a collection of educational waste prevention materials developed by cities and counties. IWMB's public relations contractor, DDB Needham, will work to secure at least five private partnerships with retailers and/or manufacturers to work with

the IWMB in promoting waste prevention education. This comprehensive approach to waste prevention education effectively utilizes the strengths of both the private and public sector to produce useful education materials and lasting results.

Waste Reduction Award Program

IWMB completed its second annual Waste Reduction Awards Program (WRAP) this year by celebrating the commitment and achievements of over 290 California businesses. The mutual goals of these businesses, their customers, and the IWMB serve to create a successful partnership for the environment. Many types of businesses rose to the challenge, and they continue to shine as models for others in their industries. Participants range from agriculture to aerospace and include hospitals, computer and other electronics manufacturers, wineries, grocers, retail distributors, nonprofit community organizations, petroleum refineries, clothing manufacturers, a law firm, utilities, landscapers, biotech, film studios, a museum, and many more.

Practices evaluated include waste prevention, materials reuse, recycling, recycled product procurement, composting, and employee education. Successful applicants received an award from the IWMB along with rights to use the WRAP logo on products, advertising, and promotional materials. WRAP award recipients are featured throughout this report to demonstrate that waste reduction is *good for business and the environment*.

Teacher Training and School Programs

No one will deny that children are the future. In many ways, they help us realize the urgency of responsible action. Educating school children on the importance of conserving natural resources and teaching preferred waste management practices is an investment in a better future. Lessons of personal responsibility demonstrate that each child can make a difference, advance the goals of integrated waste management, and continue to be an important part of the IWMB's educational efforts. Projects include integrated solid waste management curriculum development, school district waste prevention and recycling program implementation assistance, and a very special public/private partnership with Walt Disney, Inc.

Curriculum Development

The IWMB's school program links waste reduction practices at schools with classroom instruction, recognizing that effective diversion requires commitment from students and teachers, and effective learning requires students' active involvement with waste management problems and solutions.

To assist schools in promoting quality integrated waste management instruction, the IWMB worked to develop and distribute a high quality curriculum for K-12 teachers.

Using the results from the 1993 *Compendium for Integrated Waste Management*, the IWMB, in coordination with the California Department of Education (CDE), reviewed the highest scoring curricula. Guided by the IWMB's mission and goals and California's education frameworks, the IWMB and CDE selected a curriculum for

distribution to California schools. Based on instructional style and technical accuracy, *Closing the Loop*, consistently rated as an exceptional curriculum at all grade levels from K-12, was selected.

Closing the Loop was field-tested in a variety of classrooms around the state. This year, as a result of the field testers' recommendations, the IWMB modified *Closing the Loop* to meet Californians' needs. Enhancements included improving the K-3 grade level lessons and translating student worksheets and parent materials into Spanish to meet the needs of a significant portion of the state's multilingual population.

The IWMB, in partnership with the curriculum's publisher, is the exclusive distributor of the California version of *Closing the Loop* and, with assistance from CDE, is distributing the curriculum through educator training workshops. A key component of these workshops will be using the original teacher field testers to share their experiences, ideas, and results from using *Closing the Loop* in their classrooms. Another key element to this program's success will be involving local government in the distribution and training process. The IWMB will be working in close partnership with local government to support new education efforts and to avoid duplication of existing educational programs.

School District Waste Prevention And Recycling Program Implementation Assistance

Over the past year the IWMB has assisted school districts and local governments in implementing waste prevention and recycling programs. Based on the results of these projects

and other existing model programs, the IWMB developed two how-to guides.

The first guide, *Seeing Green Through Waste Prevention*, provides extensive information for developing a district-wide waste prevention program. Waste prevention saves resources by encouraging more efficient use of materials; it reduces pollution associated with extracting raw materials, manufacturing excess products, and disposing waste. By including a waste prevention program in the district's resource conservation plan, schools help the environment and cut costs simultaneously. This guide outlines steps such as waste composition surveys, waste prevention ideas and activities, and cost analysis that schools will need to undertake in establishing a comprehensive program.

The second guide, *A District-Wide Approach to Recycling*, supplies detailed information necessary to implement a recycling program district-wide. The data in this guide are supplemented by case studies based on other districts' experiences. Topics covered include organizing key players, securing hauling arrangements, and training staff and students.

Since publishing the guides, IWMB staff have made presentations at school business officials' conferences, industry workshops, and IWMB-sponsored training workshops. The guides have been well received as useful training tools for districts and local governments implementing waste management programs in school districts.

**California Fifth Graders Get
"Environmentality!": a
Public/Private Partnership with
Disney**

The IWMB's school education staff have been active participants in the California

Environmental Education Interagency Network (CEEIN), a network of all school education staff under the Resources Agency, Cal/EPA, and the California Department of Education. CEEIN has facilitated exchange of ideas and information and is now facilitating the first big statewide project that is sponsored by Walt Disney, Inc. This project, called "Environmentality," will target California fifth-grade students. Disney created "Environmentality" within its own organization over several years, with tremendous response. Jiminy Cricket is the project's mascot; the theme is to think environmentally and pledge to make changes in your everyday habits that will improve the environment. Disney is interested in expanding this concept through school children to families and in using this project as a model for future programs in other states.

The first major project sponsored by CEEIN is not only a multi-agency effort, it is also a very special public/private partnership. CEEIN worked with Walt Disney Inc. to develop the "Environmentality Challenge," a school educational program and contest which was introduced this fall to more than 300,000 fifth-grade students throughout California.

"Environmentality Challenge" is designed to encourage students to think and act environmentally at school and at home. The IWMB played a major role in the planning and implementation phases; contracted with all other participating state agencies to collect their contributions so that there would be a consolidation of state funds; and, established an information telephone line to answer questions about the program.

"Through reconditioning oil wine barrels, recycling, and composting, we have been able to cut our landfill fees by 70%— a savings of over \$20,000 annually. We proudly display the WRAP award in our office. We view the award with pride, as one part of our sustainable program."

*-Patrick Healy
Recycling and Energy
Coordinator
Fetzer Vineyards
Redwood Valley, California*

"In the three years since our waste reduction program was implemented, we have saved over 25% on paper purchases. The savings help us protect our most valuable resource—children and young adults."

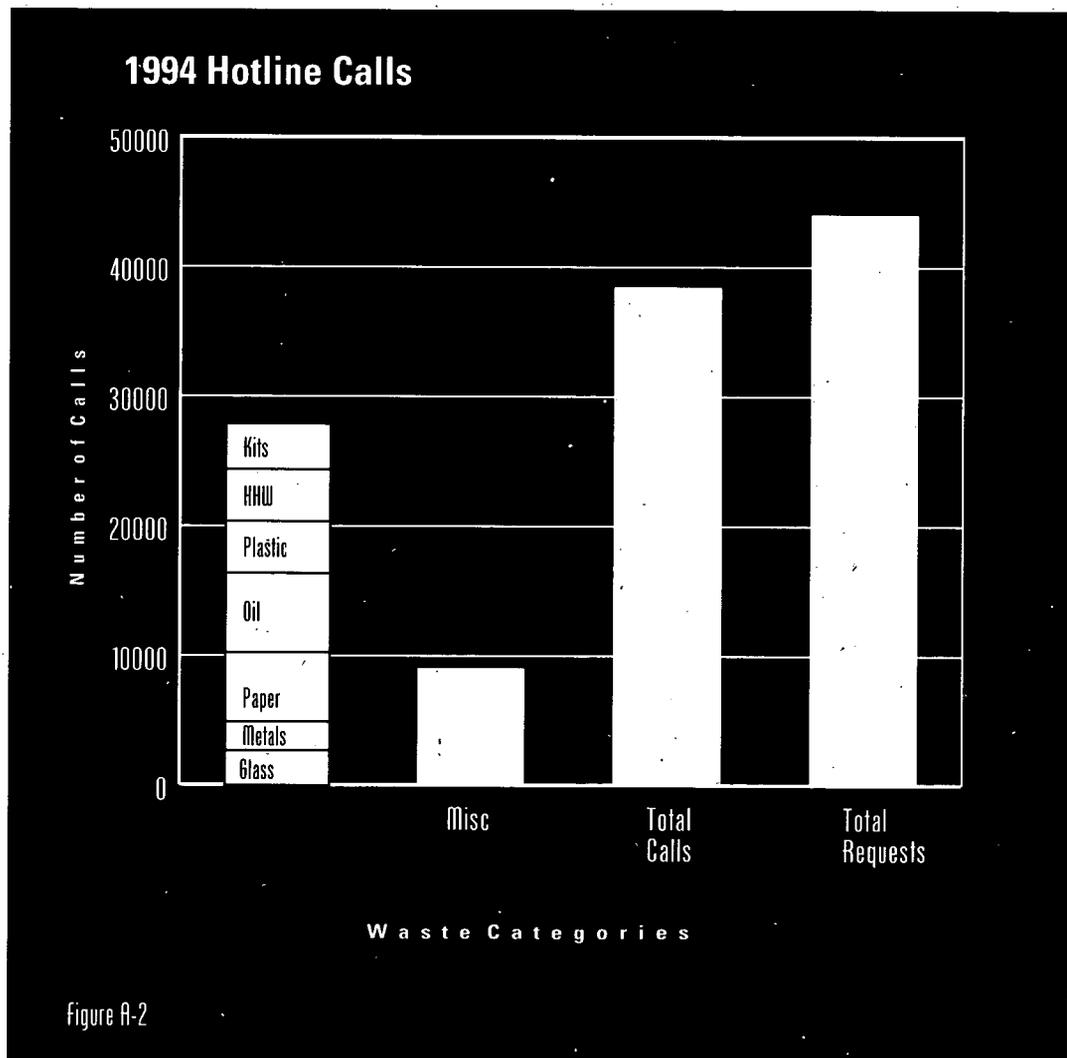
*-Gedrick L. Hicks, Sr.
Director,
Compton Special Services
Center
Nonprofit -
Drug/gang prevention
Compton, CA*

Resources for instruction were made available to participating teachers along with pledge sheets, posters, and Jiminy Cricket "Environmentality" buttons. Fifth-grade teachers used the teaching materials to conduct lessons on the environment. Students pledged with their families to make some changes in their habits to improve the environment. Buttons were provided to those students who fulfilled their environmental promises. More ambitious teachers led their students in "Environmentality Challenge" action projects, that initiate and implement efforts to effect pos-

itive change in the environment. These students will be eligible for regional prizes and a statewide grand prize of a free trip to Disneyland on Earth Day 1995.

Recycling Information Hotline

The success of the IWMB's public awareness programs is augmented by the public information hotline [PRC 3472, 42600], which answers questions about reducing, reusing, recycling, and composting waste. Requests for IWMB publications are filled by the hotline staff. IWMB's toll-free hotline **(1-800-553-2962)** is linked to an electronic database that contains the loca-



tion of over 4,250 recycling centers that accept a variety of materials from the public, including used motor oil, aluminum, plastics, metals, glass, newspaper, cardboard, and other paper products. The database also contains information on upcoming household toxic "roundups" and collection facilities. Dissemination of recycling information is coordinated with other State departments, including the Department of Toxic Substances Control for hazardous waste and the Department of Conservation for curbside recycling information and certified redemption centers. County contact names and their telephone numbers are included in the database.

The hotline number is listed in California telephone directories, newspaper recycling ads, and recycling guides throughout the state. It operates Monday through Friday, 8 a.m. to 5 p.m. See Figure A.2 for the number and types of requests received.

Southern California Outreach Services

Southern California contains 58 percent of the state's population, and generates 63 percent of the waste disposed in solid waste facilities. It is essential, for the state to achieve its AB 939 diversion goals, that waste prevention and education outreach efforts be intensified for citizens, businesses, and institutions located in Southern California. This is the mission of the Southern California Outreach Services (SCOS) office of the IWMB.

During the past year, SCOS staff have extended the services of IWMB programs to the citizens of Southern California in the areas of:

- school site waste prevention,

- yard waste prevention and recycling,
- state agencies waste recycling,
- business waste prevention,
- used oil collection center certification, and
- public information and education.

In addition, SCOS initiated a landfill education project to inform the public of the need for landfills and the environmental safeguards they employ.

B. Waste Prevention

Waste prevention, or source reduction, is the favored approach to protect natural and human-created environments. The IWMB is making much progress in this area, which was traditionally overlooked by institutional approaches to solid waste management. This year, the IWMB continued successful programs and undertook bold, new initiatives with our eyes on the goal of helping local governments, private industry, and citizens reduce the quantity of waste they produce. These efforts include the Waste Prevention Information Exchange, Grasscycling, Business Kits, and the California Materials Exchange.

Waste Prevention Information Exchange

The IWMB created the Waste Prevention Information Exchange (Info Exchange) to collect and distribute materials, at no charge, in the expanding field of waste prevention. The Info Exchange provides a unique service to government agencies, professional associations, industry, small businesses, citizen groups, and other interested parties. The Info Exchange also serves as a network to facilitate information

"Thank you so much for the treasure-trove of [waste prevention] information. When [our] program gets up and running, these documents...will save us months of reinventing the wheel."

*-Beryl Magilavy
Executive Director,
Sustainable City,
San Francisco, CA*

"They [Waste Prevention Information Exchange materials] have all been a great help to me in putting together a video script on source reduction for the City of Chico's recycling education program. I am really starting from ground zero! So your help and generosity have been very much appreciated. Thanks for being such a great resource!"

*-Lynette Hutting
Special Events/
Education Coordinator,
Butte Environmental
Council,
Chico, CA*

flow among these parties. The value of this service is expressed best by the customers themselves.

The Exchange currently covers more than 200 waste prevention topics, including:

- business waste assessments, case studies, and money-saving tips;
- consumer guides, handbooks, and household hints;
- government program ideas for local, state, and federal agencies;
- materials exchange, CALMAXSM and KidMAXSM, case studies;
- organics—backyard composting to xeriscaping;
- packaging—aseptics to wire-bound boxes;
- quantification of waste generation and prevention program effectiveness; and
- unit-based pricing, e.g., variable can rates and bag-tag systems.

Grasscycling

Recognizing that yard waste contributes upwards of 20 percent to the state's waste stream, the IWMB launched an aggressive landscaping waste reduction outreach program in close cooperation with professional associations and lawn mower manufacturers.

Opportunities for waste prevention include designing waste-efficient landscapes (xeriscaping), practicing low-waste landscaping maintenance (grasscycling, onsite mulching, and composting), and using recycled-content materials in the landscape (composts, mulch, plastic lumber).

In 1994, the IWMB targeted the largest component of the yard waste stream—grass clippings. The simplest method of reducing this component of the yard waste stream is “grasscycling”—the natural recycling of clippings by leaving them on the lawn when mowing. The IWMB launched a grasscycling promotion campaign designed to influence both the residential do-it-yourselfer and the commercial landscape maintenance contractor. The latter may service both residential and commercial accounts. The campaign highlights the cost savings associated with this practice. Savings include reducing time, labor, and fertilizer and water requirements, as well as the savings from waste reduction.

Close cooperation with professional associations within the landscape industry and with major mower manufacturers has assured appropriate program targeting and visibility. Attendance at trade shows throughout the state, speaking engagements, notices within the popular media, publication of articles, and a springtime television and radio blitz in four major media markets were used by the IWMB to promote grasscycling.

To further promote landscaping waste reduction, the IWMB has compiled a useful collection of tools for local government use—the composting information kit. This kit provides local governments with a variety of resources available in California; networks them with one another; provides details on bins, both manufactured and do-it-yourself; and outlines promotion program specifics. IWMB staff will customize information kits for local governments who send in a completed survey indicating their specific needs.

Business Kits

The IWMB is pleased to announce the availability of the "Business Kit." The kit contains a variety of information for local governments to use to educate businesses about waste reduction. The kit includes guidebooks and brochures, as well as fact sheets on waste reduction in offices, hotels, retail stores, and print shops; at meetings and conferences; in the food service industry, landscape industry, property management, and hospitals. Information on materials exchanges, reduced packaging, motivating employers and employees, awards programs, and strategies for getting businesses involved in waste reduction give local governments tools for customizing their own waste prevention programs.

California Materials Exchange— CALMAXSM

The California Materials Exchange (CALMAXSM) has been established to offer business, industry, and institutions in the state an avenue for reusing materials among themselves and for recycling materials into the manufacture of new products. Since its inception in 1992 through the third quarter of 1994, CALMAXSM has diverted over 185,000 tons of materials from landfills through 280 successful exchanges and, in the process, over \$1.5 million has been saved by California businesses. On average, participants save \$8 per ton diverted through CALMAXSM by avoiding disposal fees and/or the cost of new materials.

The primary instruments of the CALMAXSM program are a bimonthly reuse and recycling catalog, currently mailed to almost 10,000 businesses, and an on-line version of the catalog,

accessible by modem 24 hours a day and updated weekly. With CALMAXSM listings available by computer via modem, great growth is expected in the year to come. Now the "big players," like utilities and large corporations, will be able to participate in an efficient and effective manner. Right now, the on-line system is "read only." Soon, the IWMB expects to expand to allow listings to be entered and edited on line; later, we hope for associated E-mail systems where placing a listing and making trades can all be at the users' fingertips—quite literally.

With more participation, exchanges were up about 30 percent last year; with no increase in funding, an evaluation was made of how to best serve with the resources available. Other funding sources continue to be sought, including another grant from US-EPA Region IX.

CALMAXSM will continue to print the statewide catalog and provide listings on-line, as well as give technical assistance and training to communities interested in setting up their own materials exchange programs. A shift in emphasis will encourage more "mini-MAXes" or local materials exchange programs. A how-to guide is being developed. Regional workshops are planned for 1994-95 to encourage locals to create mini-MAXes that will feed into CALMAXSM. The IWMB is also embarking on a statewide and national public relations effort to increase the understanding of the concept of materials exchanges.

C. Markets for Recyclable Materials

The IWMB works to develop cost-effective markets for recyclable materials to "close the loop"

Cradle to grave recycling: not just jargon, they do it-- literally!

Tidee Didee Diaper Wins CALMAXSM Recycling "Match Of The Year"

Tidee Didee Diaper Service in Sacramento has won the IWMB's CALMAXSM Match of the Year contest for its creative recycling efforts. The diaper service company sells the old diapers as rags to wholesalers for such clients as auto dealers, janitorial services, and jewelers. Lint from Tidee Diaper's giant dryers is given to a paper maker, furniture reupholsters, schools and a casket company.

Market Development Funding Allocations

- Loans
- Direct Zone Support
- Marketing Outreach, Industry Trade Show Booth Upgrade, Business Lead Tracking System
- Demonstrations of Agricultural Use of Compost

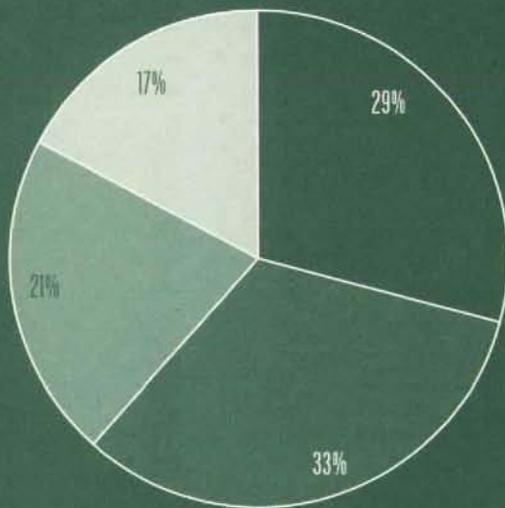


Figure C-1

and provide environmentally sound waste 15 reduction to achieve the goals of AB 939. To address the important issue of insufficient markets, the IWMB has set two goals:

1. accelerate development of new markets for recyclables, and
2. expand acceptability of products made from recyclable materials.

The Recycling Market Development Zone (RMDZ) Program and the Compost Market Development Project, discussed in this section, constitute major progress toward the first goal. Efforts to develop compost quality standards and the Public Agency Buy Recycled Program, discussed subsequently, are important steps toward the second goal.

AB 1220 (Chapter 656, Statutes of 1993) allocated \$5.75 million for the IWMB to use for market development, source reduction, and public education programs. In February 1994, the Board directed \$2.25 million of this amount for market development (See Figure C.1.) Eighty-three percent of the market development allocation targeted Recycling Market Development Zones. The remainder supported compost market development.

Recycling Market Development Zone Program

The IWMB is working to bolster demand for collected recyclable materials. Senate Bill 1322 (Chapter 1096, Statutes of 1989) finds that "market development is the key to increased, cost-effective recycling. Market development includes activities that strengthen demand by manufacturers and end-use consumers for recyclable materials collected by municipalities, non-

profit organizations, and private entities." [PRC 42000 (c)] Helping local governments and industry create needed markets is the task of the IWMB's RMDZ Program. RMDZs are areas of commercial and industrial development targeted by local jurisdictions and the IWMB for establishment of recycled product manufacturing.

So far, a total of 29 zones have been designated. The zones are distributed statewide and serve jurisdictions where more than 15 million Californians (47 percent of the population) reside (See Figure C.2.) In November 1994, the

IWMB received applications for designation of an additional 11 zones. If all are designated in 1995, the IWMB will have achieved its 40-zone goal one year early. The tremendous interest and enthusiasm shown by local governments and businesses for the RMDZ program is the key factor in acceleration of the designation schedule, as expressed by a Placer County official in the sidebar.

One of the primary tools the IWMB offers to help zones promote recycling-based business development is the program's low-interest loans,

"We are currently working with two companies wanting to locate here [that] initially contacted us because we are an RMDZ; we realize the RMDZ program has turned out to be a great marketing tool for the County of Placer. We consider IWMB an important part of the County of Placer's RMDZ team!"

*-Emily Churchman
Economic Development
Specialist,
Office of Economic
Development,
Placer County, California*



figure C-2

**Average RMDZ
Loan (requires
matching
private
investment)**

- *\$342,000*
- *14,500 tons
per year
diversion*
- *19 direct jobs
created*

currently 4.5 percent. In February 1993, the IWMB began accepting loan applications on a quarterly basis to support recycled product manufacturing in zones which received final designations. During 1994, the IWMB aggressively promoted participation of additional local governments in the zone program, reviewed applications for 45 loans, and closed 12 loans worth almost \$4 million. As a result of these closed loans, a total investment of \$8 million was made in recycled-product manufacturing, California's waste diversion capacity was increased by almost 400,000 tons annually, and 225 jobs were created or saved.

Since the program began, a total of 19 loans, worth \$6.25 million, have been closed. Because of these loans, California's diversion capacity has been increased by over 500,000 tons annually, and 361 jobs have been created or saved. There are 27 other loans, worth over \$13 million, in the process of being closed. They represent an additional diversion capacity of 4.4 million tons annually, and the creation or saving of another 283 jobs.

The IWMB greatly increased services to RMDZs this past year. Part of the funding for the service projects described below came from the \$2.25 million of AB 1220 monies set aside for market development by the IWMB. Among its 1994 accomplishments, the IWMB has:

- directed an additional \$660,000 to the RMDZ loan program;
- begun investigation of the feasibility of issuing bonds and selling program loans on the secondary market to leverage program loan funds beyond the \$5 million annual allocation;

- provided \$725,000 in direct support to the RMDZs (each zone received \$25,000 for projects which further its particular market development activities);
- allocated \$370,000 to support the zones with a comprehensive marketing outreach program, including printed materials that can be used by zones individually and the RMDZ program as a whole;
- begun work on a series of workshops to be held in 1995, which will support the business attraction and expansion efforts of zone administrators (some workshops will target California lenders to increase their awareness of opportunities to invest in new or expanded manufacturers of recycled products in the zones);
- conducted two training workshops for zone administrators to improve their understanding of techniques and issues related to integrated waste management and to economic development;
- prepared articles of incorporation and other materials which the zones can use to establish an Association of Recycling Market Development Zones through a contract with the Center for Manufacturing Excellence at California State University, Chico;
- renovated and distributed 11 surplus computers to zones (made obsolete when the IWMB acquired its new Local Area Network);
- provided research services to zone administrators (for example, the IWMB provided the results of a search of Standard Industrial Classification codes to Ventura County RMDZ and the City of Long Beach RMDZ to

help them identify businesses which might be persuaded to manufacture recycled-content products); and,

- revised its regulations to clarify the RMDZ redesignation process in anticipation of several zones requesting expansion during 1995.

Compost Market Development Project

Composting is a rapidly expanding industry in several states, including California, because of the recovery of organic materials previously destined for landfills. A major challenge facing this expansion is the development of additional markets for products made from these organic material resources. To meet this challenge, public/private partnerships are cultivating agricultural markets for urban mulch and compost products.

Farmers near urban centers are exploring opportunities to obtain mulch or compost products and put these urban resources to beneficial use. California soils are characteristically low in organic matter content, partly because of reliance on chemical fertilizers. Farmers can realize several benefits from the use of compost in the commercial production of various crops.

Benefits include:

- an increase in soil organic matter,
- a more diverse soil microbial population,
- a decrease in leaching of soil nutrients;
- better moisture retention, and
- a reduction in fertilizer applications needed to sustain crops.

To stimulate these agricultural markets, the IWMB made contractual funds available for five compost/mulch demonstrations in agribusiness. The agricultural demonstrations will be conducted over a two-year period. The goal of the demonstrations is to promote the use of municipally-derived mulch or compost in commercial agriculture. A common element of each demonstration is increased communication between compost producers and farmers. Data generated will assist California farmers who are considering compost use in the production of several different crops. Workshops, field days, newsletters, and other activities are being undertaken to promote the demonstrations.

The five demonstration projects selected by IWMB involve cooperative teams working in three counties of the San Joaquin Valley and five counties near the Salinas Valley. Each demonstration team is comprised of farm operators, technical experts, compost/mulch processors, and local government representatives. In-kind contributions from the five cooperative teams total more than \$500,000.

Project Summaries

Fresno County (\$75,000)

This demonstration project, on a peach orchard owned by Wawona Orchards, began in 1993 using industry funds. Traditional fertilization methods, including manure, slow-release pellets, and ammonium nitrate, will be compared with various composts. Materials are applied at different rates that will provide the same amount of nitrogen.

Tulare County (\$65,000)

Commercial production of cotton at the Bergman Ranches, with and without compost, will be subjected to a cost-benefit analysis in this demonstration. Cotton plots using compost will receive less chemical fertilization than conventional plots. The economic value of nutrients contained within the compost and the soil enhancement attributes associated with compost application (five tons per acre) will be evaluated by the cooperative team.

Stanislaus County (\$75,000)

A cooperative team will compare yields of watermelon, sweet corn, and tomatoes using compost (5 to 30 tons per acre) and traditional fertilizer on the C.J. Rumble Ranch. Compost and growing media mixes are also being used in containers to grow various plant species at the Grover Nursery and at Modesto Junior College. These participants are working with the City of Modesto and the University of California Cooperative Extension to bring commercial uses of compost to the attention of local farmers and nurserymen.

Santa Cruz County (\$65,000)

Herbert Ranch, Felice Ranch, Jefferson Ranch, Route 1 Farms, and Glaum Egg Ranch, located in San Benito, Monterey, and Santa Cruz Counties, will produce and/or use compost products in the commercial production of green peppers, lettuce, and onions. On-farm composting is being conducted at two of the five farms cooperating in this demonstration. A variety of compost products will be made using landscape trimmings, waxed cardboard, wood waste, agricultural by-products, manure, or a combination of these feedstocks.

Santa Clara County (\$75,000)

Farmers are applying 30 to 40 tons per acre of mulch or compost on plots of grapes, green peppers, radicchio, strawberries, lettuce, oats, and hay. Urban compost products are made from residential yard trimmings by three local processors for Wente Brothers Winery, Frazier Lake Farms, Chiala Farms, and Valley Farms located in Alameda, San Benito, and Santa Clara Counties.

Educational Video

An educational video will be produced by the end of 1996 with some of the cooperating farmers describing their mulch or compost use. IWMB allocated \$40,000 for the professional production of the educational video. Commercial agriculture is the target audience for the video highlighting benefits of mulch and compost use in crop production.

Agriculture Committee on Compost Quality Standards

The IWMB formed a Compost Agriculture Steering Committee to encourage the production and use of compost in the agriculture community. The committee is developing voluntary product quality standards for compost derived from organic materials from municipal sources.

Members of the committee include representatives of the farming community, compost producers and suppliers, and the State Department of Food and Agriculture.

Two workshops were held to gather input for the voluntary product quality standards and presentations were made at two of the state's major farm shows. A report on the committee's efforts will be made to the IWMB Market Development Committee by the summer of 1995.

Public Agency Buy Recycled Program

The IWMB initiated a campaign aimed at helping state agencies comply with the requirements of State recycled product procurement law, especially requirements of AB 11 (Chapter 960, Statutes of 1993). The 1994 State Agency Buy Recycled Campaign culminated in six workshops conducted by the IWMB. There were two each in San Francisco, Riverside, and Sacramento during October and November 1994. The workshops focused on informing State departments and agencies of the buy recycled requirements established by AB 11.

Agencies were also educated regarding reporting requirements and the opportunities to submit claims under the pilot price preference program.

Recycled procurement reporting is an essential aspect of the State Agency Buy Recycled Campaign. By October 2, 1995, all agencies must submit to the IWMB a detailed *Recycled Product Procurement Report for Fiscal Year 94-95*. In this report, they will show what steps they are taking to meet the 1996 goals set forth in State recycled product procurement law.

As part of the campaign, in May 1994, the IWMB established a mechanism by which State agencies could seek reimbursement for "losses" due to extending price preferences in the procurement of recycled products, with funding provided by the IWMB. This is a pilot price-preference program jointly implemented by the IWMB and the Department of General Services and is effective from January 1994 through January 1997. The combined amount of preference per fiscal year will not exceed \$100,000; recycled paper preference will not exceed \$50,000. Price preferences established for fiscal years 94-95 and 95-96 are as follows:

- five percent for tire-derived rubber products, re-refined automotive lubricant, recycled antifreeze fluid, recycled solvents, recycled paints, and paper janitorial supplies; and
- ten percent for paper products (except for paper janitorial supplies), compost and co-compost, and plastic products.

The IWMB's public agency buy recycled efforts met with notable successes during 1994, particularly in the area of expanding markets for re-refined oil.

- **Los Angeles City** had replaced virgin motor oil with re-refined oil in the spring of 1994 for its remaining existing lubrication contract, resulting in the purchase of approxi-

Lancaster Wins Award For Tire Recycling

The City of Lancaster received the 1994 League of California Cities' "Helen Putnam Award for Excellence" in the category of Environmental Quality Partnerships, for three recycled tire projects funded by grants from the California Integrated Waste Management Board. The projects demonstrate innovative uses for recycled tires—compost bins made from waste tires, crumb rubber as a soil amendment in athletic fields, and recycled carbon black for use in sealing asphalt.

mately 8700 gallons. In renewing this contract in the fall of 1994, Los Angeles continues to purchase re-refined oil for its estimated 1400 vehicles.

- **California Department of General Services** on July 1, 1994, replaced its existing lubrication contract for five grades of virgin oil with re-refined oil. This allows not only State departments, but local governments as well, to buy re-refined oil through the State's Participation Purchasing Program. A new State Lubrication Contract is scheduled for December 1995, in which CalTrans will attempt to purchase re-refined lubricants for most of its lubrication requirement, estimated at over 100,000 gallons per year.
- **Long Beach and Ventura County** are now purchasing re-refined oil. Long Beach entered into a "closed loop system," in which the City collects its used oil and purchases re-refined oil, completing the recycling loop.

D. Waste Stream Diversion

A key component of IWMB's enabling legislation is the waste stream diversion objective of AB 939. Much of IWMB's broad range of activities is directed toward realizing the 25 and 50 percent diversion goals. Proper management and diversion of small but troublesome components of the waste stream are equally important to safeguard public health and the environment. These special wastes include waste tires, used oil, and household hazardous waste.

Tire Recycling Program (AB 1843, PRC 42860 et. seq.)

Californians generate waste tires at a rate of approximately one tire per

capita annually. Failure to create adequate markets for these tires has resulted in growing piles of scrap tires around the state. The Legislature addressed this problem by instituting a grant program to find new uses for old tires. During 1994, the IWMB provided \$1 million from the California Tire Recycling Management Fund for business development, innovative research, and local government assistance. Figure D.1 shows the allocation of tire grant funding. The IWMB awarded grants to 22 of the 96 applicants, which are discussed in detail in *The Tire Recycling Program 1994 Annual Report* on file at the IWMB. An example of a grant recipient is the City of Lancaster—it received well-deserved recognition for its part in innovative tire recycling efforts.

From industry contacts and trends, it is apparent that tire disposal and stockpiling is decreasing, while waste tire utilization is increasing. (See Figure D.2.) From 1990 through 1994, the tire diversion rate has increased 28 percent. In 1990, staff estimated that 9.2 million tires were diverted from landfill disposal and stockpiling. In 1994, staff estimates that approximately 17.9 million tires were being diverted.

Permitting and enforcement activities by the IWMB also increase waste tire diversion. (Refer to section II.F: Regulation and Solid Waste Facility Management, Waste Tire Management subsection.)

By far, waste tire combustion consumes the majority of the tires recycled in the state, accounting for almost 40 percent of the total diverted in 1994. The cement manufacturing

1994 Tire Grant Recipients

Counties

Cities

Private

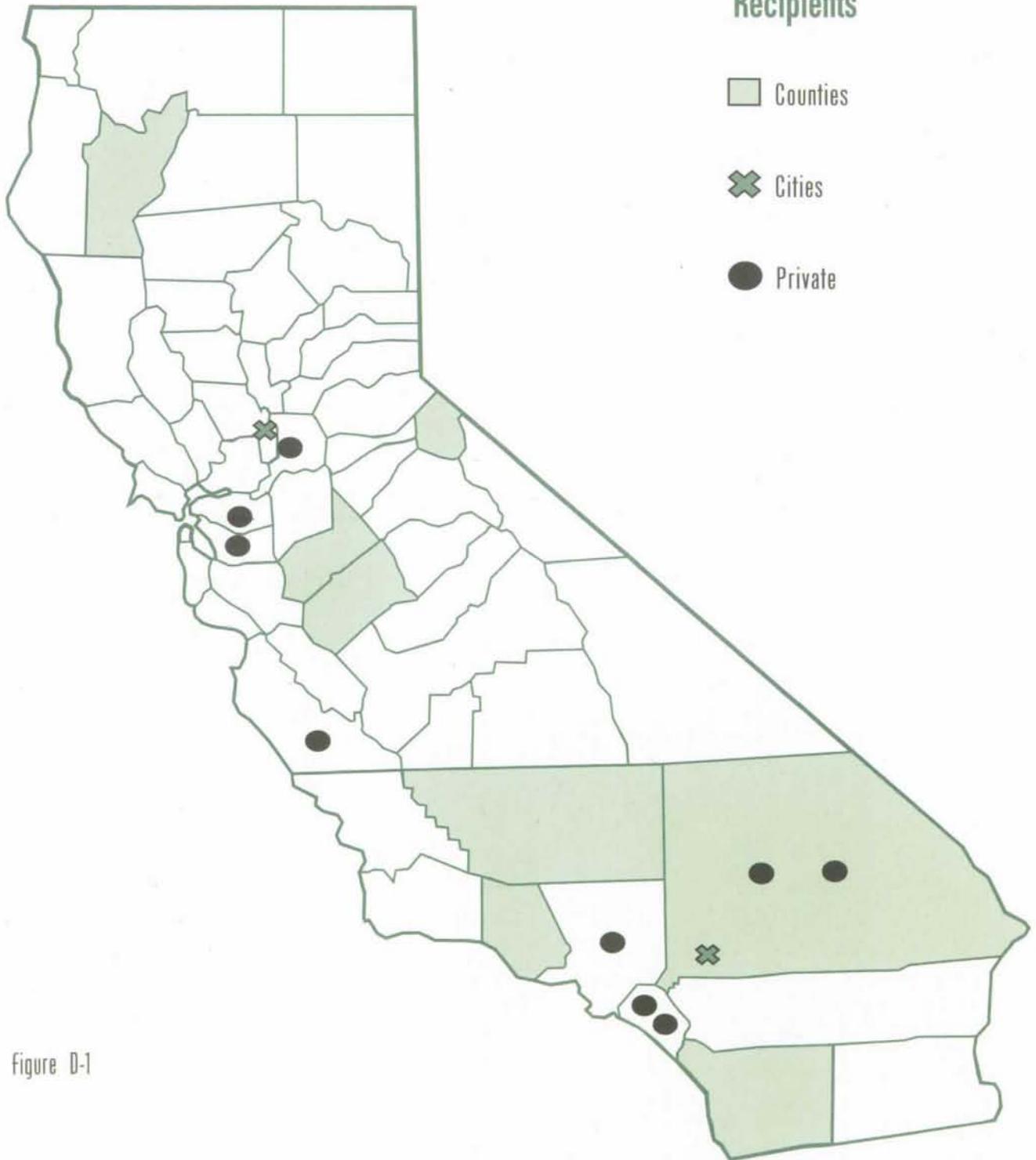


Figure D-1

Waste Tire Diversion and Disposal

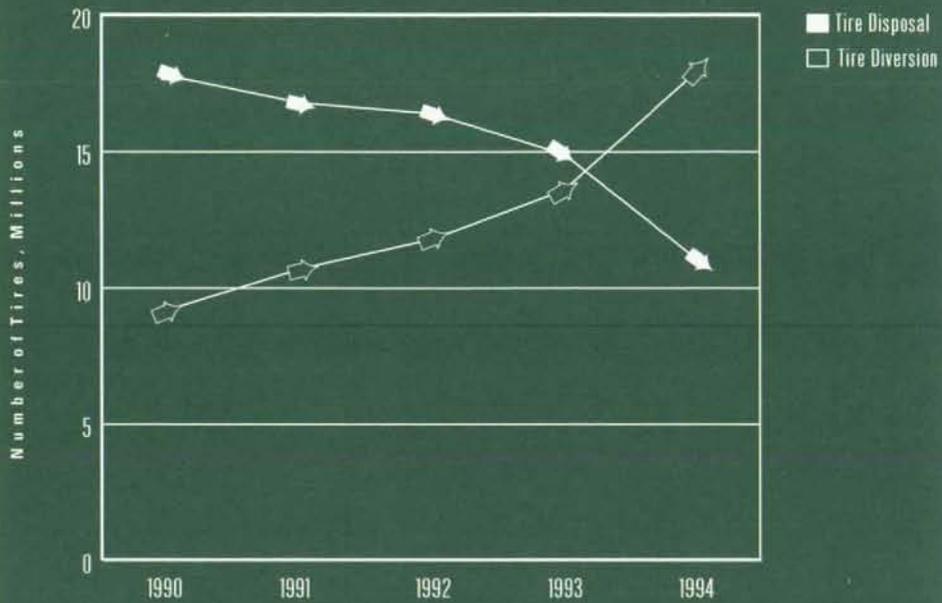


Figure D-2

Waste Tire Diversion

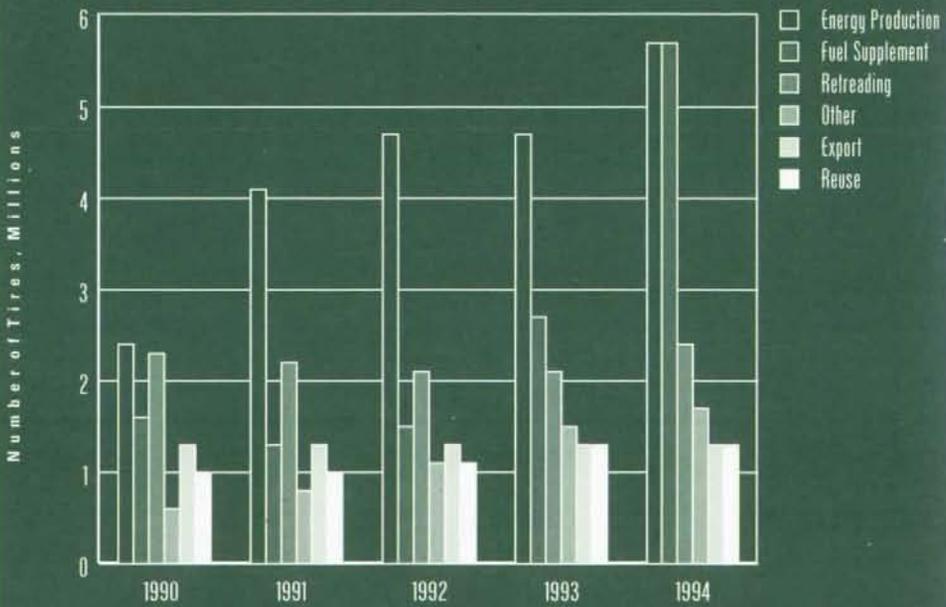


Figure D-3

industry has shown the greatest increase in waste tire consumption since 1990 and demonstrates the greatest potential for continued growth in the future. (See Figure D.3.)

Used Oil Program

The more convenient it is to recycle used oil, the more likely the public will do the right thing. As much as 50 million gallons of used oil is unaccounted for in California; presumably much of this is due to illegal disposal. Preliminary research shows that about one in five households may be dumping used motor oils in the trash, yard, or storm drain, or putting it into the garbage for disposal. Illegal disposal is a serious source of pollution because one gallon of oil dumped in a storm drain or waterway, or on the ground has the potential of contaminating over one million gallons of water. The IWMB has supported new public education and collection programs and efforts to improve participation in existing curbside collection programs. Funding for the used oil program comes from an assessment on lubricating oil manufacturers of 4 cents per quart under the California Oil Recycling Enhancement Act of 1991 [PRC 48600-48691].

Grants from the IWMB support a variety of local efforts to make it easier and more convenient for Californians to properly dispose used oil. During fiscal year 1993/1994, the IWMB approved block grant funding totaling \$14.5 million to 162 grantees representing 331 jurisdictions and 80 percent of the state's population. Block grants are available to local governments for establishing and maintaining local used oil collection programs. To be eligible for a block grant, a city or county must implement an education program to inform the public of locally

available used oil collection opportunities and ensure that at least one IWMB-certified used oil collection center is available for every 100,000 residents not receiving curbside collection of used oil. Figure D.4 shows the distribution of Used Oil Block Grants in 1994. Grants ranged from \$2,400 to \$2.4 million. Many plans called for establishment of certified used motor oil collection centers and others included the purchase and distribution of containers for used oil. Several of the public awareness campaigns included point-of-purchase informational materials, direct mailings, and bilingual materials.

New opportunities for the public to recycle used motor oil will dramatically increase as a result of IWMB's approval of \$8.4 million in opportunity grants approved for 54 city and county governments. Figure D.5 shows the distribution of Used Oil Opportunity Grants in 1994. The opportunity grants are to establish the collection of used oil and decreasing the amount of illegally disposed oil. Local governments plan to add additional certified used oil centers, curbside collection, and drop-off sites as a result of their efforts. The grants ranged from \$5,700 to \$500,000 and were awarded on a competitive basis based on criteria that included the applicant's ability to carry out the program with available funds, the cost-effectiveness of the programs, and collection opportunities for underserved areas.

One-time grants, totaling \$1.44 million, to publicize existing curbside used motor oil collection programs were also awarded to 46 jurisdictions that met the IWMB's eligibility requirements. The purpose of the grants was to maximize the level of participation in existing curbside programs.

"Through the efforts of our Green Team, LSI Logic has decreased usage of paper, increased usage of recycled products, and recycled over 300 tons of material a year. In 1993, the company saved over \$500,000 from its solid waste reduction efforts."

***-Linda Gee
Environmental Manager
LSI Logic Corporation
Semiconductor
manufacturer
Milpitas, California***

"At Yosemite Concession Services, we are already diverting over 50% of the waste we generate. We will continue to work on diverting as much material from the landfill as possible—the added motivation to save on landfill costs is very effective!"

***-Mark Gallagher
Recycling Manager
Yosemite Concession
Services
Yosemite National Park,
California***

California Used Oil Sales and Recycling Estimates

(millions of gallons per year)

	1993	1994
Lubricating Oil Sales	142	143
Industrial Oil Sales	96	92
Total Oil Sales	238	235
Lubricating Oil Recycled*	61	61
Industrial Oil Recycled*	14	16
Total Oil Recycled	74	77
Unadjusted Recycling Rate**	31%	33%
Adjusted Recycling Rate***	55%	58%

*Recycling facility estimates

**Unadjusted recycling rate is calculated by dividing the number gallons recycled by the number of gallons sold.

***Adjusted recycling rate reflects the estimated amount of oil consumed during use and, therefore, not available for recycling.

IWMB staff estimated that 60% of lubricating oil and 52% of industrial oil were available for recycling after use.

During 1994, IWMB staff estimate that 58 percent of the used oil available for recovery was recycled. (See California Used Oil Sales and Recycling Estimates table.) The products created from recycled oil are shown in Figure D.6.

Quarterly reports from used oil haulers and recycling facilities are the basis of this information.

As of December 31, 1994, the Used Oil Recycling Program certification staff received 1433 certification or registration applications. By the end of 1994, there were 977 certified used oil collection centers, 319 registered industrial generators, 49 registered curbside collection programs, and one registered electric utility throughout the state. Certification staff anticipates receiving another 500 certification applications through June 1995. During 1995, the IWMB will continue to seek out additional collection centers by working with automotive trade groups as well as oil companies and service station operators. The IWMB also certifies used oil recycling facilities and works with the Department of Toxic Substances Control to assure consistent facility inspections.

Developing and implementing an information and education program for the promotion of alternatives to the illegal disposal of used oil is required pursuant to PRC sections 48631 and 48642. In 1994, the IWMB identified the segments of the general public which contribute to the illegal disposal of used oil, and adopted a public education campaign to be implemented in 1995. Staff will also coordinate activities with local government educational programs and share information on those programs. The IWMB has contracted with the California Conservation Corps to develop and conduct classroom presentations at high schools statewide. The IWMB maintains a hotline (see discussion in Section: Public Perceptions and Practices) that the public can call for collection

Local government uses for the IWMB's used oil opportunity grants are diverse.

- *Santa Clara County will create a used motor oil collection program at seven high schools and colleges.*
- *Los Angeles County is establishing ten new oil collection sites.*
- *San Bernadino is adding a used oil curbside collection program for 40,000 city residents.*
- *Glendale will distribute 10,000 oil containers and 6,000 curbside collection containers.*
- *San Joaquin County will establish used oil collection opportunities at 14 marinas, 5 boat repair facilities and 6 rural sites.*

Products From Used Oil in 1994 (Gallons)

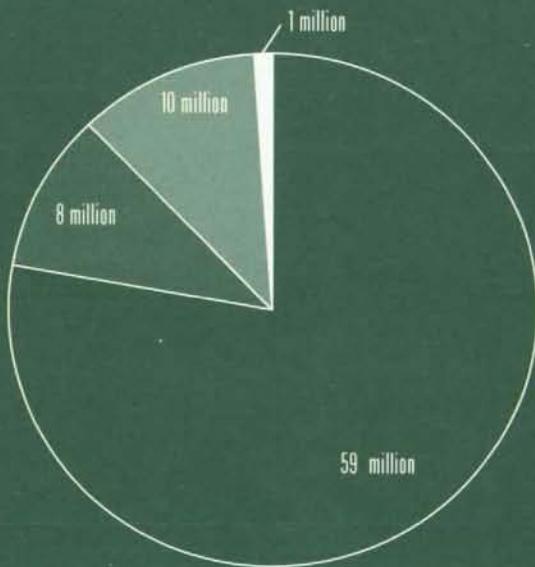


Figure D-6

site locations and information on used oil recycling. Staff have also attended numerous public events to promote used oil recycling.

Assembly Bill 2762 of 1994 allows the IWMB to establish a pilot program for recycling used oil filters on or before July 1, 1995, in conjunction with the Used Oil Recycling Program. The IWMB will operate the pilot program from July 1, 1995 to July 1, 1997, and prepare a report at the conclusion of the program. The pilot study is needed to ascertain the issues surrounding the collection of used oil filters from the public who change their own oil. These issues include the barriers to collection; the costs of collection, handling, processing, and recycling; and the efforts needed by collection program operators and local governments to provide collection. Staff will use the results of the pilot to develop policy recommendations.

Minor technical changes to the California Oil Recycling Enhancement Act may be pursued by the IWMB as the need for clarification or refinement is identified, such as:

- Board of Equalization recommendations on manufacturer fee collection,
- inoperative past mandates, and
- the definition of bulk oil.

Household Hazardous Waste Program

Household hazardous waste (HHW) is generated by homeowners when they discard products containing hazardous substances. The State Department of Toxic Substances Control (DTSC) makes the determination on what is a hazardous waste; in consultation with DTSC, the

IWMB implements a HHW program to provide uniform and consistent information on the proper disposal of hazardous substances found in and around homes.

While the federal government has excluded HHW from regulation, California requires specific procedures for its collection, storage, treatment, and disposal. The IWMB promotes state and local cooperation by providing grant funds and a broad range of technical assistance to cities and counties to eliminate HHW from the waste stream.

Technical Assistance

Beginning in 1993, technical assistance was expanded to rural counties that have not established HHW collection programs. The HHW Technical Assistance program helps local governments decrease the amount of HHW going into landfills.

The IWMB has collected data on HHW programs for several years through its grant program, surveys, and annual report forms. The information collected provides jurisdictions with useful information for initiating and continuing programs and focusing collection efforts for different HHW waste types, as well as dates of collection events for the IWMB's Recycling Hotline. Based on the annual report forms submitted to the IWMB, 16 million pounds of HHW was collected in fiscal year 1992/93. Of that amount collected, 64 percent was recycled and 34 percent disposed of in a proper manner. Statistical information for fiscal year 1993/94 collection events will be available in the spring of 1995.

The IWMB continues to support such efforts as the HHW Information Exchange, where local

and state government representatives gather to share information regarding HHW programs. Agencies share information on recurring circumstances in their programs and resolution of these issues. This effort has been ongoing since 1988.

To encourage the paint industry to provide recycling opportunities for unused paint, the IWMB chairs and participates in the Paint Task Force with DTSC, cities, counties, and the paint industry. Also, with IWMB funding and staff assistance, the Cal Poly San Luis Obispo Recycled Latex Paint Study is in its final year (of three years). The purpose of the study is to document whether paint collected at HHW collection programs contains hazardous constituents, to test the quality of recycled paint, and to develop a color-sorting protocol for local governments to increase the marketability of the recycled paint.

The Recycled Latex Paint Study's *Sampling, Testing, and Evaluation of Recyclable and Recycled Latex Paint: First Annual Report* is available from the IWMB. Paint sampling results from the first *Annual Report* indicates that paint would be considered hazardous, based on Title 22 Total Threshold Limit Concentrations, if it became a waste. The draft *Second Annual Report* indicates that recycled latex paint, made from mixtures of certain proportions of post-consumer paint and secondary latex paint (paint wash water), is as good a product as virgin latex paint. This is based on a battery of tests for common physical properties of paint such as viscosity, solids content, density, and minimum particle size.

Grant Program

The most successful program in encouraging

"Our continued research on environmental and recycled products gives clear indication that viable alternatives to virgin materials do exist. By combining our strengths, both business and government, we can continue in this positive direction—making economic and environmental progress."

**-Gavin Taylor
Vice President of
Marketing and Sales
Enviro-Tech
Resources Corp.
Retailer of environmentally
sensitive products
Encino, CA**

the establishment or expansion of local government household hazardous waste efforts is the IWMB's grant program. Through this program, established by AB 2448 (Chapter 1315, Statutes of 1987), the IWMB awards grants to cities, counties, and local agencies for programs that help prevent the disposal of hazardous waste, including household hazardous waste, at solid waste landfills. (See Figure D.7.)

As required by law, the IWMB gave priority to funding programs which provide for the following:

1. new programs for rural areas, underserved areas, and small cities;
2. expansion of existing programs to provide for the collection of additional waste types, innovative or more cost-effective collection methods, or expanded public education services; and
3. regional household hazardous waste programs.

The program funded two types of grants. Nondiscretionary grants reimburse jurisdictions for household hazardous waste programs implemented in the fiscal year prior to the grant application period. Discretionary grants are awarded on a competitive basis to provide funding to jurisdictions for new and expanded programs.

In 1994, household hazardous waste grants were awarded for a variety of activities, including funding for household hazardous waste public education and outreach programs; construction of permanent collection facilities; periodic, mobile, and curbside pickup collection programs; recycle-only programs for automotive

batteries, latex paint, and used motor oil; load checking programs; and programs that emphasize reducing, reusing, or recycling of household hazardous waste.

On March 30, 1994, the IWMB awarded \$4 million in nondiscretionary grants to 67 local governments for programs implemented in the previous year. This was the fourth and final cycle for the nondiscretionary awards.

Information and application instructions were made available to local government representatives and other interested parties in July for \$3 million in discretionary grant funding. Eighty-two applications were received by the September deadline. Household hazardous waste grant awards will be considered by the Board for adoption in 1995. Individual grants will not exceed \$120,000.

E. Partnerships with Local Government and Industry

Through IWMB partnerships with local government and industry, statewide solid waste diversion is on target and is projected to reach 25 percent in 1995. (See Figure ES.1.) Residential curbside collection and commercial source separation of recyclables, zoning changes for composting, and residential drop-off and buyback centers are the most numerous types of existing and planned programs, as shown in Figure ES.2. The IWMB provided the Legislature with a complete summary of California jurisdictions' progress in implementing waste diversion in the report *25 by 95: A Status Report on Meeting Solid Waste Diversion Mandates (Status Report)*. The *Status Report* is required by AB 440 [Chapter 1169, Statutes of 1993, PRC Section 41821(e)].

1994 HHW
Grant Recipients
(Non-discretionary)

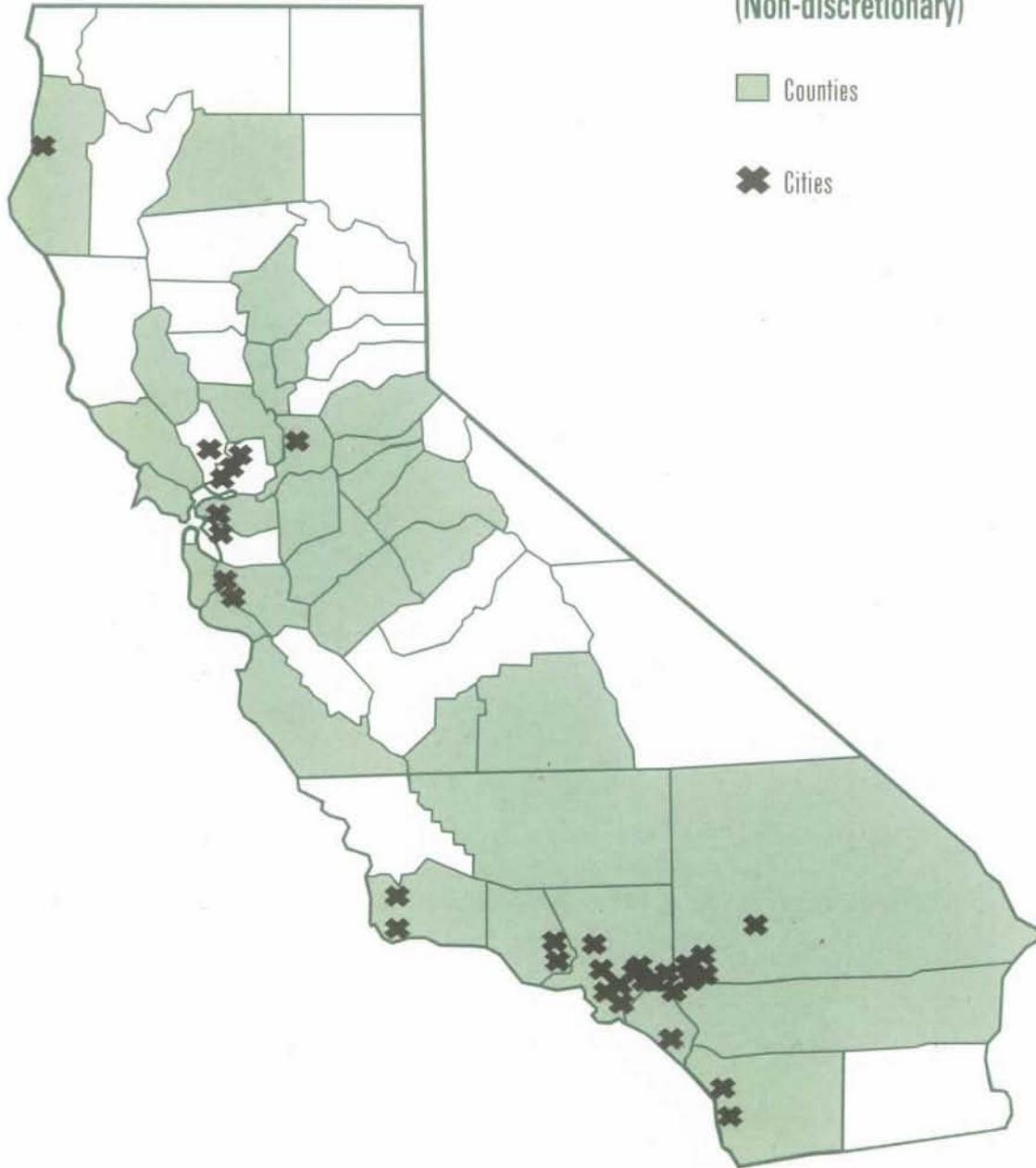


Figure D-7

"I would like to compliment...the Office of Local Assistance staff for the extraordinary job you did on the March 1994 issue of Infocycling. It presented regulations in a very simple and precise manner that was easy to understand and follow."

**-Mark H. Gauerke
Resource and Sanitation
Manager,
Culver City**

Strategies pursued by the IWMB to encourage cooperative partnerships with local government and industry include frequent and consistent communication with local government and industry, technical assistance to local governments, model programs and other educational tools for use by local governments and industry, and development of reasonable regulation through dialogue with the regulated community. The response to these procedures has been rewarding for those concerned, according to letters received.

Communication

Progress toward achieving "25 by 95" is facilitated by frequent and consistent communication among the IWMB, local governments, and industry. Communications with industry are primarily discussed in the subsection titled Markets for Recyclable Materials. IWMB activities which promote communication with local governments include the newsletter titled *Infocycling*, timely review and compliance eval-

uations of local government planning documents, input from the Local Government Technical Advisory Committee, and the Local Assistance Reference Library. The latter three activities are discussed below.

Plan Review and Compliance

As a result of the passage of Assembly Bill 440 in 1993, all of the cities, counties, and regional agencies in California were required to submit final Source Reduction and Recycling Elements (SRRE), and Nondisposal Facility Elements (NDFE) to the IWMB in three phases during 1994. Status Reports were also required to be submitted by October 1, 1994. These elements, along with many Household Hazardous Waste Elements (HHWE) and the Status Reports, were reviewed by IWMB staff to evaluate compliance with PRC Section 40900 et seq. The review results as of November 1, 1994 are presented in the following table.

Review Results for SRREs, HHWEs, and NDFEs

Review Results	Plans		
	Source Reduction and Recycling Elements	Household Hazardous Waste Elements	Nondisposal Facility Elements
<i>approved</i>	97	69	89
<i>conditional approval</i>	14	0	1
<i>disapproved</i>	5	0	0
<i>total received</i>	289	220	230

The PRC and the California Code of Regulations also contain provisions that allow qualifying cities or counties to petition the IWMB to reduce the 1995 and 2000 diversion requirements. During 1994, seven counties and 16 cities had petitioned the IWMB for a reduction in their 1995 diversion requirements; after review by the Board, all 23 jurisdictions were granted reductions. Two counties petitioned for, and received, a reduction in the 50 percent by 2000 diversion requirement.

Local Government Technical Advisory Committee

The Local Government Technical Advisory Committee (LGTAC) was formed in 1991 with the passage of Senate Bill (SB) 487, [PRC 40700-40713]. LGTAC was established to provide advice to the IWMB in carrying out the requirements of the IWM Act, as these relate to the management of solid waste by local governments. The committee members are city, county, and special district employees with demonstrated experience and expertise in solid waste collection, source reduction and recycling, planning, or disposal.

During 1994, LGTAC completed its Strategic Plan and conducted meetings throughout the state to receive comments from local governments. LGTAC also provided valuable input to staff and made recommendations to the IWMB regarding policies, regulations, and programs. New legislation passed this year extends the life of LGTAC until 1999.

Local Assistance Reference Library

In response to a questionnaire mailed last June, several jurisdictions requested that the Office of Local Assistance (OLA) create a library of infor-

mation accessible to local governments. The OLA library includes copies of franchise agreements, regional agency agreements, joint powers agreements, memorandums of understanding, ordinances, ballot items, resolutions, public education materials, and any other items jurisdictions make available to the IWMB. The documents can be used as examples so that jurisdictions just beginning the process of developing such materials do not need to start from scratch. For instance, if illegal dumping is a concern in your area, you can call to get copies of illegal dumping ordinances used by other jurisdictions. This should save staff time in both researching and writing such ordinances.

Technical Assistance

IWMB staff worked closely with local governments throughout California as they prepared and submitted planning documents to the IWMB for approval. In addition, the IWMB continued its work with local governments to assure that there will be adequate future landfill capacity.

Staff assisted local governments in the preparation of Solid Waste Generation Studies, Source Reduction and Recycling Elements, Household Hazardous Waste Elements, Nondisposal Facility Elements, Countywide Siting Elements, Countywide Integrated Waste Management Summary Plans, Status Reports, Annual Reports, Petitions for Reduction, agreements to develop regional diversion and disposal facilities, and Recycling Market Development Zone applications.

"Thanks again for all of the help ... on the SRRE and NDFF submittals. I really appreciate your expertise, patience, and guidance throughout the process!"

**-Noel A. Bonderson
Director,**

**Air and Waste
Management Agency**

**Jackson, Amador
County, California**

"I want to thank you for arranging for [staff] to travel to Inyo County ... [to] assist me with the refinement of the SRRE Waste Diversion Petition. This hands-on assistance is critical, especially in rural areas with limited resources."

**-Chuck Hamilton
Deputy County
Administrator**

The IWMB's technical assistance also included:

- providing technical information to the Legislature for the development of Assembly Bill 688 (Sher), Chapter 1227, Statutes of 1994, which provided relief to some rural jurisdictions and jurisdictions which host regional medical waste treatment facilities;
- developing guidelines and procedures for preparing Solid Waste Generation and Characterization Studies, Source Reduction and Recycling Elements, Household Hazardous Waste Elements, Nondisposal Facility Elements, Solid Waste Facility Siting Elements, Countywide and Regional Integrated Waste Management Plans; and
- preparing a statewide Disaster Response Plan to help local governments divert or dispose solid waste resulting from a natural disaster or emergency.

The IWMB is developing a database and methodology to assist local jurisdictions in the siting of landfills needed to assure that each has sufficient disposal capacity. The results of this effort will be used to provide updated, accurate information on landfill capacity; assist local governments in determining how they will meet the 15-year disposal capacity mandate [PRC 41700-41703]; suggest available strategies for ensuring adequate capacity; and provide landfill operators with standard methodologies to determine remaining capacity.

In 1992, the IWMB produced *Reaching the Limit: An Interim Report on Landfill Capacity in California*, a compilation of information from Countywide Local Task Forces on remaining capacity within their jurisdictions. The report

documents that one-half of all counties within the state, which represent approximately 70 percent of the state's population, had less than 15 years of remaining capacity as of January 1990.

Consequently, each landfill operator in the state was requested to complete a survey which included verifying and updating existing data as well as describing the methodology used to determine remaining capacity; approximately 70 percent of the landfills responded. The IWMB conducted a series of workshops this year on the compiled capacity information as well as discussion of strategies to assist local government in achieving the 15-year capacity mandate. Additional data was collected by IWMB staff during a series of Local Enforcement Agency roundtable meetings throughout the state. Workshops are anticipated to be held in early spring of 1995, with a complete report available for public distribution shortly thereafter.

Model Programs

The IWMB developed and distributed several planning document models for use by jurisdictions. A number of jurisdictions have used the models and, as a result, have been able to save a significant amount of time and money. Models included a Countywide/Regional Integrated Waste Management Summary Plan, a Countywide/Regional Siting Element, a Nondisposal Facility Element, and an AB 440 Status Report on jurisdictions' waste diversion progress.

The IWMB developed additional tools to assist local governments in their disposal reduction planning, including *The Rural Cookbook*:

Recipes for Successful Waste Prevention and Diversion Programs and *The Facility Cost Model (FCM) and Workbook*. These materials also help to facilitate direct dialogue between local governments and industry in the exploration of potential feasibility for particular rural programs and facilities. The *Cookbook* is a valuable compendium of successful case studies and available funding sources for rural jurisdictions; updates will be provided periodically. This reference manual has been well-received by rural jurisdictions. The FCM is a computer-based application designed to assist cities and counties to plan lower-cost facilities; the *Workbook* provides an explanation of how to use the FCM, an analysis of the FCM, results from a field test, and sources of cost data.

The FCM facilitates planning of waste management systems; quantifying facility capital, operating, and transportation costs; and comparing the costs. Users can apply the FCM to any type of facility and can evaluate regional waste management systems or stand-alone facilities. A primary strength of the FCM is that it allows users to isolate cost variables to see how outputs change when they vary assumptions such as operating equipment or lease/purchase agreements. Based on user inputs, the FCM generates charts illustrating the breakdown of costs.

While developing the FCM, IWMB staff worked with local jurisdictions in a field test and later conducted a series of technical assistance workshops to ensure the final product served the needs of local governments. IWMB staff revised the *FCM Workbook* based on comments from field test and workshop participants, and

Version Two is now available in Excel 4.0 for Windows or in a Macintosh format.

Regulation Development in Dialogue with the Regulated Community

The IWM Act presented the IWMB with a new version of a classic management problem: how to accurately measure success of a new program in producing its intended improvements. AB 2494 (Chapter 1292, Statutes of 1992) changed the way jurisdictions will measure compliance with the solid waste diversion mandates. The change is from a generation-based to a disposal-based system. The new disposal-based system retains the practical features of the previous system and simplifies performance measurement.

The Problem

The original generation-based system put in place by AB 939 required jurisdictions to quantify waste generation (generation = disposal + diversion). Each jurisdiction was required to quantify all generation in their base-year solid waste generation studies (SWGS). They were then required to undertake another comprehensive study of disposal and diversion in 1995 to find out if they met the 25 percent goal, and repeat this study again in 2000 to find out if they met the 50 percent diversion goal. Each city or county had to individually measure progress toward the diversion mandates, even if they were taking part in regional diversion programs and had a regional disposal system. This individual measurement offset many of the cost savings of being in a regional organization.

Jurisdictions found that it was very difficult and costly to obtain accurate information on quantities and types of diverted materials. Waste prevention is particularly difficult to quantify. The high costs of quantifying waste prevention caused many jurisdictions to be reluctant about using waste prevention programs for more than a small portion of the diversion mandates. Haulers, transfer station operators, and disposal facility operators were deluged with a multitude of jurisdiction requests for the same data in different forms and formats.

The Solution

Diversion "credits" are no longer an issue. Progress toward the 25 percent and 50 percent goals will be measured by comparing reductions in disposal amounts, as measured by the disposal reporting system, to the calculated maximum allowable disposal tonnage. (Diversion data is still needed for planning, market development, and research and development, however.) Jurisdictions are only required to report on recycling and composting programs that they fund or operate. This diversion information was requested in the AB 440 Status Report and will be included in each jurisdiction's Annual Report to the IWMB. Jurisdictions no longer need to quantify waste prevention, private sector recycling, and private sector composting.

The IWMB developed a disposal reporting system which will provide jurisdictions and the IWMB with accurate information on the amount of solid waste disposed by each jurisdiction. Jurisdictions will determine whether they have met the 25 percent disposal reduction goal by determining the amount of solid waste they dispose from January 1, 1995 to December 31,

1995. Under this new system, put in place by AB 2494 and AB 440, cities and/or counties can work together and measure progress toward the diversion goals as a group. Regional measurement of disposal amounts can greatly simplify reporting for both disposal facilities and jurisdictions. Instead of tracking, allocating, and assigning waste quantities to numerous cities and/or counties of origin, the total amount disposed would be attributed to the region as a whole. For more information, refer to CCR Section 18800 et seq. or contact the Waste Characterization and Analysis Branch.

Local jurisdictions and the commercial waste management industry indicated a strong desire for a full partnership with the IWMB in developing the solid waste measurement system and adjustment formula for calculation of maximum allowable disposal tonnage. The IWMB organized the projects to maximize public involvement through the use of a working group in addition to the general public's input. The 35-member working group consisted of local jurisdiction officials, commercial waste haulers and landfill operators, members of public interest groups, the military, industry consultants, and academicians.

Waste production is affected by factors such as population changes, economic conditions, and disasters which are outside of a local jurisdiction's control. The adjustment method allows jurisdictions to measure the effectiveness of their diversion programs in meeting the goals, by removing the effects of these uncontrollable influences from the calculation. This adjustment method was developed through an interagency agreement with the University of California at Los Angeles and tested in jurisdictions through-

"The factors chosen for the [waste generation estimation] formula seem to be the most appropriate ones ... and it's simple to operate."

*-Michael Mohajer,
Assistant Division
Engineer, Department
of Public Works,
Los Angeles County*

out the state prior to IWMB approval. The adjustment method will yield the estimated amount of waste generated for the goal years of 1995 and 2000. The method is also used as a solid waste generation estimation and projection tool by local jurisdictions and was used by the IWMB to project statewide waste diversion achievement depicted in Figure ES.1.

Actual disposal is compared to maximum allowable disposal with adjustments for changes in population, employment, and taxable transactions to determine if the goal is met. The methodology successfully embodies the desired design goals of simplicity, low cost, validity, and flexibility. The Board approved the method in 1994. Draft regulations are being developed by

IWMB staff and a computer-based automated calculation program is being developed to assist local jurisdictions.

The Base Year Adjustment Method User's Guide which will soon be available, explains the step-by-step methods for accomplishing critical tasks including how to gather the data, make the required calculations, and report the results to the IWMB.

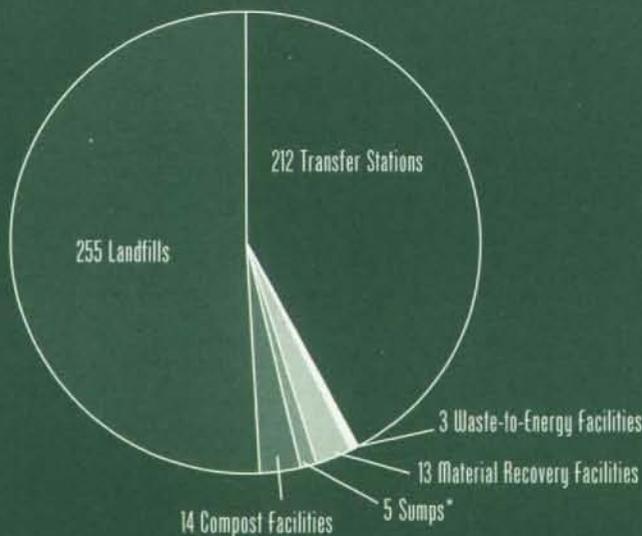
F. Regulation and Solid Waste Facility Management

Many of IWMB's responsibilities involve regulation of solid waste facilities. Figure F.1 shows the number of solid waste facilities the IWMB oversees. Two goals define the framework for

the Board's activities: (1) provide a predictable, efficient, and reliable regulatory structure and (2) work with local governments and industry to assure the safe, environmentally sound, and effective operation of all solid waste operations in California. Major accomplishments during 1994 include solid waste disposal and codisposal cleanup; Local Enforcement Agency

Solid Waste Facility Types

(Operating as of November 1994)



*Surface impoundments for Geothermal Drilling Wastes

NOTE: This pie chart represents facilities which are required to obtain a Solid Waste Facilities Permit.

Figure f-1

(LEA) certification and evaluations; tire facility enforcement, registration, and permitting; and solid waste facility management research.

Solid Waste Disposal and Co-disposal Cleanup Program (AB 2136)

Assembly Bill 2136 (Chapter 655, Statutes of 1993) requires the IWMB to initiate a program for the cleanup of solid waste disposal sites under certain circumstances. Specifically, the IWMB is required to provide for cleanup when the responsible party either cannot be identified, or is unable or unwilling to pay for timely remediation, and the public health, safety or environment are threatened. Funded by an \$8 million first-year appropriation during FY 1993-94 and \$5 million each year thereafter, the IWMB can facilitate the cleanup of these illegal sites by:

- using IWMB's contractors,
- providing matching grants to local governments for site cleanup,
- providing grants to certified local enforcement agencies (LEA), and
- providing loans to responsible parties who demonstrate the ability to repay the loans.

Among those items eligible as site cleanup projects are:

- waste removal and disposal, fencing, signage, grading, and cover;
- slope stabilization, erosion control, and drainage systems;

- gas and leachate control and monitoring systems; and,
- extinguishing underground landfill fires.

Items not eligible in site cleanup projects include:

- operation and maintenance of leachate, surface water, or vadose zone monitoring systems;
- groundwater remediation;
- costs of closure;
- closure or postclosure maintenance plans;
- postclosure maintenance services; and
- improvements to property for postclosure land uses.

A database of 314 potential sites for AB 2136 funding has been developed. Of these, 111 sites have been investigated, with 39 sites considered eligible for funding and 72 sites considered ineligible.

Since the implementation of the program in January 1994, the IWMB has approved the following 12 sites for remediation. Figure F.2 shows the locations of these sites.

- Caspar Landfill in Mendocino County (matching grant) - installation of gas collection system, leachate collection system, and cover to prevent further degradation of groundwater on a 16-acre landfill.
- Essie Haywood Illegal Disposal Site in Tulare County (LEA grant) - cleanup of illegally disposed waste and installation of fences and posting of signs on a 37.5-acre site.

AB 2136 Sites



Figure F-2

- Weitchpec Illegal Disposal Site in Humboldt County (IWMB-managed contract) - cleanup of illegally disposed waste in conjunction with the building of a transfer station by the Yurok Tribe.
- Foster Road Illegal Disposal Site in Riverside County (IWMB-managed contract) - cleanup of illegally disposed waste on a 2.5-acre site.
- Long Illegal Disposal Site in Amador County (IWMB-managed contract) - cleanup of illegally disposed waste on a five-acre rural residential site.
- Igo/Ono Illegal Disposal Site in Shasta County (IWMB-managed contract) - cleanup of 40 acres of illegally disposed waste.
- Duckpond Landfill in San Diego County (IWMB-managed contract) - retrofitting derelict gas collection system and flare station on a 3.7-acre landfill.

- Mountain Meadows Illegal Disposal Site in Lassen County (IWMB-managed contract) - cleanup of ten acres of illegally disposed waste.
- Berryessa Illegal Disposal Site in Napa County (IWMB-managed contract) - cleanup of one-half acre of illegally disposed waste.
- Jamacha Landfill in San Diego County (matching grant) - installation of gas collection system on a closed 46-acre landfill.
- Valley Center Landfill in San Diego County (matching grant) - installation of gas collection system on a closed 26-acre landfill.
- Graniteville Illegal Disposal Site (IWMB-managed contract) - cleanup of 5 acres of illegally disposed waste.

This is an ongoing program with IWMB staff continuing to investigate and evaluate sites as proposed by local governments, Regional Water Quality Control Boards, and the LEAs. The best candidate sites are taken to the Board for approval. Of the \$13 million available to date, \$8.3 million has been encumbered, with \$4.7 million programmed for encumbrance during the balance of the current fiscal year.

Local Enforcement Agency Certification and Performance Evaluations [PRC 43200-43221]

LEAs are empowered by the state to enforce laws and regulations and implement IWMB policies for the correct operation and closure of California's solid waste facilities. LEAs also establish and enforce local ordinances adopted pursuant to solid waste statutes and regulations.

LEAs are designated by their local governing body. To ensure they are implementing local programs pursuant to statute and regulation for the protection of public health and the environment, all LEAs must be IWMB-certified. To date, 57 LEAs have been certified by the IWMB. This certification indicates that each LEA has its own enforcement program plan to implement the permitting, inspection, and enforcement duties and responsibilities for its jurisdiction. In some cases, LEA jurisdictions include multiple counties.

The IWMB's Permitting and Enforcement Division staff provide training for LEAs in permitting, inspection, and enforcement for all types of solid waste facilities and disposal sites. Additionally, the Permitting and Enforcement Division publishes LEA Advisories to give guidance to and set IWMB policy for LEAs. The IWMB also provides a total of \$1.5 million grant monies to LEAs to enhance their permitting and enforcement programs.

The IWMB is required to evaluate each LEA performance every 18 months to make certain that the LEA:

- continues compliance with its certification requirements;
- provides consistent enforcement of statutes and regulations pertaining to the handling and disposal of solid waste; and
- implements its IWMB-approved Enforcement Program Plan (EPP), an administrative enforcement plan to implement duties and responsibilities in the jurisdiction.

To date, 25 LEAs (45 percent) have been scheduled for evaluation. Evaluations have been

completed for 15 LEAs. Overall, LEAs are expanding and enhancing their initial EPPs to provide for ongoing implementation of their enforcement programs and changing needs of the State program.

The IWMB facilitates communication with LEAs through a quarterly "roundtable" forum. During forums, LEAs address program implementation issues and concerns and relay their feedback to various IWMB divisions.

Another avenue of communication exchange occurs through meetings with the California Conference of Directors of Environmental Health, the California Conference of Local Health Officers, and the California Environmental Health Association. Most LEAs and their directors are public and/or environmental health agencies and participate in solid waste issue development.

The IWMB is developing decertification regulations pursuant to AB 939 and AB 1220. Prior to beginning the formal process, the proposed regulations will be presented for review and comment to the Enforcement Advisory Council (EAC), LEAs, landfill operators, and other interested parties.

The Enforcement Advisory Council (EAC) was created by the IWMB in 1983, to advise the IWMB in matters of solid waste management. The nine-member EAC represents various regions of the state and disciplines engaged in solid waste enforcement. The EAC works to achieve a coordinated, consistent statewide enforcement program by providing ongoing communication and a partnership between LEAs and the IWMB. Through LEA roundtable and EAC discussions, the IWMB can develop a more

complete understanding of emerging issues and policies.

The IWMB and LEA mission is protection of public health and safety and the environment through implementation of the state and local programs and laws, as well as open communication and a partnership in meeting these goals.

Waste Tire Management

Tire Facility Enforcement, Registration, and Permitting [PRC 42800 et. seq.]

In 1990, the Legislature enacted comprehensive requirements for the storage and disposal of waste tires. These new requirements were intended to address potential fire and health risks posed by the growing number of tire sites in California.

Final regulations for permitting major and minor waste tire facilities were adopted in 1993. With specific exemptions, all waste tire facilities are required to have a permit from the IWMB. The final regulations also provide waste tire storage and disposal standards for sites with 500 or more waste tires.

In addition, the IWMB sponsored a training program through the California State Fire Marshal's Office to address tire fire concerns. The "Rings of Fire" training program focuses on fire prevention, current research, pre-incident planning, fire suppression, and firefighter safety.

Waste tire sites that do not meet the storage and disposal standards, and those requiring a permit but operating without one, are subject to enforcement action by the IWMB. Personnel from the IWMB Enforcement and Permits

Branches work together to identify and inspect facilities operating in violation of the Waste Tire Facility Regulations. As a result, remediation at several waste tire sites has occurred.

1994 Waste Tire Accomplishments

- *Sponsored the "Rings of Fire" training program through the California State Fire Marshal's Office.*
- *Conducted training sessions for LEAs summarizing waste tire facility permit requirements and waste tire facility minimum standards.*
- *Reviewed more than 65 waste tire facilities permit applications and approved 23 sites to receive or process waste tires.*
- *Conducted 55 waste tire site inspections resulting in 27 Notices of Violation issued. Corrective Action Plans have been submitted by eight waste tire sites.*
- *Adopted emergency regulations for Waste Tire Hauler Registration Program.*
- *Issued approximately 1000 waste tire hauler vehicle registrations to more than 160 companies.*
- *Mailed 100,000 manifest forms to registered waste tire haulers.*

Waste Tire Hauler Registration Program [PRC 42950 et. seq.]

In 1993, the Legislature enacted requirements for the transportation of waste tires. These new requirements are intended to discourage the illegal disposal of waste tires and to provide a

uniform statewide program for waste tire haulers.

On or after January 1, 1995, the law requires any person who gives contracts, or arranges with another person to transport waste tires to use only a IWMB-registered waste tire hauler, unless the hauler is exempt. Furthermore, waste tire haulers are required to transport the waste tires only to facilities authorized to accept waste tires. The program also requires a waste tire manifest system and manifest form for registered waste tire haulers.

Solid Waste Facility Management Research

During 1994, the IWMB continued activities that place it in the forefront of solid waste facility management research. Research during the year focused on protection of public health.

Aspergillus Technical Bulletin

In response to questions raised by a number of LEAs, the IWMB issued a technical bulletin explaining the potential adverse health affects of exposure to *Aspergillus fumigatus*, one of the many microorganisms involved in the decay of leaves and organic matter. The bulletin explained that the spores of *Aspergillus* are very common in the environment and generally have a negligible impact on humans. However, there are certain "high risk" people who develop illnesses when exposed to large concentrations of *Aspergillus* spores.

Well-designed and properly run compost operations will cause minimal increases in *Aspergillus* spores beyond the site boundaries. The bulletin recommends that compost facility operators adhere to state and federal

regulations and use techniques such as water sprays and avoiding turning compost materials on windy days to minimize dust and airborne transmission of spores.

Medical Waste Survey

California's Medical Waste Management Act of 1990 defines "treated medical waste" as municipal solid waste. To better understand the magnitude of the impact of medical waste on municipal solid waste facilities and programs, the IWMB commissioned a survey of medical and dental care providers. The study was designed to determine the number of generators as well as the composition and quantities of medical waste being created in California. The survey also attempted to determine how much medical waste is treated by onsite and offsite treatment facilities.

Study results indicated that approximately 50,000 tons per year of medical waste are treated by offsite facilities which accounts for about 0.15 percent of total solid waste. The survey found that "sharps" (needles, scalpels, etc.) constituted the largest component followed by blood products/body parts, and laboratory wastes. However, the composition varied widely between physicians, dentists, veterinarians, hospitals, large clinics, etc.

Although the study did not indicate significant environmental or occupational health concerns, there is anecdotal evidence that the waste management industry should increase its diligence in the handling and disposal of treated medical waste. The IWMB has shared its findings with local municipal and medical waste enforcement agencies.

"The hospital has reduced its trash disposal needs by 50% with total savings to date estimated at over \$100,000. The cost savings alone speak strongly for the continuation of the facility's waste reduction efforts."

*-Christine Vandoren
Materials Manager,
AMI South Bay
Hospital,
Redondo Beach,
California*

**I I I . L O C A L
G O V E R N M E N T
H I G H L I G H T S**

A

ccomplishments of ten outstanding local government jurisdictions are reported in the third section, Local Government Highlights, to recognize the major progress which has occurred since enactment of the IWM Act. The efforts of these jurisdictions are representative of many of the 527 throughout the state.

This year, ten local governments are featured in the IWMB Annual Report. It is appropriate to recognize the outstanding efforts of local governments, in partnership with the IWMB, to motivate the necessary changes in waste generating attitudes and practices.

Ten notable jurisdictions with highly effective IWM programs are featured. They are:

1. Oakland and Berkeley
2. County of Los Angeles
3. San Jose
4. Humboldt County
5. Long Beach
6. City of Los Angeles
7. City of San Diego
8. City of Chino
9. City of Redding and Shasta County
10. Manteca

Selection criteria included, but were not limited to,

- highly effective integrated waste management programs;
- projected diversion equal to or greater than 25 percent by 1995;
- location in a proposed or designated Recycling Market Development Zone;
- balanced representation of rural, suburban, and urban jurisdictions;
- balanced representation of cities and counties;
- innovative programs, and/or;
- planned or existing special facilities or systems;

O a k l a n d a n d B e r k e l e y

are adjacent cities located on the east side of San Francisco Bay.



akland and Berkeley have been actively promoting the concept of waste prevention since the 1970s. The City of Oakland has had "metered" garbage collection service since at least 1978. In 1991, the residential rate structure was modified to include an additional 20 percent surcharge on all garbage service beyond the first 32-gallon can, and a 20-gallon "mini-can" option was introduced. Berkeley also has a unit pricing system with a 13-gallon "mini-can" rate.

Oakland has provided city-wide residential curbside recycling for all single-family and a majority of multi-family households for the past two years. The commercial sector is served through technical assistance offered by the City. The City is coordinating a recycling coop program between two merchant districts and a recycling service provider with funding from a grant by the Alameda County Recycling Board. Health care providers and hospitals have been assisted by the City's solid waste assessors which offered detailed recommendations for medical waste reduction and management. An educational video was produced and a workshop was held to communicate implementation alternatives and benefits.

Berkeley was one of the first cities to require that all applicants for construction and demolition project permits and conditional use permits include recycling plans. In early 1995, the City will provide every household with a choice of a 64 or 96-gallon container for the separate collection of green waste; the carts are expected to increase participation in the four year old program which began with bagged pickup. The growth of yard waste and curbside programs as well as aggressive marketing of commercial recycling will put Berkeley at a 27 percent diversion rate in 1995. The City "closes the loop" through its Buy Recycled program which resulted in the purchase of a half million dollars in recycled bulk bags for reuse, a paper reuse processing company, and a plastics recycling company. In two years, these businesses have created more than 130 new jobs in the RMDZ, while diverting 100,000 tons of material from area landfills.

Top Photo:

Berkeley's famous discard management center, Urban Ore, began salvaging recyclables from the incoming waste stream in the late 1980s. They also operate a general store and building materials exchange.

Bottom Photo:

Schnitzer Steel Products Co. processes white goods and other metallic discards in Oakland.



The County of Los Angeles

is located in southern California.

Top Photo:

Woody Woodpecker, L.A. County's official recycling mascot, promotes the new three Rs: reduce, reuse, & recycle with kids throughout the county.

Bottom Photo:

Master Composter volunteers provide technical assistance to backyard composters.

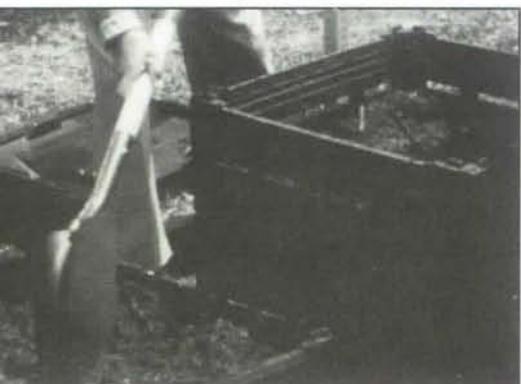
T

o promote waste reduction, the County is providing technical assistance, education, and promotion programs which most notably include the Master Composting Program. The program is countywide and coordinated in partnership with the University of California Cooperative Extension and cities throughout the county. Building on the success of the Master Gardener model of a well-trained and motivated volunteer work force, the Master Composter program is a great success. The program recruits volunteers and provides 24 hours of training on backyard composting to volunteers who pledge a minimum of 50 hours community service that includes making presentations to schools and civic and community organizations as well as staffing demonstration sites. The County is also implementing a business recycling program in the unincorporated areas using Master Recyclers who will assist commercial and industrial businesses with their recycling programs.

The County's overall public education efforts are promoted by their official mascot, Woody Woodpecker, who is provided to the County through a gratis license with MCA/Universal Merchandising, Inc. The County also has a hotline number for citizens to call for answers to recycling questions.

The L.A. County Recycling Market Development Zone (RMDZ) was designated by the IWMB in July 1994 and is located in Southeast Los Angeles County. The Zone has one of the largest concentration of industries, manufacturing plants, and commercial businesses in the United States.

Recognizing the value to the RMDZ program of networking with a well established, highly motivated, and organized work force, the zone administrator plans to work closely with realtors and chambers of commerce to inform them of the incentives offered to RMDZ businesses. Subsequent plans are to coordinate with banks and lending institutions regarding the economic viability of new and emerging recycling technologies. As a result of the County of Los Angeles' philosophy of broad-based cooperation, it is expected that they will fully achieve the legislatively-required 25 percent diversion rate by 1995.



San Jose

the capital of the Silicon Valley, is the third largest city on the west coast and is located at the southern tip of San Francisco Bay.

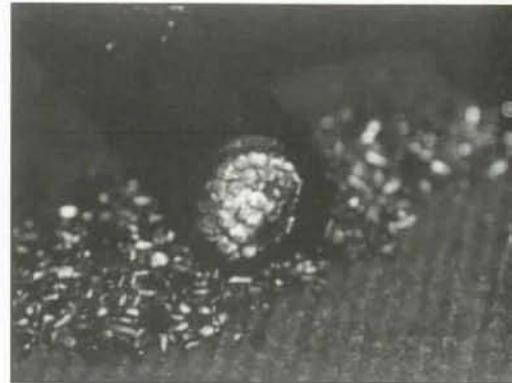
R

ecycle Plus, an expanded curbside recycling program launched in mid 1993, has enabled San Jose to surpass the State's 1995 landfill diversion goal of 25 percent. San Jose now is focusing on its commercial waste stream to meet the year 2000 mandate of 50 percent.

San Jose is dedicated to "closing the loop" through the attraction and expansion of "green industries" that manufacture products from recycled feedstock. Towards this end, San Jose established an \$800,000 Green Industry Fund in 1993 to provide gap financing and location incentives to such businesses. In 1994, the IWMB awarded the status of Recycling Market Development Zone (RMDZ) to the entire 170-square-mile City of San Jose. San Jose designated specific Green Industry Target Areas to overlap with the City's existing Enterprise Zone (EZ) Target Areas. Businesses located in these areas benefit from State EZ tax incentives as well as local construction-related tax waivers and appropriate zoning to ease permitting. San Jose's RMDZ is a full service program: providing assistance with site selection, financing, permitting, and sourcing of feedstock.

San Jose's Office of Economic Development, Environmental Services Department, and General Services/Purchasing Department work as a team to promote new markets for recycled feedstock. San Jose administers the University Partnerships: Green Industry Grant Program which sponsors specific studies to help overcome product design, manufacturing, and market barriers, and to identify new applications for recycled materials. San Jose also has a source reduction and recycled purchasing policy. In 1994, recycled content purchases totaled \$1.9 million.

The City of San Jose, PG&E, and a joint partnership of Silicon Valley businesses opened the nation's first Environmental Business Cluster in 1994—an incubator for startup environmental technology businesses.



Top Photo:

Markovits & Fox Metals recycles over 78,000 tons annually of plastic and various metals from insulated wire scrap.

Bottom Photo:

San Jose's curbside recycling program provides materials for remanufacturing businesses in the area.

Humboldt County

located on the Pacific coast about 250 miles north of San Francisco and 400 miles south of Portland, Oregon, accesses the international marketplace via Humboldt Bay —the only deep water port in California north of San Francisco.

Top Photo:

Humboldt's building material salvage training project was initiated with a grant from the IWMB; volunteers manually deconstructed and sorted this house from top to bottom and were taught skills including estimating costs, bidding jobs, and selling salvaged materials.

Bottom Photo:

The Pacific Lumber Company provides ash from their 25 megawatt biomass cogeneration plant for use as a soil amendment in this corn field.

T

he county has been very successful in meeting its two primary challenges to effective diversion: (1) long distances to recycling markets and (2) a diffuse population. Economic development efforts focus on small scale manufacturing and cottage industries using recycled materials. Long range planning and regional cooperation with neighboring counties will be key to creating stable markets.

Humboldt County is overcoming these challenges to meet the diversion goals, as are many other jurisdictions, through effective partnerships with the IWMB and the local community of businesses and residents. Diversion projections for the unincorporated area of the county are 39 percent for 1995 and 56 percent for the year 2000. Success in surpassing "25 by 95" is attributed to citizens' commitment to recycling, as evidenced in 1988 when over 75 percent of Humboldt County voters approved a ballot measure to develop County recycling and waste reduction policy. Achieving the year 2000 goal requires successful establishment of businesses using recycled glass, several grades of paper, tires, fish waste, organics, reusables, construction materials, and providing plastics processing capability. A composting and mulching demonstration project is underway with IWMB funding and a committed and cooperative team of farmers, advisors, composters, and local governments.

As a result of the RMDZ designation, the Arcata Community Recycling Center, Inc. received IWMB approval for a \$162,500 loan to assist in achieving diversion of 5700 tons per year.

The RMDZ sponsored the first annual Recycling and Ecological Expo in Humboldt County this year and published a newsletter to stimulate exchange of ideas and activate needed networks. These activities serve to promote new and existing remanufacturing businesses in the area.



Long Beach

is located on the coast just south of Los Angeles.

T

he City's diversion program strategy is designed to achieve a balance between its responsibility to fulfill the AB 939 diversion goals and motivate private sector contributions to program implementation. Long Beach promotes the idea that recycling and diversion programs need to be considered and funded as additional utilities, based on the concept that waste materials are a resource to be managed rather than refuse to be discarded. The City of Long Beach expects to achieve 25 percent diversion by 1995.

The City is currently implementing a volumetric refuse rates program with automation of the current waste collection system. Residential customers are provided one 60- or 100-gallon refuse can and curbside recyclables collection that includes motor oil. The City runs a backyard composting program and teaches monthly classes on green waste reduction techniques to residents. Green waste drop-off programs will be considered to meet the 50 percent goal.

The City has an extensive public education and information program. In addition to English, the program includes written materials in three languages: Cambodian, Spanish, and Vietnamese.

Long Beach was designated as a Recycling Market Development Zone in 1992. The zone has become an integral part of the City's economic development efforts and has attracted new recycling manufacturing businesses and expanded existing companies. The City teamed up with the Community Environmental Council from Santa Barbara to win a U.S. EPA market development grant to assist existing Long Beach manufacturing businesses in converting from virgin to secondary material feedstocks. Coupled with an aggressive City procurement program and cooperation with area businesses, the diversion, remanufacturing, and procurement efforts begin to "close the loop" in a systematic and effective way.



Top Photo:

Gridcore Systems International transforms mixed paper and cardboard into a lightweight, high strength fiberboard.

Bottom Photo:

The Traveling Recycling Education Center, partially funded by a IWMB grant, teaches the three Rs as well as resource conservation from a child's perspective of a school, house, park, car, and supermarket.

The City of Los Angeles

is located in southern California and is the second largest city in the U.S. with a population of 3.4 million.

Top Photo:

Earthquake debris processing shown at Chiquita landfill; the citywide earthquake recycling rate was 33% in 1994.

Bottom Photo:

Plastopan North America, Inc. remanufactures postconsumer plastic resin into refuse container lids.



T

he City of Los Angeles responded to the AB 939 mandate not as something onerous or expensive, but as an opportunity to bring new approaches to waste management practices.

The City is responsible for managing the entire waste stream, yet it provides waste services directly to only about 50 percent of the community; the private sector handles the balance. Despite this configuration, Los Angeles projects a 36 percent diversion by 1995. In fact, the City's long term Solid Waste Management Policy Plan sets a more aggressive waste diversion goal of 70 percent by the year 2020.

Success in exceeding the 25 percent goal is attributed to the well-established recycling infrastructure, access to international markets for recyclables through the Port of Los Angeles, and the City's unique "generator approach" that created city/private waste management partnerships.

The City also examined its own waste stream and developed comprehensive diversion strategies for its Department of General Services, Bureau of Sanitation, Bureau of Street Maintenance, Department of Airports, the Harbor Department, and the Department of Water and Power.

To help "manage" that portion of the waste stream outside its direct purview, the city established working groups with the commercial and industrial sectors that were determined to be major waste generators. The working groups discuss general waste management policies, plan recycling strategies, estimate diversion and disposal tonnage, and coordinate diversion programs.

The entire city was designated as a Recycling Market Development Zone in 1992 and a comprehensive strategy was developed to showcase new technologies, new ideas in construction and manufacturing methods, and new recycled-content products.

The City of San Diego

is located on the U.S.-Mexico border on the coast of California.

S

an Diego currently maintains more than 30 waste diversion and recycling programs targeting specific sectors of the local waste stream. These include broad-based technical assistance to businesses and special efforts with the San Diego Zoo and Sea World. The City is also considering the construction of a materials recovery facility to divert even more of the residential and commercial waste streams.

Effective public education and information (PEI) programs are essential in maximizing diversion participation. San Diego sponsors recycling events, distributes a recycling directory, and produces multilingual/multicultural guides on how to reduce waste and where to recycle. School programs include learning materials and curriculum development, bilingual translations, and classroom presentations.

Based on the success of its PEI, San Diego plans to more than double the service area of its curbside yard waste collection program, expand collection of recyclables from single and multi-family residences by providing convenient community collection points, establish a buyback center, continue the Community Cleanup program, and expand the Christmas Tree Recycling Program. The City also works with local naval bases to divert waste from landfills.

The City of San Diego is a member of both the City of San Diego and North San Diego County Recycling Market Development Zones (RMDZ). The City RMDZ received honorable mention by the California Cities "Helen Putnam Award for Excellence" for achievements in environmental quality partnerships. An important plan to stimulate larger regional markets for recyclable materials is the development of a binational RMDZ within the border industrial areas of both Tijuana and San Diego. This cooperative effort will serve as a model to other border states.



Top Photo:

Recycling Earth Products, Inc. recycles drywall scraps from new construction into gypsum. The gypsum has been used as an absorbent for petroleum products and as a soil amendment.

Bottom Photo

San Diego works in partnership with the Department of the Navy to implement innovative recycling programs.

The City of Chino

is located in the southwestern corner of San Bernadino County in southern California, about 35 miles due east of Los Angeles.

T

he key to the City of Chino's successful diversion is the strong partnership between surrounding cities, local business, the local solid waste hauler, and the IWMB. The City is projecting a minimum of 25 percent diversion for 1995. Effective diversion programs are especially critical as the area faces the loss of local landfill capacity in the near term, with increased transportation and solid waste processing costs.

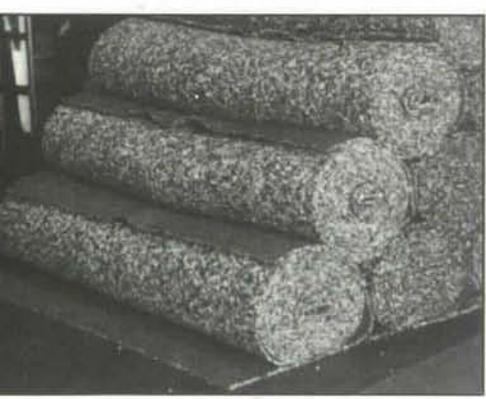
*Top Photo:
Hi Life Products, Inc. manufactures carpet products using 2400 tons annually of plastic.*

*Bottom Photo:
A tub grinder processes Christmas trees.*

In addition to achieving strong voluntary participation in recycling, the City promotes recycling programs that include residential curbside, multifamily service, industrial green and wood waste diversion, Christmas tree recycling, and household hazardous waste diversion. Chino is proud to have been one of the first in its area to institute city government office recycling and recycled-content procurement policies; both were initiated prior to AB 939.

In 1994, the City of Chino, as lead agency, teamed up with the City of Chino Hills to form the Chino Valley Recycling Market Development Zone with assistance from the IWMB. This aggressive plan will help the surrounding area meet the 50 percent by 2000 requirement as much of the future growth is anticipated to be commercial and industrial. Businesses which currently or could potentially use secondary plastics, wood waste, organics/yard waste, textiles, paper, and metals are targeted for conversion, retrofitting, or expansion, or recruited to locate in the area. Existing reuse industries, particularly tire retreading, laundry, and repackaging manufacturing discards, are also targeted.

As a result of receiving a Used Oil Grant from the IWMB, Chino offers a used oil curbside collection and drop-off program. The City produced a used oil video, which won third place in a nationwide contest sponsored by the National Association of Telecommunication Officers and Advisors.



The City of Redding and Shasta County

are located in the interior of northern California, straddling Interstate 5. The City of Redding is the largest population center in the primarily rural North State.

S

ignificant strides are being made toward exceeding the diversion goals of AB 939 through innovative cost-saving measures, regional cooperation, and market development. Projected 1995 diversion rates are 32 percent for the City of Redding and 29 percent for the County of Shasta. Currently, recyclables are processed at the City of Redding's Resource Recovery Facility, which recycles 13,500 tons of material annually—the largest throughput of any facility in the northern California region.

Recyclables soon will be diverted at Redding's new transfer station and materials recovery facility (TS/MRF), which was designed to maintain sorting flexibility to respond to fluctuations in recyclables markets. The facility will receive, process, and transfer an average of 350 to 400 tons of solid waste per day and is designed to accommodate up to 750 tons of waste per day to handle the future needs of surrounding areas. Much of the materials received at this facility will come from Redding's successful residential curbside recycling program, which boasts a 64 percent monthly set-out rate. To minimize the level of public effort necessary to participate in the curbside program, a single-bin commingled system was chosen.

Shasta County is a newly designated Recycling Market Development Zone. The key to successful recycling in the City of Redding and Shasta County is producing a value-added product. In the near future, a major West Coast producer of molded pulp egg cartons, food trays, and paper plates located nearby will utilize processed paper from the new TS/MRF. Another example of a value-added effort is the City of Redding's investment of \$750,000 for composting equipment to produce high-grade compost for use by the City Parks Department as well as for sale to CalTrans, private landscapers, and the public.



Top Photo:

Redding's composting program produces high-grade compost for use by the City Parks Department as well as for sale to CalTrans, private landscapers, and the public.

Bottom Photo:

Aerial view of new transfer station/materials recovery facility.

Manteca

in San Joaquin County, is located in the Central Valley, 75 miles east of San Francisco

S

ince the mid 1980s, Manteca has offered curbside collection and composting services for leaves and Christmas trees. The City of Manteca leadership recognized that if the 25 percent diversion goal was to be met, two major areas would have to be addressed: residential and commercial collection services. Waste reduction is being accomplished by phasing in programs and limiting each residence to a single 96-gallon trash container provided by the City.

Residential recyclables curbside collection began in 1992 and includes used motor oil, HDPE and PET plastic bottles, newspaper, glass, tin, and aluminum. In addition, Manteca encourages backyard composting with compost demonstrations, and provides phone book recycling, concrete and asphalt recycling, and education campaigns on the various diversion programs. In addition, the Resource Conservation Coordinator writes a weekly column for the local paper on waste diversion to keep residents thinking about and improving their participation. In implementing the City's commercial programs, the Resource Conservation Coordinator performed waste audits for over 200 local businesses. As a result, a commercial cardboard collection program was implemented once the need was identified. In the future, the City will collect mixed paper, wood wastes, and restaurant wastes.

Manteca has promoted and participated in a number of activities including poster contests, recycling events, informational utility bill inserts, Earth Day recycling events, and county-wide household hazardous waste collection events.

Knowing that diversion programs must be enhanced by market development efforts, the City of Manteca joined forces with six other cities and San Joaquin County to apply for a Recycling Market Development Zone designation by the IWMB. Through these collective efforts, the City of Manteca is projecting a 25 percent diversion for 1995.

Top Photo:

Unused paint is recycled for graffiti abatement projects.

Bottom Photo:

Residential curbside recyclables collection includes used oil.



IV. FUTURE EFFORTS

T

hrough extensive partnerships and cooperation between the IWMB, local jurisdictions, and the private sector, California will meet its short term goal of 25 percent diversion by 1995. This has been accomplished through significant market development efforts in addition to the establishment of a meaningful number of diversion programs and innovative waste prevention efforts. The next challenge, that of meeting a 50 percent diversion rate by the year 2000, will require much resourcefulness and creativity by local jurisdictions, with assistance from the IWMB and private sector. Mindful of the challenges ahead, the IWMB is already taking steps to meet diversion goals set forth for the year 2000.

A. Recycling Market Development and Waste Reduction

California Recycling Business Assistance Team

A 50 percent diversion rate is not achievable if there are insufficient markets to absorb the additional materials diverted from landfills. In 1994, the IWMB was awarded a \$500,000 grant from the U.S. Environmental Protection Agency to establish the California Recycling Business Assistance Team (R-Team). This grant is funded under the federal 1994 Jobs through Recycling initiative. The R-Team will develop an 18-month self-sustaining resource network to deliver assistance to businesses involved in recycling. By this mechanism, the IWMB will expand service to a larger number of recycling-based businesses throughout California.

The R-Team works through a partnership that links experts at the IWMB with those in economic development at the Trade and Commerce Agency and those in environmental permitting at the Business Environmental Assistance Center. The R-Team also works with and serves Recycling Market Development Zone Administrators, makes referrals to Small Business Development Centers (SBDC), and uses the services of California Manufacturing Technology Centers (CMTC) to help recycling businesses overcome technological barriers to the use of recycled materials.

The variety of R-Team services to help recycling-based businesses grow and prosper in California include the following:

- **business assistance** provides general business information, such as feedstock material sources and quantities, business reports, business plan development through SBDCs, permitting and siting assistance, and lists of available business assistance information;
- **technical assistance** includes development of technical services available through the IWMB, the BEACs and other organizations such as CMTC and federal laboratories as well as technical reports, low cost testing and evaluation of materials and processes, best manufacturing practices, conversion technology and waste reduction, and technology workshops;
- **financial assistance** helps businesses obtain financing, evaluates business proposals, assists with business plans and grant writing, consults on economic equipment and process justification, and assists in contracting with federal labs; in addition to loans and grants available from the IWMB, the R-Team will identify and develop new sources of financial assistance from conventional lenders by educating lenders about recycling and reuse businesses;
- **marketing assistance** helps businesses increase the demand for recycled-content and reused products by developing a database of these products; works with government, private procurement departments, priority businesses and industries to identify buyers for businesses' recycled products;

and, assists with marketing plans and creating exhibits of recycled-content products to display at appropriate trade shows to further expand marketing opportunities.

Private Sector Buy Recycled Program

Considering that approximately 80 percent of all goods and services are consumed by the private sector, it makes sense to focus on purchase of recycled-content products (RCP) by private industry and commerce. To that end, the IWMB initiated a Private Buy Recycled Program (PBRP), the goal of which is to further develop reliable, stable, and competitive markets for all products that can be made with materials diverted from the California waste stream.

The thrust of the PBRP is to harness the purchasing power of individual companies by enhancing existing and creating new alliances with private industry, local governments, and the IWMB. Through these alliances, the IWMB will work to help overcome the barriers of specific industries to purchasing RCPs. Other program aspects include developing performance-based materials specifications, providing updated and reliable information on recycled products, measuring the procurement progress of each alliance, and continuing to support existing programs to eliminate duplication and waste.

Staff distributed the *Private Buy Recycled Strategy* to several hundred people representing local government and business concerns. Based on the outstanding endorsement and suggestions from workshop participants, the IWMB is poised to develop the type of program that private industry wants—one that is responsive to

their specific needs and that will help private industry, local government, and the IWMB realize the benefits of a sustainable secondary materials market.

Waste Prevention Business Training Assistance

To facilitate waste prevention activities throughout California and direct future activities, the IWMB adopted a statewide strategy, *The Statewide Waste Prevention Plan*. Key activities recommended in the plan include:

- providing cooperative technical assistance to businesses, and
- conducting case studies and demonstration projects.

To meet these goals, staff developed a program concept that blends features of other successful programs designed to assist businesses. The Business Waste Reduction Program will encourage businesses to meet with waste reduction experts to conduct a waste assessment and identify opportunities to reduce waste and save money. It is an approach that emphasizes positive, voluntary actions and face-to-face contact with volunteer experts, often from the private sector.

To test the merits of the program, four regional pilot programs will be conducted over a one-year period. If successful, the organizations participating in the pilot will be expected to raise funds to continue the program, and the IWMB could consider expanding the program beyond the regional areas featured in the pilot.

The IWMB envisions a possible future scenario in which quality, low-cost, hands-on business assistance would be available in each region or

"If you're not BUYING RECYCLED, you're not recycling. To close the recycling loop, in 1994 THARCO turned 9200 tons of postconsumer waste into new corrugated boxes of 100% postconsumer content."

**-Steve Malmquist
Sales Manager**

**THARCO
manufacturer of
corrugated boxes
San Lorenzo, California**

community in California on a long term basis. Organizations providing assistance would encourage and educate businesses about how to use resources more efficiently, reduce waste, and save money.

B. Regulatory Reform

The Solid Waste Disposal Regulatory Reform Act of 1993

Urgency legislation AB 1220 (Chapter 656, Statutes of 1993) was enacted to improve the manner in which management of solid waste is regulated by the State. Implementation of the legislation requires significant revision to the regulations governing permitting and enforcement of solid waste operations and facilities. Some of these changes include removing overlap, duplication, and conflict among the agencies and boards which regulate solid waste disposal facilities. Additional changes include:

- streamlining the solid waste facilities permitting process,
- studying the feasibility of combining financial assurance mechanisms for operating liability and corrective action, and then
- developing a consolidated set of solid waste disposal facility regulations with each board retaining its appropriate authority and responsibilities.

Adoption of these regulations is expected in 1995.

Regulatory Tiers [PRC 43020 & 43021]

In November 1994, the IWMB adopted regulations which establish a five-tier flexible regulatory oversight structure for solid waste opera-

tions and facilities. The new system will allow for a permit and application review process which is commensurate with the level of threat that various facilities and operations pose to public health and safety and the environment. The IWMB took action because existing regulatory requirements were not adequate for the wide range of solid waste handling operations that currently exist in California. These regulations are just one aspect of the IWMB's efforts to implement permit streamlining.

The adopted regulations represent the framework of the tiers and do not discuss applicability of any given tier to a particular facility or operation. The IWMB will initiate a separate rulemaking process to determine where specific operation and/or facility types will be placed. Placement will address other State/Federal agency oversight and the threat that the operation and/or facility may pose to public health and safety and the environment as well as legislative intent. To facilitate the placement of operations into the regulatory tiers, the IWMB, with the assistance of a public advisory committee, is developing a general methodology.

The Appropriate Level of Regulatory Control project is the second phase of implementing the flexible regulatory structure. An advisory committee comprised of representatives of industry, academia, environmental groups, and regulators is working with IWMB staff to establish a general methodology based on public health and safety and potential environmental quality impacts associated with solid waste operations. Once the general methodology is in place, IWMB staff, with the assistance of the advisory committee, will begin the rulemaking process that will place

operations into the tiers. Draft minimum standards will also be developed for the safe performance of these operations and/or facilities.

Waste Characterization Methodology Development

The IWMB is required to develop a uniform waste characterization method [PRC Section 41770(b)] for jurisdictions to use in conducting studies of the types and amounts of materials they dispose. The process will include developing standard definitions for all material types to be used in future characterization studies and diversion activity reports. In three phases, the project will first identify, then evaluate and select a method for waste characterization, and finally test and refine the selected method before its implementation by local jurisdictions. With input from a working group of representatives from local government and the solid waste industry, the identification portion of the study was largely completed in 1994. The remainder is expected to be completed during the first half of 1995.

The uniform characterization method selected will be standardized and simplified, and data it generates will be included in the IWMB's interim database. As jurisdictions generate local data, it will be used statewide by the IWMB to assess the success of existing diversion programs and to plan new or expanded programs, as needed. The data also will be used to assess market development, research, and technology development needs.

C. Protecting Public Health and Safety and the Environment

Composting Regulations, Enforcement, Inspection

Composting creates a useful soil amendment from organic materials which all too often are wasted by disposal in a municipal landfill. In 1991, IWMB staff began the process of developing regulations for the permitting of composting facilities in a manner that protects public health and the environment, yet does not impose unreasonable burdens on the operators of composting facilities. In July 1993, the first phase was completed when the regulations for composting of "green material" were approved by the Office of Administrative Law. In the second phase, IWMB staff have been developing regulations for composting of other feedstocks including food material, mixed solid waste, and sewage sludge. After extensive public comment, the draft regulations have been amended to provide for a tiered approach in which the level of regulation varies with the feedstock and the size of the facility. The IWMB anticipates that the second phase of the composting rulemaking will be adopted in early 1995.

Regulation of Asbestos-Containing Waste at Solid Waste Facilities and Disposal Sites

As early as 1991, asbestos-containing waste (ACW) was identified as an area where regulatory streamlining, specifically permitting and inspection, could occur. ACW is defined as a hazardous waste when it contains greater than one percent asbestos in a friable, finely divided,

or powdered state. (Section 66261.24 of Title 22, CCR.) The waste may be disposed in any landfill if the Regional Water Quality Control Board allows disposal through its Waste Discharge Requirements, and if the waste is handled and disposed according to the Toxic Substance Control Act (Health and Safety Code, Section 25143.7). Historically, the Department of Toxic Substances Control (DTSC) had regulatory authority over the friable ACW waste stream, a hazardous waste stream, while the IWMB had regulatory authority over all solid waste facilities.

With the passage of AB 688 by Assembly member Sher (Chapter 1227, Statutes of 1994) the IWMB obtained authority to regulate disposal of ACW at any solid waste facility or disposal site. The IWMB will adopt a permitting, inspection, and enforcement program to provide efficient regulation of this waste stream. To prevent regulatory overlap, the IWMB will work closely with its sister department, DTSC, to define enforcement duties. To implement this program, emergency regulations will be adopted for consistent statewide disposal management practices that protect public health and safety and the environment.

Disaster Response Plan

The *Integrated Waste Management Disaster Response Plan* is intended to provide for the handling, storage, processing, transportation, and diversion from disposal sites, or disposal where absolutely necessary, of solid waste resulting from a state or local emergency, in accordance with PRC Section 43035 (AB 2920 (Lee), Statutes of 1992, c.436). The Board's primary goal is to assist in the expeditious recovery of areas affected by natural disasters

or emergencies while providing for protection of public health and safety and the environment.

The *Disaster Response Plan* is being prepared by an in-house multidivisional team, in close coordination with the Office of Emergency Services (OES) and with input from the Federal Emergency Management Agency (FEMA) and local jurisdictions. The *Plan* is being developed in three parts: Part One, *Initial Response Procedures*, was developed and approved by the Board in 1994; Part Two, *Disaster Preparedness*; and Part Three, *Emergency Waiver of Standards*, are being developed internally at this time.

Appended to the *Disaster Response Plan* will be supporting documents such as emergency contact listings and case studies. Future appendices to the *Plan* will be developed to include sample disaster debris removal contracts that provide for waste diversion as well as guidance documents designed to assist solid waste facility LEAs and solid waste Recycling Coordinators with emergency disposal and diversion of disaster-related debris.

Some of the areas the *Plan* is intended to highlight include:

- government coordination and mutual agreements,
- pre-disaster assessment,
- FEMA/OES reimbursement,
- debris management programs—requirements and constraints,
- public information program,
- proposal for workshop on disaster debris management, and
- new regulation—emergency waiver of standards.

APPENDIX A

LEGISLATIVELY-MANDATED REPORTS HIGHLIGHTS AND ACTIVITIES

Public Perceptions and Practices

Due Date and Status	Mandate	Summary	Highlights
3/31/95 (Annual Report)	PRC 42603 (b) (AB 1515, Sher, 1991)	Report annually on teacher training and IWM program in schools.	Five regional (Fresno, Los Angeles, Riverside, Humboldt, and Alameda Counties) K-6 teacher training workshops have been conducted. The focus of the workshops was to train educators to use <i>Closing The Loop</i> in their classrooms. See section II.A for discussion of K-12 teacher training and school programs.
3/31/95 (Annual Report)	PRC 42623 (AB 1381, Areias, 1991)	Report annually on status and effectiveness of school district source reduction & recycling programs.	The IWMB developed two guides for school districts and local governments: <ol style="list-style-type: none"> 1. <i>Seeing Green Through Waste Prevention</i> and 2. <i>A District-wide Approach To Recycling</i>. Three regional training workshops were held in southern and northern California. The workshops provided a networking opportunity for school districts, local governments, and industry. Model school district programs were highlighted. Topics covered at the workshop included: initial organizing and identifying key players, dealing with haulers and hauling logistics, conducting waste audits and site visits, identifying markets for recyclables, developing a district implementation plan, and maintaining the program. See section II.A for discussion of K-12 teacher training and school programs.
3/31/95 (Annual Report)	PRC 40507(e) (AB 939, Sher, 1989)	Requires annual report to include actions taken and recommendations to educate and inform the public and private sector.	See discussion below.
3/31/95 (Annual Report)	PRC 42601 (AB 1515, Sher, 1991)	Report annually on measurement of public information program effectiveness.	Three methods of waste prevention education effectiveness are being implemented in 1994 and 1995: <ol style="list-style-type: none"> 1. pre- and post-campaign statewide telephone survey; 2. pre- and post-campaign targeted waste audits in selected communities; and 3. self-evaluations of waste prevention education partners.

Waste Prevention

Due Date and Status	Mandate	Summary	Highlights
3/31/95 (Annual Report)	PRC 40507(h) (AB 2494, Sher, 1992)	Report annually on effectiveness of the source reduction program assistance.	<p>In 1994, the IWMB embarked on several projects designed to assist local governments in educating businesses in their communities about waste reduction:</p> <ul style="list-style-type: none"> • see section II.A for discussion of the second annual Waste Reduction Awards Program, • see section II.B for discussion of Business Kits, • see section II.B for discussion of the Waste Prevention Information Exchange, and • see section II.B for discussion of the Grasscycling program.
1/01/95 Approved by Board 9/94.	Uncodified (AB 2393, Cortese, 1992) 1 time	Study heavy metals in packaging that affect waste disposal.	<p>Conclusions in the report include:</p> <ul style="list-style-type: none"> • heavy metals in packaging and other waste components disposed in landfills do not currently constitute a significant threat to groundwater, based on the State Water Resources Control Board's landfill leachate monitoring program results; and • although incinerator ash may, on occasion, exceed hazardous waste regulatory limits for heavy metals, no study has demonstrated that heavy metals in packaging are the cause. <p>Recommendations include:</p> <ul style="list-style-type: none"> • continued MSW landfill leachate monitoring; and • encouragement of additional voluntary reductions by manufacturers of heavy metals in packaging.

Markets

Due Date and Status	Mandate	Summary	Highlights
3/31/95 (Annual Report)	PRC 40507 (d) (AB 1515, Sher, 1991)	Review market development strategies undertaken to ensure markets exist for materials diverted from solid waste facilities.	The IWMB has begun implementing 7 of the 16 priority actions in the Market Development Plan. In addition, using AB 1220 funds, five compost demonstration projects have been funded and are underway.
3/31/95 (Annual Report)	PRC 42000(e) (AB 1909, O'Connell, 1993)	Review market development strategies and make recommendations to expand markets.	
3/31/95 (Annual Report)	PRC 42247 (SB-1322, Bergeson, 1989)	Report annually on implementation of the Compost Market Program.	See section II.C for discussion of the Compost Demonstration Project.
3/31/95 (Annual Report)	PRC 42008 (AB 1909, O'Connell, 1993)	Report progress in developing and implementing the market development plan.	The IWMB has begun implementing 7 of the 16 priority actions in the Market Development Plan: <ol style="list-style-type: none"> 1. promote "Buy Recycled" by local and state governments and private industry; 2. consider low interest loans for equipment and projects; 3. develop a marketing information database; 4. set minimum content standards (RPPC); 5. promote government procurement of recycled products; 6. create industry advisory task forces; and 7. develop quality standards for compost.
3/31/95 (Annual Report)	PRC 40507(h) (AB 2494, Sher, 1992)	Report annually on effectiveness of market development assistance.	Information included in the report prepared pursuant to PRC 42008. See above. See section II.C for discussion of Markets for Recyclable Materials.
3/31/95 (Annual Report) Price preferences approved by Board 4/94.	PCC 12162(c)(1) (AB 11, Eastin, 1993)	Publish annually the established price preferences for priority recycled products.	See section II.C for discussion of the Public Agency Buy Recycled Program.
3/31/96 (Annual Report)	PCC 12162(e) (AB 11, Eastin, 1993) 1 time	Report on pilot program for funding claims submitted by state agencies for providing recycled product price preferences and make recommendations for the continuation or modification of the program.	See section II.C for discussion of the Public Agency Buy Recycled Program.

Markets

Due Date and Status	Mandate	Summary	Highlights
3/31/95 (Annual Report) 12/5/94 Submitted.	PRC 42443	Report annually on number of recycled lead-acid batteries purchased by DGS.	During FY 1993-94, DGS purchased 8790 storage batteries which are made from recycled-content materials. DGS continues to have difficulty in providing IWMB staff with procurement information due to limited staff resources and the Speier/Eppel bills. However, since May 1994, IWMB staff have been gathering procurement information from existing state contracts and now has successfully tabulated FY 1993-94 dollar purchases for recycled lead-acid batteries. IWMB staff will continue efforts to tabulate the total number purchased.
3/31/95 (Annual Report)	PRC 42650 (b) (SB 1322, Bergeson, 1989)	Report annually on results of research and development programs.	See section II.F for discussion of Solid Waste Facility Management Research— <i>Aspergillus</i> technical bulletin and medical waste survey.
3/31/93 Submitted 7/05/94.	PRC 42324 (SB 235, Hart, 1991)	Report on a plan for implementing the Rigid Plastic Packaging Containers program.	The <i>Conceptual Plan to Implement the Rigid Plastic Packaging Container Act</i> clarifies which manufacturers are affected by the program and presents options for certification, compliance, program funding, and exemption criteria.
1/01/95 Considered by Board 12/94.	PRC 42340(d) (SB 466 Boatwright, 1993) 1 time	Report on whether to continue the exemption of rigid plastic package containers for use in shipment of hazardous materials.	The Board agreed the exemption should be extended. Report title: <i>Report to the Legislature—Assessment of the Federal Department of Transportation's Prohibition of the Use of Used Plastics in Hazardous Material Containers—Final Staff Draft.</i>
3/31/96 On schedule.	PRC 42145(f) (SB 1322 Bergeson, 1989) 1 time Recodified to PRC 42010(f) (as part of annual report) (AB 1909, O'Connell, 1993) 1 time	Report on the RMDZ loan program.	Data collection ongoing. Data include loan amounts, quantities and types of diverted materials, and numbers of jobs saved or created. See section II.C for discussion of the RMDZ Program. See also section III for discussion of local government program highlights.
7/01/94 Approved by Board 12/94.	PRC 42776 (AB 1305, Killea, 1989) 1 time -	Report and survey on recycled content papers.	The report, <i>Survey of U.S. Paper Distributors Regarding Recycled Printing & Writing Papers</i> , recognized substantial opportunities existed to significantly expand the markets for recycled-content printing and writing papers, especially in the private sectors. Recycled paper procurement will become a priority consideration in the IWMB's Private Buy-Recycled Program.

Markets

Due Date and Status	Mandate	Summary	Highlights
3/31/95 (Annual Report)	PRC 40507(g) (AB 939, Sher, 1989)	Requires annual report to include review of Revenue and Taxation Code pertaining to tax credits and deductions.	As of December 1, 1994, the estimated allowable credit for approved equipment was \$13.8 million; approved applicants estimated they would use 6.3 million tons of secondary and postconsumer material annually. IWMB received 193 applications, certified 142, denied 29, with 22 applications pending.
Approved by Board 1/95. Report title: <i>Impacts of the California Recycling Tax Credit Program.</i> 3/01/94 Approved by Board 1/94.	RTC 17052.14(j) RTC 23612.5(j) (AB 1308, Killea, 1989) 1 time (SB 432, Alquist, 1989)	Evaluation of recycling investment tax credits.	Report concluded that the tax credit had not been a significant incentive to expand secondary material recycling, due primarily to mandates surrounding the program's implementation and the short time the tax credit had been available. The report recommended tax credits for recycling equipment be continued. The Governor's Office requested additional analysis and resubmittal in early 1995.
1/01/94 Approved by Board 12/93.	Uncodified (SB 960, Hart, 1991). SB 1919, Hart, 1992, extended due date to 1/01/94 1 time	Recommendations for recycling mixed paper waste.	Report concluded that there is relatively little demand for mixed paper by mills due to a variety of barriers. Report recommended that the Board consider actions to: <ol style="list-style-type: none"> 1. increase market demand for mixed paper recovered in California; 2. increase demand for recycled-content products made with mixed paper; 3. promote the development of efficient local mixed paper diversion systems; and 4. promote the long-term competitiveness of mixed paper collection and end-use.
3/31/95 (Annual Report)	PRC 42414 (SB 1322, Bergeson, 1989)	Report annually on state procurement of retreaded tires.	DGS was unable to locate a vendor that sells passenger retreaded tires listed on the federal Qualified Products List (QPL). In June 1994, the Board awarded four grants to the retread tire industry for market development in California of passenger retreads. The result of a grant to qualify a retreader's passenger tire on the QPL is pending.
5/01/95 Approved by Board 1/95.	PRC 42884 (AB 1843, W. Brown, 1989)	Report annually on tire diversion.	See section II.D for a discussion of waste tire diversion. <i>1994 Tire Recycling Program Annual Report</i> to be submitted under separate cover.

Markets

Due Date and Status	Mandate	Summary	Highlights
3/31/95 (Annual Report)	PRC 42520 (AB 1515, Sher, 1991)	Report annually on plastics recycling information clearinghouse (PRIC).	<p>The PRIC provides information to anyone seeking information related to plastics recycling. This includes: developing and providing information on postconsumer plastic collectors, reclaimers, and manufacturers; providing research services; compiling a selective bibliography of periodical articles, books, directories, and reports on plastics recycling; and updating market, legislative, and technical information. Many phone and written inquiries were handled.</p> <p>The 1994 PRIC activities were more varied than in previous years, suggesting an increased interest for recycling plastics. New topics included identifying specialized plastic recycling programs such as disposable cameras, videotapes, metalized plastic film, and other composite materials.</p>

Diversion

Due Date and Status	Mandate	Summary	Highlights
<p>1/01/94 Approved by Board 3/94. Report title: <i>Evaluation of the State of California's Recycling Program, FY 1992-93.</i></p>	<p>PCC 12165(b) (AB 4, Eastin, 1989)</p>	<p>Re-evaluate collection program by 1/01/94, and upon Board determination to exclude a specified material type from the program that results in a net revenue loss to the state, report conclusions and recommendations to the Legislature.</p>	<p>Project Recycle is the State's in-house waste reduction program administered by the IWMB. The required evaluation was conducted for FY 1992-93 results.</p> <ul style="list-style-type: none"> • Net savings to the State were estimated at \$760,000. • 13,660 tons of materials were recycled, an increase of 117 percent over the previous year. • The number of recycling programs increased from 343 to 529 (an increase of 54 percent) including programs at prisons, universities, hospitals, parks, and offices. • More than 2600 20-gallon metal recycling containers and 21,500 cardboard desktop recycling containers were provided. • Two waste paper collection contracts were issued. • 40,000 plastic file boxes were reused. • Milk carton and laser toner cartridge collection programs were developed.
<p>3/31/95 (Annual Report)</p>	<p>PRC 42563 (AB 1515, Sher, 1991)</p>	<p>Report annually on implementation of white office paper recovery program.</p>	<p>Project Recycle includes the white office paper recovery program. Recycling programs are being established and maintained in State offices, prisons, youth authority facilities, developmental centers, hospitals, colleges, universities, parks, and maintenance facilities. The number of State facility programs increased by 20 percent, from 560 to 696 programs during 1994:</p> <p>During 1994, 23,182 tons were recycled—a 50 percent increase over last year. Paper products constituted 46 percent of the total:</p> <ul style="list-style-type: none"> • computer paper—315 tons, • white ledger paper—2272 tons, • colored ledger paper—1558 tons, • corrugated cardboard—6597 tons.

Diversion

Due Date and Status	Mandate	Summary	Highlights
<p>Report approved by Board 5/94.</p> <p>1/01/96 On schedule.</p> <p>1/1/2000 On schedule.</p>	<p>PRC 42552-42556 (SB 1066, Dills, 1991)</p>	<p>Study on recyclability of old telephone directories (OTD).</p>	<ul style="list-style-type: none"> ◦ 95 percent of all OTDs published for California follow Yellow Pages Publishers Association environmental guidelines and are made with recycled materials and are completely recyclable. ◦ Of the 28,000 tons OTDs published for California, 3,600 tons or 13 percent are recycled. ◦ Markets for OTDs include new directory paper, hydroseed mulch, insulation, ceiling tiles, livestock bedding, fruit pads, and shipping envelopes. ◦ Barriers to effective collection and recycling of OTDs include: inconsistent or cyclical supply; difficulty in organizing effective collection programs concurrent with distribution of new editions; lack of funds, high transportation and handling costs; and weak recycling markets for collected OTDs.
<p>3/31/95 (Annual Report) Biannual report approved by Board 10/94.</p>	<p>PRC 48676 (AB 2076, Sher, 1991)</p>	<p>Report biannually on industrial and lubricating oil sales and recycling rates.</p>	<p>See section II.D for a discussion of the Used Oil Program.</p>
<p>3/31/93 Submitted 07/94.</p>	<p>PRC 3488 (SB 1200, Petris, 1990)</p>	<p>Used oil collection report.</p>	<p>In 1992, the Board awarded 19 grants to cities and counties totaling \$840,057 to administer a used oil demonstration grant program designed to encourage the establishment of public used oil curbside collection programs. The grant program was funded by fees from the Petroleum Violation Escrow Account. A final report was submitted to the Legislature in July 1994 with the following recommendations:</p> <ul style="list-style-type: none"> ◦ incorporate an aggressive public education campaign with curbside oil collection programs; ◦ incorporate curbside oil collection programs into existing curbside collection programs or garbage collection routes; ◦ provide curbside collection of oil on an appointment basis as an alternative to regular collection services; ◦ collect oil filters as part of the curbside collection program; ◦ curbside oil collection programs should register with the IWMB; ◦ continue to award grant funding to local governments; ◦ and encourage rural areas to incorporate the appointment type of system for oil collection programs.

Diversion

Due Date and Status	Mandate	Summary	Highlights
<p>3/31/95 (Annual Report) Approved by Board 3/95.</p> <p>Additional appendices under separate cover on file at the IWMB. Report title: <i>Annual Update to the Nonyard Wood Waste Report.</i></p> <p>3/31/94 Approved by Board 9/94.</p>	<p>PRC 42512 (AB 1515, Sher, 1991)</p>	<p>Report annually on nonyard wood waste diversion.</p>	<p>The IWMB in consultation with the Air Resources Board is required to quantify the amounts of nonyard wood waste diverted from permitted disposal facilities and assess the economic and environmental impact of either encouraging or discouraging diversion from these facilities. The main conclusions in the report are listed below.</p> <ul style="list-style-type: none"> • Data currently available on nonyard wood waste quantities is both scarce, and when available, contradictory. • IWMB's encouragement or discouragement of the diversion of nonyard wood waste from permitted disposal facilities would have a minimal impact on the environment or the economy of the wood waste industry as a whole. There are greater economic and environmental consequences resulting from direct market forces that the IWMB would have little influence upon. Site-specific exceptions may exist. • The nonyard wood waste report recommends that the IWMB encourage all types of diversion and assist new markets for wood wastes.

Partnerships with Local Government and Industry

Due Date and Status	Mandate	Summary	Highlights
3/31/95 (Annual Report)	PRC 40507(i) (Chartered-out provisions of SB 2061, Leslie, 1992 — AB 54, Sher, 1993)	Report on recommendations for providing technical assistance to rural counties and cities.	The Office of Local Assistance (OLA) will continue to provide guidance and technical support to rural jurisdictions in the preparation and implementation of waste diversion plans. OLA should increase its efforts to facilitate the exchange of information between local government, the public and businesses through workshops and field consultation. Efforts should focus on diversion opportunities that create local jobs and save local governments money.
3/31/95 (Annual Report) Approved by Board 2/95. Additional appendices under separate cover on file at the IWMB. Report title: <i>Twenty-five by Ninety-five, Sharing the Responsibility: Local Government Assistance.</i>	PRC 40507(h) (AB 2494, Sher, 1992)	Report annually on effectiveness of the model siting element & CIWMP, model programs & materials designed to assist rural jurisdictions.	A number of jurisdictions have used the models, and as a result, have been able to save a significant amount of time and money. The IWMB also prepared and distributed <i>The Rural Cookbook</i> , a compendium of successful waste prevention and diversion programs throughout the United States. This document will save jurisdictions time and money by allowing them to avoid "reinventing the wheel." The models and the <i>Cookbook</i> have been very well received by local governments.
Unspecified The Board adopted <i>Part One: Initial Response Procedures</i> for its <i>Disaster Response Plan</i> on 7/27/94. The Board will complete <i>Part Two: Disaster Debris Management</i> by early 1995.	PRC 43035 (AB 2920, Lee, 1992) 1 time	Develop an IWM disaster plan to provide for the handling, storage, processing, transportation, diversion from disposal sites, or disposal at a disposal site where absolutely necessary, of solid waste, resulting from a state of emergency or local emergency.	The Plan provides guidance to local governments in the preparation of local plans for the diversion of debris in the event of a natural disaster or emergency. The IWMB is also preparing regulations so that landfills may exempt themselves from daily permit limits in the event of a disaster. These will be completed in 1995.
1/01/95 Approved by Board 12/94.	PRC 41821(e) (AB 440, Sher, 1993) 1 time	Report summary of jurisdictions' reports on their progress in achieving diversion requirements.	This report, <i>Meeting Solid Waste Diversion Mandates: A Status Report to the Legislature</i> , provides a snapshot in time and concludes that jurisdictions are on track to achieve the 25 percent diversion goal.

Regulations and Solid Waste Facility Management

Due Date and Status	Mandate	Summary	Highlights
3/31/95 (Annual Report)	PRC 43221 (AB 1220, Eastin, 1993)	Report annually on the status of the certification and evaluation of LEAs.	See section II.F for discussion of Local Enforcement Agency Certification and Performance Evaluations.
3/31/95 (Annual Report)	PRC 43030 (d) (AB 4032, Harvey, 1990)	Report annually on implementation of monitoring and control program for the subsurface migration of landfill gas.	<ol style="list-style-type: none"> 1. Established Landfill Gas Technologies Group. 2. Will develop improved approaches to managing landfill gas. 3. Developing revised regulations for the design and operation of landfill gas monitoring systems and new regulations for landfill gas control systems. 4. Staff working on improving coordination with the Air Resources Board and local Air Pollution Control Districts on landfill gas issues.
1/01/95 Approved by Board 12/94.	PRC 43501.5(a) (AB 337, Statham, 1993) 1 time	Report results of study to determine reasonable and necessary closure/ postclosure maintenance requirement for Class III landfills.	<p>Conclusions in the report, <i>A Review and Assessment of Existing Closure and Postclosure Maintenance Requirements for Class III Landfills in Counties with Populations of 200,000 or Less</i>, include the following:</p> <ul style="list-style-type: none"> • closure costs per acre of landfill closed depend much more on the size of the landfill than on the population of the county; • the common method of paying for closure, tipping fees, is similar regardless of the population of the county; • the burden of closure is heavier on less populated counties because fewer rate payers are available to bear the costs of closure; • due to the requirements of the federal regulations governing municipal solid waste landfills, less populated counties can be granted little relief from closure requirements.
3/31/95 (Annual Report)	PRC 48022 (AB 2136, Eastin, 1993) 1 time	Report on pilot program for solid waste disposal site cleanup.	See section II.F for discussion of Solid Waste Disposal and Codisposal Cleanup Program.

Organizational Leadership

Due Date and Status	Mandate	Summary	Highlights
12/31/98 On schedule.	HSC 57000(c) (as part of the budget process) (SB 1082, Calderon, 1993)	Report annually on performance objectives and quality improvement of environmental protection programs.	Assigned to Permitting and Enforcement Division.
3/31/95 (Annual Report) Approved by Board 2/95.	PRC 40507 (a)(b)(c)(d)(e)(g)(h) (AB 1515, Sher, 1991)	File an annual report with the Legislature.	This report, <i>Progress through Partnership: 1994 IWMB Annual Report</i> , is the fulfillment of this mandate.
3/31/95 (Annual Report) Interagency agreement with Dept. of Finance. Results will be reported on the audit of fees paid for April '93 - April '94.	PRC 48657 (AB 2076, Sher, 1991)	Conduct annual audit of entities selling lubricating oil.	The Department of Finance is conducting the annual audit of the Used Oil Recycling program with a completion date of mid-December. A report with opinions on the findings will be produced in early 1995.
1/01/95 Approved by Board 11/94.	Supplemental Report of the 1994 Budget Act	Provide 5-year revenue and expenditure projections of the Integrated Waste Management Fund.	There are no recommendations or policy changes included in the report, <i>Supplemental Report to the Legislature Regarding Revenue and Expenditure Projections through the Year 2000</i> .

APPENDIX B

CIWMB PUBLICATIONS LIST

To order publications, or to receive an up-to-date publications list, call the Board's Hotline at 800-553-2962. Please have the publication name, subject listing, and number (if listed) ready. If you have a large order, please mail the request to:

Hotline Coordinator, Public Affairs Office
California Integrated Management Board
8800 Cal Center Drive
Sacramento, CA 95826

These publications are also available for review at specific libraries throughout the state, including the CIWMB library. For the State Depository Library nearest you, contact the hotline.

General

1993 Annual Report, 600-94-001

1994 Annual Report, 520-95-002

Acronyms and Abbreviated Terms

California Integrated Waste Management Statutes (updated yearly)

CIWMB Strategic Plan

A Comprehensive Plan for Management of Nonhazardous Waste in California

News-at-a-Glance (monthly)

Program Descriptions for the California Integrated Waste Management Board, 530-95-003

Progress Through Partnership: Executive Summary of the 1994 Annual Report, 520-95-004

Resource Guide to Integrated Waste Management

Science & Technology Research Priorities for Waste Management in California

Summary of Legislation Enacted in the 1993-94 Legislative Session, 541-95-001

Business Assistance

California Materials Exchange (CALMAXSM): Materials Exchange for Business Reuse and Recycling

Business Assistance: An Overview of Programs from the CIWMB, 442-95-017

The CALMAXSM Classified: The Waste Not Want Ads for California (bimonthly)

User's Guide to the CALMAXSM Program

Business Kit Fact Sheets:

Creating a Paper Reduction Campaign, 500-94-034

Definitions, 500-94-039

Encouraging Top Management to Support Waste Reduction Efforts, 500-94-035

Environmental Policies for Business, 500-94-037

Food Service Waste Reduction - Tips and Ideas, 500-94-027

Materials Exchange, 500-94-040

Motivating Employees to Change Old Habits, 500-94-036

Purchasing for Waste Reduction, 500-94-030

Purchasing Recycled Products, 500-94-031

Reducing Waste in Property Management, 500-94-032

Use Less Packaging and Reduce Waste, 500-94-038

Waste Reduction Opportunities in the Landscape Industry, 500-94-043

Waste Reduction Ideas for Meetings and Conferences, 500-94-033

Waste Reduction at Retail Stores, 500-94-026

Waste Prevention in the Printing Industry, 500-94-041

Waste Reduction in Hotels and Motels, 500-94-029

Waste Reduction Ideas for Offices, 500-94-028

Waste Reduction Activities for Hospitals, 500-94-042

Case Study: Eat Your Vegetables, 500-94-055

Don't Throw Your Profits Out With the Trash

Food for Thought: Restaurant Guide to Waste Prevention And Recycling (Spanish, English, Chinese)

Local Governments Can Help Businesses Prevent Waste, 441-95-009

Preferred Packaging Procurement Guidelines, 500-94-023

R-TEAM: Helping Businesses Profit Through Recycled-Content Manufacturing, 400-94-007

Recycled Products Procurement, 302-92-001

Reduce, Reuse, Recycle - It's Good Business! A Guide for California Businesses, 500-94-004

Waste Reduction for Business and Industry, 500-94-013

Composting & Organics

Action Plan: Compostables

Backyard Composting: Your Complete Guide to Recycling Yard Clippings (book, \$4.00 each or \$2.00 each for minimum order of 80)

Choosing a Compost Bin for Your Community, 442-95-008

Christmas Tree Recycling Guide, 304-92-001

Compost Market Development: A Literature Review

Compost Field Experiment Guide for California Communities

Comanagement of Municipal Solid Waste and Wastewater Treatment Plant Sludges Using an Anaerobic Composting Process, 431-95-016

Compost Demonstrations Initiated, 422-95-010

Compost Makes Soil Sense, 422-95-011

Composting: Nature's Way to Recycle (English, Spanish) 500-94-014;

Grasscycling: Send Your Grass Back to Its Roots, 500-94-007

Market Status Report: Compost

Nonyard Wood Waste Report, 500-94-045

Reciclaje de Pasto o Zacate (Spanish version of Grasscycling), 500-94-002

Santa Barbara County Preliminary Compost Market Assessment

Turn Your Garden Trimmings Into Soil Conditioner (Sunset magazine reprint)

Wood Waste Processing Facilities List

Wood Waste: How to Keep Wood Waste Out of the Landfill, 500-94-017

Worms 500-94-003

Construction & Demolition

Recycled Content Construction Products

Construction & Demolition Debris Recycling Program

Construction/Demolition Recycling Businesses - Receivers & Processors, 431-95-040

Diversion

Encouraging Commercial Sector Participation In Waste Diversion Programs, An Interactive, Half-day Videoconference, Resource Manual

Waste Diversion in Rural California

Economics

California's Incentive for Production of Virgin and Secondary Materials, 503-93-002

Disposal Cost Fee Study: Final Report

Facility Cost Model Packet, 600-94-002

Fee Options to Support Integrated Waste Management

Financial Assistance Available - Grants Section (brochure), 400-94-003

Manufacturer Responsibility Options to Support Integrated Waste Management

Pay as You Throw: Unit Pricing fact sheet, 100-93-002

Recycling Equipment Tax Credit Report

Regulatory Fee and Program Overlap Report

Tradable Credit Applications to Integrated Waste Management

Unit Pricing Systems, 100-93-001

Household Hazardous Waste

Household Battery Waste Management Study, 402-92-001

Household Hazardous Waste Fact Sheets (Spanish, English)

Aerosols, Latas de Aerosol

Antifreeze, Anticongelante

Household Hazardous Waste, Información General

Latex Paint, Pinturas de Latex

Lead-Acid Batteries, Baterias de Plomo y Acido

Oil-based Paint, Pinturas con Base de Aceite

Used Oil, Aceite Usado de Automoviles

Sampling, Testing, and Evaluation of Recyclable and Recycled Latex Paint: First Annual Report

Safe House, Safe Me! Coloring Book, 500-94-046

Local Government Assistance

Conversion Factors for Individual Material Types

How to Prepare a Countywide or Regional Agency Siting Element, 300-94-003

How to Prepare a Countywide or Regional Agency Summary Plan, 300-94-004

Infocycling: Information-sharing Memo for Local Government

The Rural Cookbook: Recipes for Successful Waste Prevention and Diversion Programs

Markets for Recycled Products

Action Plan: Ferrous Metal

Action Plan: Glass

Action Plan: Pavement

Compendium of Comments Received Regarding Emerging Markets Development Options Series

Emerging Market Development Options: Summary Report

Emerging Issues, Global Agreements: Analysis of Emerging Market Development Options

Landfill Mining Feasibility Study

Market Status Report: Ferrous Scrap Metal Market

Market Status Report: Glass

Market Status Report: Pavement

Markets Implications of Correctional Resource Recovery Facility Separated Materials, 431-95-013

Meeting the Challenge: A Market Development Plan for California, 303-93-001

Private Buy Recycled Strategy, 422-95-041

Recycling Market Development Zones, 400-94-010

Recycling Market Development Zone News

Secondary Materials Market Assessment Study

State Markets for Correctional Resource Recovery Facility Materials, 431-95-014

Paper

1994 Recycled Content Newsprint Quality Standards

Action Plan: Waste Paper

Environmental Factors for Recycled Paper Manufacturing, 400-94-013

Market Status Report: Waste Paper

You Can Reduce Unwanted Mail, 442-95-020

Plastics

Action Plan: Plastics

California Directory of Plastic Reprocessors and Brokers

Market Status Report: Plastics

Plastics: Waste Management Alternatives

Rigid Plastic Packaging Container Report

Recycling

Evaluation of the State of California's Recycling Program: Fiscal Year 1992/1993

Issues in Correctional Resource Recovery Facility Implementation, 431-95-015

Recycling Standards Development Program

Recycling: No Time to Waste (English, Spanish), 500-94-011

SB 235: Recycling Rate Report

Telephone Directory Recycling Materials Study, 500-94-052

Schools/Education

Closing the Loop: Integrated Waste Management Activities for School and Home, 500-94-005

Closing the Loop Sampler, 322-95-003

Compendium for Integrated Waste Management, 502-93-001

A District-wide Approach to Recycling, 500-94-009

Going Beyond Recycling—Buy Recycled, 322-95-001

Reusable School Newsletter (semiannual)

Resource Listing of Agencies/Organizations Providing Assistance to School Districts Implementing Recycling Programs

Seeing Green Through Waste Prevention: A Waste Prevention Guide for School Districts, 504-94-010

Solid Waste Facilities

Ash Quantification and Characterization Study: Phase I Report

Joint Report: Reforming the California Solid Waste Disposal Regulatory Process, 504-93-001

Landfill Gas Characterization

LEA Advisories

No. 1: Asbestos-containing Waste Disposal, 200-92-001

No. 2: '92 Legislation Impacts Existing Waste Programs, 200-93-001

No. 3: Site Investigation process for Investigating Closed, Illegal, and Abandoned Disposal Sites, 200-93-002

No. 4: Permitting of Fuel-contaminated Soils Treatment/Processing Facilities, 200-93-003

No. 5: Use of Nonhazardous Contaminated Soil as Daily Cover, 200-93-004

No. 6: Aspergillus, Aspergillosis, and Composting Operations in California, 200-93-005

No. 7: Subtitle D Questions and Answers, 200-93-006

No. 8: General Guidance for Implementing AB1220 in the Regulation of Solid Waste Disposal Sites (revised 6/24/94 - replaces 1/94 version), 200-94-001

No. 9: Solid Waste Ranking System User Guide: Site Investigation Process (SIP) PART II, 200-94-002

No. 10: Procedural Change in Approving Alternative Cover Demonstration Projects Using Geosynthetic Blankets, 200-94-003

No. 11: Metallic Discards Management 200-94-004

No. 12: Permitting of Nontraditional Facilities 200-94-005

No. 13: Wood Waste Landfills 200-94-006

No. 14: Revised Policy & Procedures for Maintaining the Inventory of Solid Waste Facilities Which Violate State Minimum Standards 200-94-007

No. 15: Completion of Solid Waste Information System Inspection Reports for Disposal Sites and Transfer Stations 200-94-008

No. 16: Clean Closure 200-94-010

No. 17: Nuisance Dumping 200-94-011

No. 18: Permitting and Enforcement at Composting Facilities 200-94-012

No. 19: Streamlining the Approval of Alternative Daily Cover Demonstration Projects Using Green Material 200-94-013

No. 20: 1995 Inspection Guidance for Solid Waste Landfills, 232-95-001

No. 21: Format for Permit Review Reports, 232-95-003

MRFs: Policy, Planning, and Design Resource Manual

Permit Desk Manual

Procedural Guidance Manual for Sanitary Landfills

Vol. I: Landfill Leachate Monitoring and Control Systems (and Appendices)

Vol. II: Landfill Gas Monitoring and Control Systems

Reaching the Limit: An Interim Report of Landfill Capacity in April 1992, 301-92-001

Special Wastes

Metallic Discards Management Plan & Appendices, 500-93-001

Medical Waste Issues Study, 500-94-016

Appliance Recycling Guide: A Guide for Solid Waste Facilities, 500-94-022

Tires

Action Plan: Tires

Market Status Report: Tires

California's Waste Tire Challenge, 400-94-012

Tires as a Fuel Supplement: A Feasibility Study

Used Oil

Become the Center of Attention - It's Good for You and Your Community

Used Oil Fact Sheets

Attention: Generators of Used Oil

California Oil Recycling Enhancement Act

CIWMB Used Oil Filter Pilot Program, 333-95-006

Frequently Asked Questions by Generators of Used Oil

Money Available for Collecting Used Oil

Procedures for Preventing Acceptance of Contaminated Used Lubricating Oil

Used Oil Recycling Rates Semiannual Report, 500-94-054

Waste Reduction

A Guide for Leaving Less Behind for the Future: Reduce, Reuse, Recycle

No Waste Gift-giving Ideas, 500-94-053

Statewide Waste Prevention Plan

State Initiatives in Waste Prevention

Waste Prevention Ideas, 500-94-008

Waste Prevention: Stopping Waste at the Start (English, Spanish), 500-94-012

You Can Do It Too! Preventing Waste at the CIWMB, 442-95-025

**1993-1994 Legislative Session
Final Status of Priority Bills**

Bill No: AB 314 (Sher)*

Subject: Environmental Quality

Clarifies that public agency contracts for the preparation of specified environmental documents must be executed within 45 days from the date on which the state environmental impact report (EIR) is required; prohibits the use of a master EIR if approval of a project that was not described in the report may affect the adequacy of the environmental review in the report for any subsequent project; specifies that periods for judicial challenge of the California Environmental Quality Act (CEQA) compliance commence when notice is sent to those who request it; and adds a provision that permits severance of CEQA cases when appropriate. Contains an urgency clause.

**Chapter 1294, Statutes of 1994.
Effective October 1, 1994.**

Bill No: AB 688 (Sher)

Subject: Planning and Diversion Requirements

Authorizes the IWMB to conditionally approve integrated waste management plans and their elements, and clarifies circumstances under which the IWMB is, or is not, to impose penalties for failure to comply with planning and diversion mandates. Includes various provisions to assist rural jurisdictions in meeting the planning and diversion mandates of the Integrated-Waste Management Act. Excludes "biomass conversion" from the definition of transformation and allows a jurisdiction to obtain a 10 percent credit toward meeting the 50 percent by 2000

diversion requirement through biomass conversion. Authorizes the IWMB to reduce the diversion requirements for a jurisdiction which hosts a regional medical waste treatment facility if certain conditions are met. Requires the IWMB to regulate the disposal of asbestos containing waste at solid waste facilities. Makes clarifying changes to the rigid plastic packaging container program administered by the IWMB.

Chapter 1227, Statutes of 1994.

Bill No: AB 783 (Polanco)

Subject: Public Utilities: Economic Development

Authorizes the Public Utilities Commission (PUC) to approve utility economic development programs in recycling market development zones as well as in enterprise zones and economic incentive areas. Allows utilities to recover in rates economic development program expenses in cases where the utility demonstrates that ratepayers of the public utility will derive a benefit from those programs. This is an urgency measure. (Note: AB 783 was originally introduced in 1993 by then-Assemblyman Peace; it was rewritten by Assemblyman Polanco to be similar to AB 1431 of 1993, which was vetoed by the Governor.)

Chapter 53, Statutes of 1994.

Bill No: AB 1495 (Peace)

Subject: Economic Development and Infrastructure

Enacts the Bergeson-Peace Infrastructure Bank Act. Creates the California Infrastructure Bank within the California Housing Finance Agency, which would be renamed the California Housing and Infrastructure Finance Agency. Assigns

responsibility for carrying out the Act to the Bank. Creates within the State Treasury several related accounts. Specifies that the bill would not become operative until the Legislature receives written notice from the Governor that sufficient funds are available to implement the provisions of the bill.

Chapter 94, Statutes of 1994.

Bill No: AB 2523 (Bowen)

**Subject: Electronic Data Processing:
State Agencies: Master Plan**

Requires the Director of Office of Information Technology to develop a master plan by January 1, 1996, that provides for networking between all state agencies in order to enable these agencies to communicate with each other, share data where appropriate, and maximize public access to this network.

Chapter 925, Statutes of 1994.

Bill No: AB 2632 (Solis)*

Subject: Puente Hills:

Acquisition of Land Requires the owner of the Puente Hills Landfill to dedicate as open space property, the buffer zone and Canyons 6, 7, and 8, as specified in the Los Angeles County Conditional Use Permit (CUP). Requires the owner of the disposal facility to enter into an agreement with the Los Angeles County Department of Parks and Recreation to use the disposal site as a public park when disposal activities are completed, as specified in the CUP.

Chapter 1295, Statutes of 1994.

Bill No: AB 2762 (Sher)

Subject: Used Oil Recycling

Authorizes the IWMB to establish a 2-year pilot program for recycling used oil filters; increases the volume of sale or transfer of used oil subject to payment from 5 gallons to 500 gallons from 1/1/95 to 1/1/2000; makes clarifying changes to the definitions of "bulk oil" and

"used oil hauler"; extends the due date of specified quarterly reports to 45 days following the end of each quarter; defines "used oil storage facility" and "used oil transfer facility"; and makes various other technical and clarifying changes to the used oil program.

Chapter 1147, Statutes of 1994.

Bill No: AB 2938 (Aguiar)

**Subject: Solid Waste: Diversion
Requirements: Time Extensions**

Requires a city which is incorporated after January 1, 1990, to submit a SRRE, a household hazardous waste element, and a nondisposal facility element to the Board for approval within 18 months from the date the city was incorporated or within 18 months from the effective date of the bill, whichever is later. Reduces the conditions to be met before the Board may grant a time extension from the diversion requirements for newly-incorporated cities.

Allows the Board to authorize a time extension to a newly-incorporated city to submit a SRRE that includes a specified implementation schedule for the initial element and the first revision. This is an urgency measure.

Chapter 1150, Statutes of 1994.

Effective September 29, 1994.

Bill No: AB 3218 (Costa)

Subject: Recovery and Storage of Oil

Makes technical and clarifying changes to existing legislative findings and declarations regarding the recycling of used oil. Exempts units, including associated piping, that are part of a system used for the recovery of oil from oil-bearing materials, and the associated storage of these materials and the recovered oil, from the hazardous waste control laws if specified conditions are met. Defines the terms "oil", "oil-bearing materials," "oil recovery operations," and

"petroleum refinery" for purposes of those exemptions.

Chapter 1054, Statutes of 1994.

Bill No: AB 3413 (Conroy)

Subject State Agencies: Fee Increase Moratorium

Requires each state agency to develop and maintain an index of all fees, license fees, and fines administered and collected by the agency, except for fees collected from a governmental agency.

Chapter 784, Statutes of 1994.

Bill No: AB 3582 (Richter)

Subject: Hazardous Waste: Oil Disposal and Use

Among other things, the bill would classify used oil as a recyclable material which is subject to regulation as a hazardous waste, unless it meets certain requirements: Prohibits any use of used oil or recycled oil as a dust suppressant or insect or weed control agent unless allowed under another applicable law, but only to the extent that the use is consistent with federal law. Requires that used oil which is not subject to regulation as a hazardous waste be managed in accordance with specified federal regulations.

Chapter 1154, Statutes of 1994.

Bill No: ACR 139 (W. Brown)

Subject: Biodegradable Plastics

Encourages state agencies to act expeditiously to increase their purchase of biodegradable plastics. Urges the IWMB and other appropriate agencies to analyze the efficacy of biodegradable plastics, including an analysis of potential impacts resulting from the mixing of biodegradable plastic resins with other plastic resins. Requests the IWMB to adopt standards and specifications, as appropriate, for biodegradable plastics.

Chapter R-122, Statutes of 1994.

Bill No: SB 923 (Calderon)

Subject: State Superfund Reform

Establishes the "California Expedited Remedial Site Action Model Reform Act of 1994 - Phase One" (Model Reform Act) in an effort to address issues raised by critics of the Carpenter-Presley-Tanner Hazardous Substances Account Act (the state Superfund law).

Chapter 435, Statutes of 1994

Bill No: SB 1257 (Ayala)

Subject: Defense Installation Conversion to Nonmilitary Use

Requires the Secretary of Environmental Protection, in coordination with appropriate federal, state, and local agencies, to expand one-stop permit programs to provide for the development of defense installations converted to nonmilitary use. In addition, the bill requires the Secretary of Cal/EPA to develop, and seek approval of, a Memorandum of Agreement for coordination of permits with all appropriate federal, state and local agencies issuing permits that may be required for the use of the converted facility. This is an urgency measure.

Chapter 34, Statutes of 1994.

Effective March 30, 1994.

Bill No: SB 1021 (Thompson)

Subject: Recycling Market Development

Makes various technical and clarifying changes to the IWMB's Recycling Market Development Zone Program.

Chapter 436, Statutes of 1994.

Bill No: SB 1450 (Hughes)

Subject: Illegal Dumping

Makes the dumping of waste matter in commercial quantities a misdemeanor punishable by imprisonment in a county jail for not more than six months and by a trebled fine.

Chapter 737, Statutes of 1994.

Bill No: SB 1894 (Leslie)
**Subject: Solid Waste: Local
Government Technical Advisory
Committee**

Extends from January 1, 1995 to January 1, 1999, the operative date of the Local Government Technical Advisory Committee (LGTAC), which assists and advises the IWMB. Requires appointments to the committee to be representative of urban, suburban and rural areas. Deletes stipend provisions for attendance at each meeting. Requires quarterly meetings to be held at various locations around the state. Increases the duties of the LGTAC.

Chapter 625, Statutes of 1994.

Bill No: SB 1898 (Peace)
**Subject: State Agencies: Business
Forms**

Requires the Director of General Services, among other things, to establish a State Forms Management Program for all state agencies and provide assistance in establishing internal forms management capabilities.

Requires each state agency, by June 30, 1995, to inventory all reports and forms it requires businesses to complete in order to comply with agency requirements, and to eliminate all forms it determines are no longer needed to enable that agency to carry out its statutory responsibilities.

Chapter 769, Statutes of 1994.

Bill No: SB 1915 (Marks)
**Subject: Procurement of Recycled
Products**

Declares legislative intent to bring California's procurement guidelines for recycled paper products into compliance with current federal recycled product procurement practices and would revise, in part, the definition of recycled paper products for those purposes by increasing from 10 percent to 20 percent of its total weight the amount that must consist of postconsumer waste. Specifies that changes from the terms "postconsumer waste," "secondary waste," and "total weight" to "postconsumer material," "secondary material," and "fiber weight" would take effect immediately, but other changes to provisions relating to certain fine grades of paper would not become operative until January 1, 1995.

Chapter 942, Statutes of 1994.

*Indicates bills that became law without the Governor's signature.

**California Integrated Waste
Management Board
8800 Cal Center Drive
Sacramento, CA 95828**

(916) 255-2200

Office of the Executive Director

Ralph Chandler
Executive Director 255-2182

Dorothy Rice
Chief Deputy Director 255-2185

Public Affairs Office

Pat Macht
Assistant Director 255-2296

Policy & Analysis Office

Caren Trgovcich
Assistant Director 255-2700

**Legislative & Regulatory
Affairs Office**

Patty Zwarts
Assistant Director 255-2203

Legal Office

Kathryn Tobias
General Counsel 255-2825

Administration & Finance Division

Marie LaVergne
Deputy Director 255-2269

**Diversion, Planning & Local
Assistance Division**

Judith Friedman
Deputy Director 255-2302

**Waste Prevention, & Market
Development Division**

Daniel Gorfain
Deputy Director 255-2320

**Permitting & Enforcement
Division**

Doug Okumura
Deputy Director 255-2431

Acknowledgments

1994 Annual Report

Report Writing Directors:

**Pat Schiavo and
Caren Trgovcich**

Principal Writer:

Renee Lawver

*Special acknowledgment to
all Board staff who assist
ed with the preparation of
this report, particularly
the report writing and
coordination team:*

*Carole Brow,
Catherine Cardozo,
Charlene Herbst,
Debra Kustic,
John Nuffer, and
Shirley Volsansky.*

Publications Coordinator:

Paige Lettington

Senior Graphic Artist:

Diane O'Leary

Graphic Artist:

Thomas Gonzales

*For additional copies of
this report, contact the
Board's Recycling Hotline
at (300) 553-2962.*