Pueblo Integrated Waste Management Plan

Recommendations to Enhance Solid Waste Management for the Communities of Pueblo, Colorado

February 2000

Prepared by:

The Environmental Policy Advisory Committee to the Pueblo Area Council of Governments

And

The Pueblo 2010 Commission Environmental Task Force

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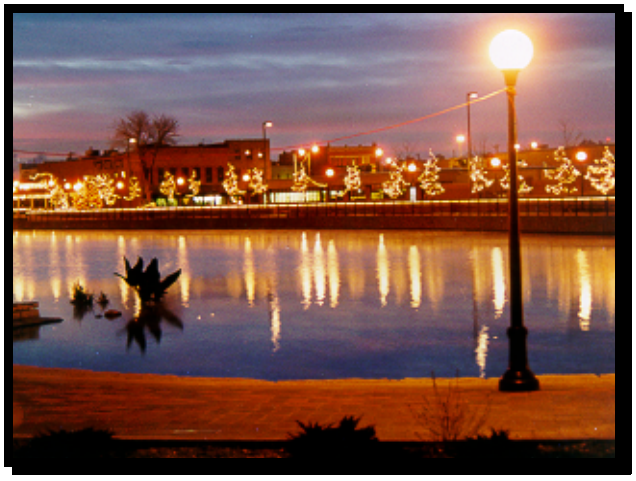
PUEBLO INTEGRATED WASTE MANAGEMENT PLAN

TABLE OF CONTENTS

Pueblo's Lake Elizabeth at the north end of the Historic Arkansas Riverwalk, December 1999

(photo by Curt Burns)



ACKNOWLEDGMENTS

The Environmental Policy Advisory Committee (EPAC) to the Pueblo Area Council of Governments and the Pueblo 2010 Environmental Task Force wish to acknowledge the efforts of the following in the preparation of this Integrated Waste Management Plan:

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Jean Williams, MD, American Association of University Women, League of Women Voters

Phil Shafer, Senior Planner, Pueblo County Planning and Development

Scott Cotton, Colorado State University, Extension Agent, Range Management, for editorial review and comments

John Krohn, Operations Manager, Ashland Specialty Chemical Company

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Mark Carmel, Pueblo County Administrator

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Corporate Support

WestPlains Energy, a Division of UtiliCorp United, Inc., Pueblo, Colorado, for its provision of office supplies, meeting facilities, equipment and copying.

Consultant

Jim Johnson and Associates, Boulder, Colorado, for initial data development work on this Plan.

Grants Supporting the Preparation of this Plan

Office of Energy Conservation 1997 Grant to develop a waste management plan and support the efforts of the Environment Action Plan of the 2010 Strategic Plan of Pueblo.

Office of Energy Conservation 1997 Grant to establish the Environmental Coordinator position for Pueblo and support waste management programs.

Businesses and organizations supporting Integrated Waste Management in Pueblo

Asplundh Tree Expert Company (Christmas Tree Recycling)
Bonnie's Car Crusher (Household Recyclable Waste Round-Up)
Colorado State University Extension Office
Concerned Parents of Pueblo (Graffiti Cover-Up)
Irving Oil Co. (Household Recyclable Waste Round-Up)
Greenway Nature Center (Zoo Doo)
Lamar Advertising (Litter Bee)
McDonalds Restaurants (Phone Book Recycling)
Pueblo Chemical Depot (Household Hazardous Waste Round-Ups)
Pueblo City-County Health Department
Pueblo Community Environmental Pride Association (Household Hazardous Waste Round-Ups)
Pueblo Disposal Services (Community Clean-Ups, Christmas Tree Recycling)
Pueblo Airport Industrial Park (Phone Book Recycling)
Pueblo Zoo (Zoo Doo)
Safeway Food and Drug Stores (Phone Book Recycling)
Target (Buy Recycled Education Programs)
US West Dex (Phone Book Recycling)
WestPlains Energy (Christmas Tree Recycling)
Zupan Landfill (Yard Waste Round-Ups)

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EXECUTIVE SUMMARY

Integrated waste management is *"the complementary use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment."*

Integrated waste management considers first source reduction, then reuse, recycling and composting, and finally landfilling or incineration. Integrated waste management in the long-term makes sense, environmentally and economically. For example, while landfilling may appear to be the cheapest method of waste management, facilities that fail to observe environmentally sound practices for siting and operation may not adequately protect public health and the environment. Costs associated with the clean-up of poorly managed landfills must be included in evaluating landfill costs.

This Plan provides numerous recommendations and strategies for integrated waste management for Pueblo communities. Key elements of this Plan are summarized below.

MAINTAIN THE ENVIRONMENTAL POLICY ADVISORY COMMITTEE TO THE PUEBLO AREA COUNCIL OF GOVERNMENTS AS THE LOCAL SOLID WASTE ADVISORY COMMITTEE

Citizens' advisory committees, such as EPAC, are essential in providing a forum for a variety of opinions, tapping into local expertise, generating community commitment, and organizing volunteer efforts. A balance of interests are represented on EPAC including local elected officials, municipal employees, community or neighborhood groups, landfill operators, waste haulers, recyclers, environmentalists, major waste producing industries, regulatory agencies, and citizens. Since the planning area encompasses more than one community, geographic representation is also considered. The committee's future role must be clearly outlined, local governments must provide official status and operational support (access to meeting space, staff time, telephones, office supplies, etc.). Subcommittees, such as the one that prepared this Plan, can continue to accomplish specific tasks.

STUDY THE LOCAL WASTESTREAM

Implementation of a localized integrated waste management system depends on an accurate understanding of waste generation, waste composition, and existing waste management practices. Study of the local waste stream would give the community this information. The information would not only give a representation of the current situation, but would establish a foundation for future projections. The study should

examine residential and commercial waste, industrial and agricultural waste, institutional waste, imported out-of-county waste, seasonal variations, demographics, the state of the economy, and other appropriate parameters. A waste study may be conducted by utilizing existing data from similar communities or by sorting, measuring and categorizing samples of the waste received by local facilities.

IMPLEMENT POSITIVE PUBLIC EDUCATION

Successful integrated waste management, particularly in rural areas, depends strongly on public education efforts. The basic components for a public education program are described throughout this Plan. They include distributing prepared literature and audio-visual materials, and making presentations to churches, schools, civic organizations, business groups, and environmental groups. Integrated waste management information can best be promoted through existing lines of communication and by providing printed materials at community gathering points, retail locations, and waste disposal sites. Existing businesses, institutions, or clubs can be asked to sponsor workshops or demonstrations on various components of integrated waste management.

With more resources, expanded educational programs can provide workshops and seminars, multimedia campaigns, school curricula, hotlines, office waste reduction programs, shopper awareness programs, and demonstration projects. In addition to general consumer awareness, education can focus on specific waste reduction programs and special waste issues.

EXPLORE REGIONAL COOPERATIVE AGREEMENTS AND STRUCTURES

Through cooperative efforts between neighboring communities, and private and public entities, communities may streamline administrative costs, increase the feasibility of processing recyclables, and reach residents more efficiently through education programs. Regional recycling facilities have may be successful in Pueblo. Smaller communities may be able to coordinate recycling drives, taking advantage of higher volumes of materials and lower transportation costs. Communities may be able to share specialized equipment such as mobile balers, shredders, and crushers. Transportation and manufacturing industries may also help ease barriers to recycling.

PROVIDE INCENTIVES FOR WASTE REDUCTION

Low solid waste disposal rates or fees may not provide an incentive for source reduction, reuse, and recycling. Innovative fee structures could be used to provide incentives for those who generate less waste to be landfilled. In addition to economic

incentives or disincentives, communities can offer awards and other public recognition programs to businesses or individuals that significantly reduce their waste.

IDENTIFY AND IMPLEMENT FUNDING MECHANISMS

A random survey of Colorado communities, as well as those in other states indicates that a variety of funding mechanisms is used for integrated waste management systems. The most common funding mechanisms used to finance solid waste management programs in Colorado are:

- ◊ Donations and grants
- ◊ Municipal general funds
- ◊ Unit-based or pay-as-you-throw pricing
- ◊ Utility or enterprise funds
- ◊ User surcharges

Donations and grants can provide startup funds and small amount limited funding to continue support of a very limited integrated waste management program. Under existing conditions, a user surcharge appears be the most efficient and equitable means to generate the funds necessary to provide Puebloans with the environmental services *they need and deserve*. Funds generated by the surcharge could be deposited into an enterprise fund from which recycling programs and other activities could receive the funding to provide community environmental services.

CHAPTER 1

INTRODUCTION

The communities of Pueblo County are currently experiencing an increase in population and economic diversification. As new businesses relocate to the Pueblo area and the population grows, environmental issues that may have gone unnoticed in the past will become more visible and expectations for community-wide environmental services will increase. The demand for community environmental services will come from the experiences of new residents and businesses with environmental services in other areas, as well as by a now common awareness of our obligation to "do the right thing" for our children and the environment.

Since 1991, Colorado citizens and businesses have increased the demands placed on the state's solid waste systems in two major ways. According to the 1997 Solid Waste Initiative prepared by the Colorado Department of Public Health and Environment, these demands are:

> "Citizens have requested added services resulting in new waste management mechanisms and facilities that emphasize alternatives to landfilling, such as recycling and composting.
>
> Citizens have also demonstrated a strong interest in the proper handling of household hazardous waste and agricultural chemical collection.
>
> New resources and new effort are needed to respond safely and effectively to these new demands..."

In 1994, Pueblo residents articulated their vision for the environment in the *Communities of Pueblo County Strategic Plan* (referred to here as the 2010 Plan.) The Environmental Policy Advisory Committee (EPAC) to the Pueblo Area Council of Governments, which also acts as the 2010

ENVIRONMENTAL POLICY ADVISORY COMMITTEE (EPAC)

- ***Advisory Group to the Pueblo Area Council of Governments***
- Since 1974

Mission: To influence attitudes and policy making decisions in an effort to protect, conserve, and preserve our natural resources, and to ensure a safe, healthy, and attractive environment for the citizens, communities and businesses of the City and County of Pueblo.

Environmental Task Force, has been striving to meet the environmental goals of the Strategic Plan since 1995. Through a series of grants from the Governor's Office of Energy Conservation, limited funding from the Pueblo Area Council of Government, and donations from various local organizations, EPAC was able to begin implementing several of the strategies outlined in the 2010 Plan and expand on several programs that desperately needed funding to continue, including:

2010 COMMISSION
ENVIRONMENTAL TASK FORCE

- ***Advisory Group to the 2010 Commission***
- Since 1994
- The 2010 Commission is a group of business people, city officials, and non-profit organizations responsible for promoting and leading the implementation of the Pueblo County Strategic Plan. Task forces are staffed by volunteer key experts who identify goals and objectives that will promote the Strategic Plan.

- ✓ Preparation of this Community-Wide Integrated Waste Management Plan
- ✓ Coordination of community clean up efforts
- ✓ Public education through the "Litter Bee" campaign, school curriculum environmental supplements, recycled product presentations, and more
- ✓ Coordination of recycling events (yard waste roundups, phone book collection, Christmas tree chipping, recycling days, household hazardous waste collection days, etc.)

An Integrated Waste Management Plan adds value to the communities of Pueblo County by addressing these environmental issues:

- ✓ More active promotion of environmental education and outreach to the community on environmental issues, including assistance to local businesses on waste reduction and recycling opportunities
- ✓ A centralized point of reference for resources on solid waste and environmental issues that residents, businesses, and local governmental entities could utilize
- ✓ Expansion of the recycling programs currently underway to ensure they are routine and frequent services provided to the community
- ✓ Recognition of opportunities that may result from coordinating the efforts of multiple entities resulting in benefits for the whole community that may otherwise go unnoticed (i.e., Company A has a waste product that could be

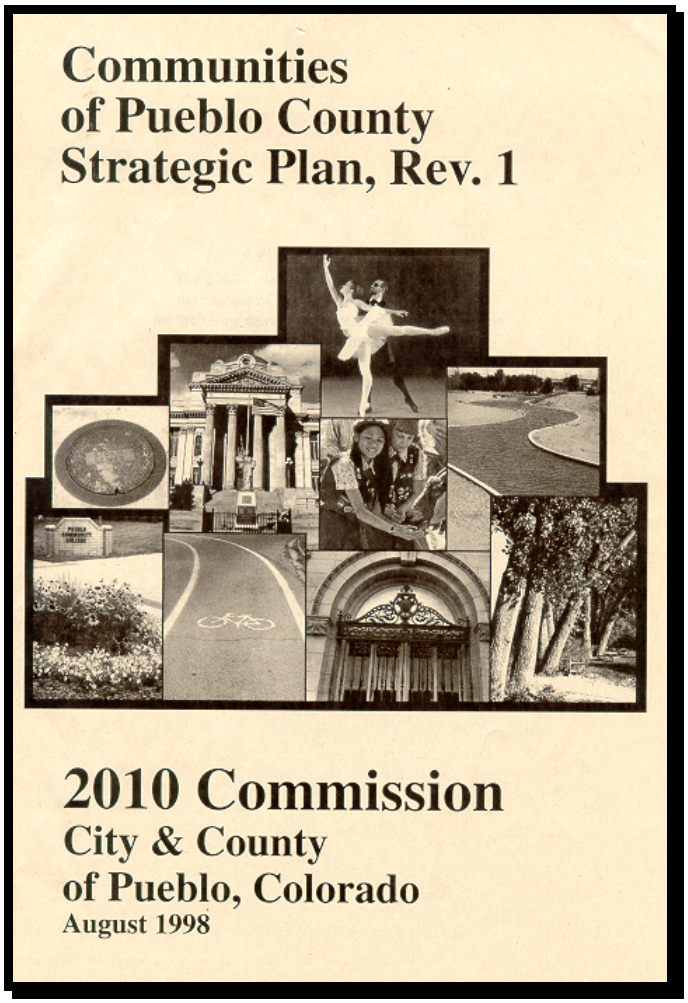
used by Company B in their manufacturing process; the Integrated Waste Management Plan recommends development of a material exchange)

- ✓ More active investigation and follow through on illegal dumpsite cleanup facilitating enforcement by the Pueblo City-County Health Department and Police/Sheriff's Departments

As a result of an Integrated Waste Management Plan, Pueblo residents will reside in a more healthful, environmentally responsible, and visually appealing community. Moreover, its positive impacts will contribute to Pueblo's ability to compete with other communities to recruit responsibly proactive businesses and attract an educated work force.

COMMUNITY ENVIRONMENTAL ISSUES AND SERVICE DEMANDS

Environmental issues affect Pueblo's opportunity for *sustained* growth and development. The 2010 Plan recognizes the importance of environmental services; in fact, each Task Force has at least one goal or objective that relates to community environmental issues. For example,



- ➢ Goal 4 of the *Arts, Culture and Historical Preservation Task Force* states, "For Pueblo to achieve its arts, culture and historical preservation vision, the communities of Pueblo County need to develop citizen participation programs that will create positive, inherent attitudes toward home and community."

- ➢ A basic issue addressed by the *Business and Economic Development Task Force* is described as follows: "Task Force members recognize the growing importance of a community's image. Tourism and attraction of new businesses rely on the quality of life

projected by the community."

- The vision statement for the *Governance Task Force* reads, "In the year 2010, the communities of Pueblo County have governance that integrates and maximizes diverse community participation as a positive and earnest part of decision making. Decisions reflect fiscal responsibility and accountability to our communities."

- The vision statement for the *Health and Well Being Task Force* states: "In the year 2010, the communities of Pueblo County are encouraging and promoting a healthy lifestyle, self-responsibility, and individual well-being through education, accessible health care, good housing, food, human services, a clean environment, and safety of persons and property."

- Goal 1 of the *Infrastructure Task Force* states, "For Pueblo to achieve its infrastructure vision, the communities of Pueblo County need to become a community that encourages and provides an incentive to maintain and develop the beauty of our environment."

- The *Learning Task Force* has specific objectives to validate academic subject area curricula through business and industry as well as to increase community participation in the education process.

Although environmental concerns span a broad range of topics, certain issues come to the fore based on questions the Pueblo City-County Health Department fields on a regular basis. These issues include:

- ✓ Recycling opportunities in the Pueblo area
- ✓ Responsible disposal of household hazardous waste

Each of these environmental issues is discussed below.

RECYCLING

In 1993, Coloradans were challenged by then Governor Roy Romer to reduce the amount of waste sent to landfills 50 percent by the year 2000. Puebloans accepted the Governor's challenge by incorporating it as an environmental goal in the 2010 Plan. The benefits of recycling and source reduction are many. Environmentally, recycling and source reduction conserves natural resources, reduces the use of energy and landfills, and cuts air and water pollution. Economically, recycling creates six times as many jobs as landfilling (a national average).

Other communities throughout Colorado have developed recycling programs as an integral part of their overall waste management strategy. Some of these programs are

as simple as drop-off facilities scattered throughout the town. Other programs include state-of-the-art materials recovery facilities that separate co-mingled waste materials collected curbside by haulers. Almost all communities include a concerted effort to educate the public about the consequences of improper disposal of recyclable household hazardous waste and the foolishness of squandering away landfill space on wastes that could be recycled.

Pueblo does not have mandatory trash or recyclable collection. Residents and businesses have a choice of service providers that may or may not offer recycling services. Recyclables, such as newspapers, aluminum cans, and occasionally glass bottles and plastics, can be taken to local drop boxes (sponsored by Pueblo Disposal Services, a private company) or to the local grocery stores in town. Residents that want to recycle bulkier items, like appliances, can wait for an *annual* recycling event or contact local firms to haul away freon-free appliances. However, information detailing these services are not necessarily readily available to Puebloans.

Numerous recycling and other advanced waste management programs have developed in Pueblo. These programs, which are detailed throughout the Plan run on the efforts of volunteers and local corporate sponsors and are managed with almost no funding. Programs of this sort will not continue to exist unless some form of local support is identified. Private recycling operations are detailed in Appendix C, Local Recycling Directory for Pueblo.

In recent years, some funding has been provided through grants from Governor's Office of Energy Conservation. Funding has also been provided through a one-time Supplemental Environmental Project Fund, which provides a portion of funds generated from fines from violations of regulations to be used for proactive environmental improvements. However, these funds will no longer be available after the year 2000. Additional funding must be identified to continue these programs. Funding mechanisms are discussed in Chapter 12 of the Plan.

Although the number of Puebloans using the local recycling options has been growing steadily as residents become more aware of them and as new residents continue their recycling habits from other communities, the programs can be run more efficiently and provide greater benefits to the community.

HOUSEHOLD HAZARDOUS WASTE

Every household uses and discards materials that contain hazardous chemicals. Examples of household hazardous waste include paints; paint strippers; used engine oil, antifreeze, and lead-acid batteries; pesticides, insecticides, and herbicides; and a variety of cleaning fluids.

The average U.S. household generates more than 20 pounds per year of household hazardous waste that can negatively impact the environment if incorrectly disposed. For example, an estimated 180 million gallons per year of used oil is illegally dumped each year by Americans who change their own vehicle oil and fluids. Not surprisingly, a significant portion of the pollution found in U.S. waterways can be traced back to improper disposal of used oil. When chemicals are improperly disposed of into the sewer system, they may adversely affect the biological processes at the sewage treatment plant. Pollutants that bypass the plant and are untreated can potentially impact downstream users (agricultural irrigation, ranching, or well-water supplies).

An estimated 1,000,000 pounds per year of household hazardous waste are generated in Pueblo County!

In addition, household hazardous waste that is disposed of in landfills can potentially leach into soil and groundwater, which may endanger surrounding communities' water supplies, in turn leading to potentially lower property values and costly remediation. Household hazardous waste thrown in the trash may also present a serious health and safety risk to trash collectors who may not see it as they dump and compact the refuse in their trucks, and then be sprayed or splashed with harmful chemicals.

In July 1997, EPAC/2010 Environmental Task Force coordinated a recycling event for the communities of Pueblo County that included the collection of bulky wastes (tires, appliances, etc.) and some limited recyclable household hazardous waste (paints, oil, antifreeze, lead-acid batteries). Community response about the event was extremely positive, both in terms of the number of people delivering materials as well as their comments to volunteers directing the event. The following wastes were collected during that 1-day event:

- ✓ 6,500 gallons of paints and stains
- ✓ 2,106 gallons of used oil and antifreeze
- ✓ 188 used oil filters
- ✓ 446 lead-acid batteries
- ✓ 4,405 tires
- ✓ 60,000 pounds of appliances

If national estimates are applicable to Pueblo, future events have the potential to collect approximately 400 tons of household hazardous waste annually that might otherwise be illegally dumped or improperly disposed! The results of a recent survey conducted by EPAC/2010 Environmental Task Force dramatically support the need for community household hazardous waste collection programs.

Household hazardous waste collection is not an unusual service provided by a community of Pueblo's size. EPAC/2010 Environmental Task Force surveyed several other cities with similar or lower populations than Pueblo about their household hazardous waste programs; the results of this survey are summarized below.

CITY	POPULATION	HOUSEHOLD HAZARDOUS WASTE PROGRAMS
Davenport, IA	95,233	County-City joint funded
Las Cruces, NM	62,126	Recyclable and household hazardous waste collection bins at all transfer stations funded through a City Enterprise Fund (about $9 per household per month)
Cheyenne, WY	50,008	Yearly household hazardous waste collection day funded through city general funds
Colorado Springs, CO	470,000	Household hazardous waste collection events funded by $0.25 per cubic yard landfill surcharge

AVAILABLE DATA ON WASTE GENERATION

Only very limited information is available on waste generation nationally, in Colorado, and in Pueblo County. Unfortunately, an insufficient amount of data exists to determine statistical differences. The importance of waste tracking is described in this report and recommendations for improved data collection and management provided.

THE PUEBLO ENVIRONMENTAL COORDINATOR

As a result of the Environmental Coordinator's efforts, Pueblo's recycling programs continue to run efficiently and have the support of a sufficient number of volunteers and corporate sponsors. The Environmental Coordinator also works to identify grant funding and to bring into the community both state and national funding for the programs detailed in the Plan.

PUEBLO ENVIRONMENTAL COORDINATOR (EC)

- ***Environmental Education and Recycling Coordination***
- With a trial grant from the governor's Office of Energy Conservation in 1998, one of the 2010 Plan's Environmental Objectives was realized. The position became full time in 1999, housed at the Pueblo City-County Health Department. This position provides an educational clearinghouse for environmental issues and plans events to reduce environmental impacts, encouraging source reduction, reuse, recycling, and proper disposal.

PLAN STRUCTURE AND CONTENTS

This Plan describes the elements of integrated waste management, specifically the complementary use of a variety of waste management practices to safely and effectively handle municipal solid waste with the least adverse impact on human health and the environment.

In Chapters 2 through 9, waste management strategies are described separately and Policy statements are suggested.

In Chapters 10 and 11, short-term recommendations and long-term strategies, respectively, are provided. Short-term recommendations should be accomplished within three (3) years after the Plan is approved. Short-term recommendations should completed before attempting to accomplish the more aggressive long-term strategies.

Finally, Chapter 12 provides a discussion of potential funding mechanisms.

CHAPTER 2
INTEGRATED WASTE MANAGEMENT VISION

Policy: The Communities of Pueblo will plan, implement, and monitor an integrated approach to solid waste management ultimately reducing the amount of waste disposed by landfilling or incineration, based on the following priorities:

1. reduction of waste generated at the source
2. reuse
3. recycling
4. composting of biodegradable waste

WHAT IS INTEGRATED WASTE MANAGEMENT?

The U.S. Environmental Protection Agency defines integrated waste management as

> *"the complementary use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment."*

Integrated waste management consider reuse, then recycling and composting, and finally landfilling or incineration. Each of these methods is more fully discussed in the following six chapters.

Integrated Waste Management in the long-term makes sense, environmentally and economically. For example, while landfilling may appear to be the cheapest method of waste management, facilities that fail to observe environmentally sound practices for siting and operation may not adequately protect public health and the environment. Costs associated with the clean-up of poorly managed landfills must be included in evaluating landfill costs.

Implementing new federal and state regulations to correct these practices is dramatically increasing the cost of landfilling. Space in well-sited, well-designed, and well-operated landfills is a valuable commodity to be appreciated and conserved.

The cost and effectiveness of source reduction and reuse have not been evaluated for Pueblo communities. Composting shows promise as an economically feasible

management method for some local entities. Because, recycling markets fluctuate, planning and decision making is more complicated than this plan can address fully.

Short-term cost-effectiveness is only one measure of the usefulness of any waste management method.. The integrated waste management process has the potential to conserve energy and resources, to lead to wiser decision-making, to increase community involvement, to enhance protection of human health and the environment, and to create jobs.

Existing businesses that are implementing integrated waste management practices can serve as model demonstration sites for businesses of their type. Such modeling will encourage other companies to implement similar practices. Businesses can exchange information on costs and benefits associated with integrated waste management practices.

As old landfills close and new ones become more difficult to site and more expensive to construct and operate, the disposal of waste has become a growing problem for many communities. In order to deal with this problem, integrated waste management policies can work with cooperation from local governments, the private sector, and the general public.

THE WASTE REDUCTION GOAL

One primary goal of this Plan is to establish programs that will allow Pueblo communities to measure waste management practices and their effectiveness.

Precise measurement is essential in evaluating policies, tracking progress, and revising plans. Although volume is a more significant measure in terms of landfill capacity, weight is more consistent and therefore comparable. The mechanisms are not currently in place locally to accurately measure wastes or recyclables. Local resources have not been committed to undertake such data gathering activities.

Waste reduction can take place through recycling and composting, but also through source reduction and reuse. Until mechanisms are in place to measure recovery or reduction attributable to each of these methods, efforts should be directed to measuring waste disposal.

Associated with development and implementation of tracking mechanisms is the goal of measured waste reduction. As measurement mechanisms become available, consistent increasing reduction is a goal of this Plan. However, it is important that improved measurement is not confused with changes in waste generation.

THE PUBLIC EDUCATION GOAL

Another goal of this Plan is changing consumer behaviors and attitudes about waste reduction strategies -- source reduction, reuse, recycling, and composting. Public education, along with increased waste reduction opportunities, is one important strategy for encouraging this change.

PUEBLO LITTER BEE PROGRAM

- Since 1997
- **Sponsors**: EPAC, Lamar Outdoor Advertising, Pueblo City-County Health Department, Community Development Block Grants
- Over 2,000 elementary-grade school children have been educated about litter, recycling, individual responsibility, and reducing waste at its source.

Currently, most public education on integrated waste management occurs through the efforts of a few local citizens' groups - Pueblo Beautiful, Concerned Parents of Pueblo, League of Women Voters, the Colorado Public Interest Research Group, and the EPAC. Public education can help citizens make more informed decisions about waste management.

Pueblo Litter Bee logo seen at bus stops and schools throughout Pueblo.

Courtesy of Larimer Advertising

Recommendations and strategies enhancing Integrated Waste Management in Pueblo are provided in Chapters 10 and 11 of this Plan.

CHAPTER 3

SOURCE REDUCTION

Policy: Pueblo Communities will promote source reduction as the most important method of solid waste management.

"*...Solid waste source reduction is the design, manufacture, purchase, or use of materials or products (including packaging) to reduce their volume and amount of toxicity before they enter the municipal solid waste stream*." This simple concept has major implications. Source reduction encourages manufacturers to change how goods are produced, packaged, and sold. It encourages consumers to change their attitudes, habits, and behavior concerning how and what they buy.

Stopping waste before it starts is the first and most important way to reduce the amount of waste being generated. The following are common source reduction strategies:

- ◊ Decrease consumption
- ◊ Increase product durability
- ◊ Reduce packaging
- ◊ Manufacture and use less toxic products

ENVIRONMENTAL ISSUES

Changing management methods for waste after it has been created is often a matter of transferring pollutants from one medium to another. Source reduction eliminates this concern because it works at the front end of the waste stream by reducing waste generation. One of the reasons source reduction should become the first waste management priority is because it alleviates environmental problems associated with disposal. A smaller waste stream means less landfill leachate, ash disposal, transportation and fewer landfills, incinerators, and recycling processes. All these may have associated environmental impacts.

Decreasing consumption and buying more durable goods reduces the manufacturing pressure and the resulting environmental impacts associated with resource extraction, energy consumption, transportation, and manufacturing. A savings is realized by using resources more efficiently.

Consider potential environmental impacts before implementing any waste management method, including source reduction. If a change in production processes increases the net amount or toxicity of wastes produced during the entire life of a product, source reduction is not necessarily beneficial.

EDUCATION AND ECONOMIC ISSUES

Implementing source reduction educational programs may be the least costly of the waste management methods. Public education must be adequately funded, but generally costs less than siting new facilities. Source reduction activities save disposal costs. A smaller waste stream means less waste to transport and manage. If taxes or bans on particular products or packaging are implemented, they will have economic impacts for consumers. If product or packaging design standards are mandated, there will be new costs for manufacturers that they will pass along to consumers.

BARRIERS TO SOURCE REDUCTION

1. Social and cultural values favor convenience, lower costs, time savings, and newness in consumer products. We live in a consumption-driven economy.

2. Consumers do not generally think about source reduction and often confuse it with recycling. There is a general lack of understanding about what consumers can do to prevent waste at its source. People do not know how to recognize products that have less packaging, use fewer resources, or are less toxic.

3. Source reduction alternatives are often not available to consumers. It can be difficult to find or identify products that are less toxic, environmentally preferred, concentrated, or available from bulk sources.

4. Few economic incentives exist for consumers to practice source reduction. Source reduction already occurs in industry when the technology develops and economic forces make it profitable.

5. Source reduction is difficult for governments to mandate and is hard to measure. This makes public and government support and funding difficult to obtain.

Recommendations and strategies enhancing Integrated Waste Management in Pueblo are provided in Chapters 10 and 11 of this Plan.

CHAPTER 4

REUSE

Policy: Pueblo Communities will promote reuse of products and materials that would otherwise become part of the waste stream. Reuse is preferred over recycling, landfilling and incineration as a solid waste management method.

Many products, which have performed the function for which they were designed, may still have value in their present form either for the same purpose or some other purpose. Containers can be refilled. Newspapers can be used for insulation. Furniture and appliances can be repaired. Construction and demolition wastes can be used for small remodeling or construction projects. Clothing can be mended or donated to service organizations.

HOUSEHOLD RECYCLABLE WASTE ROUND UP

- Since 1997
- **Materials Available for Reuse**

  Paint (varnishes, solvents, etc.) Roofing Tar/ Asphalt
- Sponsors: Pueblo County Environmental Pride Association (PCEPA), Pueblo Chemical Depot, Irving Oil, Bonnie's Car Crusher, Colorado Department of Health and Environment, Pueblo City-County Health Department
- One weekend in May, Pueblo citizens drop off their household recyclables for reuse or recycling. The event provides an opportunity for local recyclers to come together and offer services to Pueblo Communities, while diverting materials from local landfills or being illegally dumped.

Products, that have out-lived their useful life for one consumer, may still have value for someone else. Consumers who want the newest model or the latest design may overlook this potential value and discard usable products and materials. Many discarded items could be repaired. Community swap programs allow consumers to bring unwanted products to a central place and pick up products that they need. Such exchanges require community organization and are often limited to single categories such as paint, but could be expanded to include other materials. Yard and garage sales are a good example of community swap programs. At yard sales, consumers invite the public to buy unwanted items they have placed in their yard, often for a low price.

The goal of reusing products is to keep them out of the waste stream. They are not waste until thrown away. With adequate community support, Pueblo communities can significantly reduce their waste through reuse programs.

CONCERNED PARENTS OF PUEBLO, INC.,

- Graffiti cover-up at over 5,200 locations
- Since 1992
- By reusing leftover latex paint, Concerned Parents helps beautifying Pueblo by painting over graffiti.

ENVIRONMENTAL ISSUES

Reuse lessons environmental problems associated with disposal. A smaller waste stream means less landfill leachate, less ash disposal, less transportation and fewer landfills, incinerators, and recycling processes. Reuse is a higher priority than recycling because products do not have to be remanufactured. Markets for reused items are generally local, eliminating transportation barriers. Air pollution associated with manufacturing and transportation are also reduced.

ECONOMIC ISSUES

One important strategy for implementing reuse programs, requires a financial investment, but has a lesser cost than building new facilities. There would be costs to diverting usable items from the waste stream at a transfer station or recovery facility, and costs to operating a reuse and repair center. Costs could be minimized by asking the public to separate reusables, by using volunteers, non-profit groups, existing facilities, and non-monetary contracts.

BARRIERS TO REUSE

1. One common public perception is that used items are of little value and that it is not proper to use what others have discarded.

2. Reuse programs take time, money, and energy to organize and maintain.

Recommendations and strategies enhancing Integrated Waste Management in Pueblo are provided in Chapters 10 and 11 of this Plan.

CHAPTER 5

RECYCLING

Policy: The Communities of Pueblo will promote the steady increase in the amounts and types of materials recycled by promoting collection, processing, remanufacture, and purchasing of recycled goods. Recycling is preferred over landfilling and incineration as a solid waste disposal method for all recyclable materials.

PUEBLO COUNTY RECYCLING

- Since 1992
- Pueblo County government offices recycle paper. In 1998, the program recycled 777,780 pounds of paper saving and estimated 6,536 trees and eliminating 500 cubic yards of waste

When the useful life of a product is over and no way has been found to reuse it in its original form, waste managers should explore composting or recycling as the next option. Composting is the recycling of organic matter and will be discussed in the next chapter. Recycling is a higher priority than landfilling and incineration because it helps conserve valuable resources and energy. At every stage in the production of a product from virgin materials, energy and resources are consumed. Recycling aluminum, for example, saves 70 to 95% of the energy involved in production of aluminum from ore.

PUEBLO NEIGHBORHOOD CLEAN-UPS

- Since 1999
- 3 tons of tires and 3 flat bed trucks of steel diverted from landfills with each cleanup.
- Neighborhood cleanups allow citizens in low to moderate-income census tracks to spruce up their yards without having to leave their neighborhood. Besides collecting refuse, tires, white goods (large appliances) and steel are also recycled.

Recycling requires changes in behavior and habits of consumers, retailers, and manufacturers. When buying a product, consumers need to consider whether it is made from recycled material, and whether they can recycle it in their community. They must separate it from wastes destined for disposal. Full, community-wide recycling requires retailers and other businesses to purchase recycled products for their own use and for resale, and to collect their own wastes for recycling. Manufacturers

would need to make an investment in the equipment and processes needed to use post-consumer materials in manufacturing their products.

Recycling is all activities involving the collection, storage, sorting, shredding, shearing, baling, and chipping of recyclable material, including, but not limited to, glass, paper, plastic, metal, or textiles; the processing of recyclables to prepare them for resale; the marketing of recovered material for use in the manufacture of similar or different products; and the purchase of products containing recycled material.

The major steps in recycling involve the collection of materials from consumers, the processing and transportation of those materials, the conversion of those materials into useful products through remanufacturing, and the purchase and use of those new products. It is important to find a balance between each part of the equation. If any step is missing, recycling is not occurring. The major steps in recycling are discussed briefly below.

COLLECTION

Collection of recyclable materials must be as easy and convenient for consumers as landfilling. Collection programs should encourage consumers to separate recyclables from other waste. This "source-separation" ensures a product of higher quality and greater value. Some collection program options are outlined below:

PHONEBOOK RECYCLING

- Since 1991, annual collection of outdated phonebooks
- Volume recycled: Approximately 12.6 tons were recycled, approximately 49.14 cubic yards of waste were diverted from local landfills in 1999. Since 1991 118,000 tons of outdated phone books have been recycled and saved 460,2000 cubic yards of landfill.
- Sponsors: US West Dex, Safeway Food and Drugstores, McDonalds, Pueblo Airport Industrial Park, EPAC
- Late April to mid-May each year, Pueblo citizens drop off phonebooks in dumpsters at sponsor's locations. The recycled paper is used to make new phonebooks.

Drop-off centers may be the only cost-effective collection systems for rural areas. Separate bins or containers for source-separated materials are placed at convenient locations for consumers to drop off their recyclables.

Buy-back centers also depend on consumers to bring in their recyclables, some of which are paid for at market rates.

Community collection events require a great deal of volunteer effort and careful planning, but can be effective. Residents are asked to store their recyclables until the day of the event, when they can bring them to a central location. These efforts are sometimes done in coordination with the local buy-back center.

PUEBLO HOUSEHOLD HAZARDOUS WASTE ROUND UP

- Since 1997, annual collection of household hazardous waste, pesticides, insecticides, herbicides, aerosol cans, and other common household chemicals
- **Volumes Recycled**:

	1997	1998	1999
Paint/Stain	6,500 gal	2,867 gal	2,000 gal
Oil/Antifreeze	2,106 gal	N/A	N/A
Used Oil	N/A	1,000 gal	1,300 gal
Oil Filters	188 filters	30 gal drum	30 gal drum
Tires	4,405	1,453	2,100
Batteries	446	140	180
Appliances	60,000 lbs	40,999 lbs	40,000 lbs

(N/A: Not Available gal: gallons lbs: pounds)

- Sponsors: Pueblo County Environmental Pride Association, Pueblo Chemical Depot, Colorado Department of Health and Environment, Pueblo City-County Health Department
- One weekend in May, Pueblo citizens drop off their household recyclables, which are then reused or recycled. This event provides and opportunity for local recycling companies to come together and offer their services to Pueblo communities, while diverting materials from local landfills or being illegally dumped.

Commercial collection programs target the large commercial sources of recyclables with a collection program. Greater volumes of segregated recyclables may be collected in this manner compared to residential collection.

Curbside collection of residential and commercial recyclables gives communities the highest participation rate of any collection program, due to increased convenience. It also costs the most to operate.

A hybrid of several of these options may be best for some communities.

Pueblo's private recycling companies operate buy-back centers and drop-off bins. Occasional high-visibility collection drives are provided by the Pueblo County Environmental Pride Association. Few curbside collection programs exist.

Surveys conducted in Pueblo in 1998 show that citizens want to recycle. Many are willing to pay to recycle. Many more would recycle if collection were made convenient and inexpensive. Lack of recycling is caused by long distances to market, low volumes, and a lack of resources. It is not caused by a lack of commitment by Pueblo consumers.

PROCESSING AND TRANSPORTATION

Once materials are collected from consumers, they must be prepared for market. This may involve additional separation to improve quality, baling or compaction to improve transportation efficiency, storage until sufficient quantities are accumulated, aggressive marketing, and finally, transportation to markets. Transporting post-consumer materials long distances will be profitable only when the remanufacturer is willing to pay a high enough price to the recycling processor. In Pueblo, processing and transportation have primarily been accomplished by private recyclers.

REMANUFACTURE

The success of materials collection and processing depends on the availability of markets. Remanufacturers who want to purchase post-consumer materials and convert them into new products, ideally are located in the economic region. In Pueblo, demand-side or market development strategies are more likely to be effective than supply-side or collection strategies, because of the lack of markets for recyclable goods.

TOMRA-Aluminum Buy-Back Center

- ***Recycling and Remanufacturer***
- Since 1977
- TOMRA has been buying back aluminum which results in an average of 950,000 pounds per year of metals (aluminum, copper, and brass), voluntarily brought into their business (based on 1998 figures)

Remanufacturers are concerned about the net cost of the post-consumer materials, and the existence and location of the end-user markets. They must be able to buy the supply at a price low enough, and sell the product at a price high enough, to make a profit after all their expenses. Re-manufacturers want assurance of long-term commitments by the supplier of the post-consumer material and by the end-user to purchase the recycled product. In other words, they need to be confident of supply and demand. With such assurances, the remanufacturer can justify the capital investment needed to buy new equipment or revamp processes for using more post-consumer materials.

ROCKY MOUNTAIN STEEL MILL

- ***Recycling and Remanufacturer***
- Since 1982, 100 percent of their product has been manufactured from recycled scrap steel and iron
- Volume recycled: One million tons of scrap metals each year.
- Taking scrap metal from cars, white goods, and other materials, Oregon Steel is the regions largest volume steel recycler and remanufacturer. They divert waste from the landfill, and reuse it, which keeping raw materials from being harvested.

Across the nation, the supply of post consumer materials is available. Consumers' continue to throw things away and most of them are willing to separate recyclables from their waste. Public education programs have convinced more consumers to source separate. Collection programs have been successful in getting high participation rates, especially when collection is convenient and does not add additional costs for the consumers.

PURCHASING

The demand side of recycling has been more problematic nation-wide. When demand for recycled products is low, remanufacturers cannot sell them, which means they have less need for the post-consumer materials supply. That means the collected material is either stockpiled or disposed of in landfills or incinerators. The demand might be low for a number of reasons. Consumers may not be aware of the availability of recycled products, the quality of the product might not meet consumer preferences, or it might cost more than a similar product made of new materials. A vital recycling strategy is to educate end-users to the availability and quality of recycled products. For recycling to work, consumers must purchase remanufactured products.

BUYING RETAIL RECYCLED PRODUCTS EDUCATIONAL EVENT

- Since 1999
- For *America Recycles Day, 1999* the Pueblo Environmental Coordinator arranged an educational recycling event at Target where 4th grade students participated in a scavenger hunt at a local department store. Children were instructed to find products made of recycled materials from every department in the store. Over 50 different products were identified.

ENVIRONMENTAL ISSUES

Recycling has some potential risks to human health and the environment. These are associated with the generation of heavy metals and organic chemicals in the

remanufacturing process. However, the same or greater risks are associated with the manufacture of virgin products. Research has been done comparing the types and amounts of pollutants generated in manufacturing processes for recycled materials versus those for new materials over the life cycle of a given product. Because of these concerns, source reduction, reuse, and composting provide greater environmental benefits with less costs than recycling.

ECONOMIC ISSUES

Recycling can create new industry for Pueblo, provide for new local market development, and create jobs. It is unlikely than any new jobs would be created if these resources were sent to the landfill instead of to recyclers. Studies indicate that recycling creates up to six times more jobs as landfilling.

The implementation and operation of recycling programs, however, can be a large expense to communities. Analysis of cost-effectiveness of alternative options is an important factor in considering a recycling program. Capital costs, operating costs, external costs, and the long-term (30+ years) costs of landfill management and remediation must be considered. Operators can realize revenues from the sale of recyclables, but due to market instability, revenues cannot be depended on to offset fixed operational costs.

All recycling options incur collection costs. The cost of curbside collection of source-separated recyclables is significantly higher than for mixed waste. The difference can be lessened by using the same collection vehicles on the same routes to collect mixed waste and recyclables on an alternating schedule or on specially designed co-collection vehicles. Drop-off bins, buy-back centers, and collection events are much cheaper for local governments because residents do their own hauling. Studies on the costs of recycling vary widely depending on the location and type of program.

BARRIERS TO RECYCLING

1. Markets for recyclable materials are historically unreliable due to fluctuating supply and quality.

2. Long distances to markets and high costs of transportation make recycling difficult for the communities of Pueblo.

3. A difficult challenge exists to find financial resources to purchase balers, conveyors, trucks, and other equipment, technology, or facilities that are essential to recycling and marketing collected goods.

4. Landfilling is still relatively inexpensive in Pueblo. Low garbage disposal fees are a disincentive to recycling. Consumers are generally unaware of the full costs of landfilling that are being borne by the community.

Neighborhood clean-up events collect disposable materials from low-income census tracks. Photo by Sarah Bruestle

Recommendations and strategies enhancing Integrated Waste Management in Pueblo are provided in Chapters 10 and 11 of this Plan.

CHAPTER 6

COMPOSTING

Policy: Pueblo Communities will promote the steady increase in composting of organic materials. Composting is preferred over landfilling and incineration as a solid waste disposal method for organic materials.

"Composting" means the controlled biological decomposition of organic matter into humus. The same process occurs continuously in nature when organic matter is exposed to air and moisture. Waste managers can accelerate the process by controlling the mix of air, water, temperature, and nutrients.

YARD WASTE ROUNDUPS

- Since 1995, bi-annual collection and mulching of yard waste
- Volume recycled: 200 to 600 carloads of yard waste, approximately 500 cubic yards per event
- Sponsors: Zupan Enterprises Inc., EPAC
- The last Saturday of April and October, Puebloans drop off yard waste, which is mulched. The mulch is given away free-of-charge for use as soil treatment and garden mulch. The remainder is used by the landfill as cover material.

Yard wastes and food wastes are the materials most commonly composted. Agriculture and feedlot waste can also be composted. These four wastes (yard, food, feedlot, and agriculture wastes) are collectively called "green waste." Old paper, treated sewage sludge, and other household organics are also candidates for composting. Nation-wide, yard wastes comprise about 18% of the waste stream by weight, food wastes about 7%, and paper about 41%. Even if the resulting compost was simply landfilled, the process would reduce the volume of composted wastes by 50 to 85%.

CHRISTMAS TREE RECYCLING

- Since 1994
- Volume recycled: 2,000 to 4,500 trees, approximately 400 cubic yards annually
- Sponsors: WestPlains Energy, a Division of UtiliCorp United, Asplundh Tree Expert Company, EPAC
- Two weekends a year, after Christmas, Pueblo citizens drop off Christmas trees, which are then mulched. The mulch is given away free-of-charge.

Composting can provide a

useful product. The quality of the final compost will help determine the possible markets. High-quality compost can be used as an amendment for marginal soils or as a top dressing on lawns and golf courses. A lower-quality product can be used as a daily cover at a landfill or in construction projects, or mine reclamation.

Composting can occur on a small scale in the backyard, or in small- or large-scale municipal operations. Backyard composting is typically preferred since the cost is minimal. Yard waste and food waste can be successfully composted in a simple backyard enclosure.

ENVIRONMENTAL ISSUES

The primary problem associated with composting is the odor that can result from improperly run operations. Operators can control odor by better pile management or air filtration.

Heavy metals contamination can be a problem with mixed municipal solid waste and sludge composting, resulting in a product that should not be used in food-producing applications. Most pesticides do not persist through the composting process, but research is not conclusive on some of the more persistent agriculture pesticides.

Composting operations have the potential to produce leachate when excess water moves through the compost leaching organic nutrients from the piles. The leachate can contaminate ground and surface waters. Operators control leachate production by proper site selection and preparation, and proper operational practices.

Composting reduces problems associated with landfilling. Compostable materials often are the primary source of moisture in the landfilled waste stream. The elimination of these wastes can result in a reduction of leachate generation in landfills. Organic materials are also the source of methane gas, one of the primary air pollutants produced at landfills. Methane is produced in insignificant amounts during aerobic composting.

ECONOMIC ISSUES

The more complex the system, the more waste streams being composted, therefore, the higher the costs of setting up and operating a composting program. A simple yard waste windrow system can be operated using existing public equipment, labor, and space for minimal cost. Because of the high costs of in-vessel systems, they are not expected to be widely used in Pueblo where other, less expensive, waste management options are available. In addition to costs of equipment and facilities, costs of yard waste collection is also a consideration. This is not a factor if a community already has

separate yard waste collection, if backyard composting is implemented, or if self-haul of yard waste is required.

Operators may also offer a high-quality compost for sale to the various markets mentioned above. They will need to give extra attention, however, to compost quality and marketing before counting on income from compost sales.

PUEBLO "ZOO DOO"

- Since 1996
- Compost of yard waste from the Greenway Nature Center and animal feed, fecal products, and yard waste from the Pueblo Zoo. The composted material is called "Zoo Doo." It is sold to the public on Saturday mornings (in the fall the Zoo sponsors a public 'give-a-way' event).

EDUCATION

A public yard maintenance education program can reduce the amount of yard waste at the source and encourage the use of compost in lawn care and gardening. It can promote not only backyard composting, but other yard management methods such as leaving grass clippings on the lawn, planting low-maintenance ground cover, and chipping yard waste for use as mulch.

BARRIERS TO COMPOSTING

1. Public officials and the general public lack knowledge about composting processes and markets and may resist changes in waste management methods.

2. Collection procedures that keep compostables separate from other waste may meet with public resistance or higher costs.

3. While composting operations can be relatively inexpensive, they are not free of costs. Some local communities may perceive they that do not have the resources to implement a composting program.

Recommendations and strategies enhancing Integrated Waste Management in Pueblo are provided in Chapters 10 and 11 of this Plan.

CHAPTER 7
LANDFILLING

Policy: Pueblo Communities will encourage alternatives to landfilling of solid waste. Landfilling is a lower priority than source reduction, reuse, composting, and recycling as a method for solid waste management.

Around the nation, solid waste disposal has traditionally centered on landfilling, or burying waste in the ground. That practice continues in Pueblo where more than 90% of waste is landfilled. With good planning, careful attention to environmental problems, and effective public education, Pueblo will be able to continue landfilling as a major part of an integrated waste management system for many years.

Under current policy dictated by federal and state regulations, landfilling has come to mean the entombing of wastes in an airless and waterless grave. This is a departure from the former practice of open dumping and burning which encouraged decomposition, but potentially caused spread of disease through vectors, release of leachate, air pollution, and litter. Sanitary landfills try to prevent those problems, but are creating repositories of wastes that decompose very slowly and that require long-term care and possibly future remediation at as yet undetermined costs.

ENVIRONMENTAL ISSUES

The U.S. Environmental Protection Agency's Superfund Program estimates that 22% (more than 260) of the sites on its National Priorities List are, or used to be, solid waste landfills. One landfill in Pueblo is among these listed sites.

As water moves through toxic and hazardous materials, as well as organic materials that have accumulated in a landfill, it picks up dissolved and finely suspended particles and forms a liquid called "leachate." The major environmental concern of landfills is the potential for leachate generation, migration, and subsequent contamination of ground water. There is evidence that leachate has migrated from landfills and has impacted ground water quality in almost every state in the U.S. Since some Pueblo County residents depend on groundwater for their drinking water supply, potential contamination from landfill leachate is a concern.

The environmental impacts of landfills depend primarily on what goes into them. Increased monitoring of incoming wastes and refusal to accept hazardous substances would make landfills a much safer waste disposal option.

The state has established regulations for the monitoring of regulated hazardous wastes and polychlorinated biphenyls (PCBs) waste to prevent their disposal in municipal landfills. Screening programs include random inspections of waste and landfill personnel training, or other approved steps that insure incoming loads do not contain regulated hazardous or PCB wastes.

Solid waste landfills cause other potential environmental problems. They can produce explosive gases, such as methane. Litter, dust, noise, and disease vectors can all be problems in improperly run landfills. Adequate enforcement of new methane monitoring requirements and operational criteria in federal and state regulations should control these problems. Methane produced at solid waste landfills can be used as a fuel like natural gas.

Many of the factors that increase the risks of landfills to human health and the environment also apply to illegal dump-sites. These factors include annual precipitation, proximity of human populations and environmental resources, and the lack of environmental controls.

ECONOMIC ISSUES

Currently land disposal fees in Pueblo, and in Colorado, are very low compared to other parts of the country. In many cases, the public is unaware of the true costs of disposal. Communities should consider new fee mechanisms and rate structures applicable to hauling and landfilling and the opportunities these new mechanisms and structures can provide for higher priority waste management strategies.

Because of increasing environmental regulation, the cost of landfilling is rising dramatically. Coordinating waste management activities across county lines can provide new opportunities and potentially reduce the environmental impact of landfill operations. Cooperative agreements already exist. Some north Pueblo waste and waste from Fremont County is disposed at El Paso County landfills. Fremont County receives funds from tipping fees that have been used for recycling events and Fremont County residents can utilize El Paso County recycling facilities.

Recommendations and strategies enhancing Integrated Waste Management in Pueblo are provided in Chapters 10 and 11 of this Plan.

CHAPTER 8

INCINERATION

Policy: Solid waste incineration is not encouraged for Pueblo. Incineration is the lowest priority method for solid waste management.

Incineration of waste has a place on the hierarchy of waste management methods because of its potential to reduce the volume and weight of waste, and to produce energy. The U.S. Environmental Protection Agency estimates that nearly 75% (by weight) of solid waste is combustible and that combustion can reduce its volume by 70% to 90%. Incineration is a waste treatment method, rather than an ultimate means of disposal.

Incineration, also known as ***Waste to Energy***, like landfilling, is *currently* considered a lower priority in the waste management hierarchy.

ENVIRONMENTAL ISSUES

Air emissions from incinerators may contain a mixture of pollutants with health-related risks. However, best available control technologies reduce emissions of these pollutants to levels not associated with health risks. These pollutants include particulate matter, sulfur dioxide, nitrogen oxides, corrosive acid gases, heavy metals, and chlorinated organics. There is controversy over whether incinerators can maintain consistently and uniformly high temperatures to achieve control of the pollutants. However, pollutant control equipment is sophisticated and continuously documents emissions. Also, constituents in ash may have the potential to leach into ground water after the ash is disposed of at a landfill.

ECONOMIC ISSUES

Due to concerns about air emissions and ash disposal, environmental standards for construction of incinerators are extensive and very expensive to meet. Because of the high costs, incinerator technologies require large volumes of combustible waste to meet efficient economies of scale. These volumes are not available in Pueblo.

Recommendations and strategies enhancing Integrated Waste Management in Pueblo are provided in Chapters 10 and 11 of this Plan.

CHAPTER 9

SPECIAL AND INDUSTRIAL WASTES

Policy: Pueblo Communities will promote an integrated approach to the management of special and non-hazardous industrial wastes. When practical, source reduction, reuse, composting, and recycling will be implemented prior to landfilling and incineration.

HOUSEHOLD HAZARDOUS WASTES AND CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS OF HAZARDOUS WASTES

A waste is considered hazardous if it is ignitable, corrosive, reactive or toxic or if it appears on any one of four lists of over 400 hazardous wastes contained in the federal regulations.

- **Ignitable**: easily combustible or flammable (paint wastes, solvents, or degreasers).
- **Corrosive:** dissolves materials such as metals, or burns the skin (rust removers, waste cleaning fluids, and waste battery acid).
- **Reactive:** unstable or undergoes rapid or violent chemical reaction with water or other substances (waste bleaches and other oxidizers).
- **Toxic:** contains high concentrations of heavy metals (lead, cadmium, mercury, etc.) or specific pesticides that could be released into the environment.

"Acutely hazardous" wastes are those, that the Environmental Protection Agency has determined to be so dangerous in small amounts that they warrant more stringent regulation. Certain pesticides fall into this category.

Household hazardous wastes are unusable products found in the home with any of the listed characteristics. Almost every home produces waste that could be hazardous if improperly discarded. The Environmental Protection Agency estimates that every year U.S. consumers discard 600,000 tons of hazardous waste. Household hazardous wastes include cleaning, home maintenance, automotive, personal care, and yard maintenance products. A large portion of the category called household hazardous waste is made up of paint, solvents, pesticides, and batteries.

An interpretation of an existing federal law exempts any amount of hazardous waste collected from conditionally exempt small quantity generators and households from extensive regulation.

Household hazardous waste in any amount is exempt from state and federal hazardous waste regulations simply because it is generated by households. It may be legally disposed of in a solid waste landfill, an incinerator, or a sewage treatment plant. However, the constituents may be identical to wastes from industrial and commercial sources, which come under stringent regulations.

As a result of doing business, a company may generate hazardous wastes that must be handled and disposed more carefully than the rest of its waste stream. The handling, transportation, storage, and disposal of these substances are regulated by stringent federal law and state regulations. Company officials must send the wastes to a treatment, storage, and disposal facility that is designed and permitted to accept hazardous wastes. Generally, if these substances are being legitimately recycled, they are subject to less stringent requirements. Such wastes are not the subject of this Plan.

An alternative often used for small businesses is coordinated pick up by a hazardous waste treatment company. A regular collection is scheduled for a string of generators in an area so collection can be done on one route. The costs of these types of efforts drop as more generators become involved.

However, if the company generates less than 220.5 pounds (approximately 100 kilograms or 25 gallons) of hazardous waste, and less than 2.2 pounds (approximately 1 kilogram) of acutely hazardous waste per month, it is “conditionally exempt” from the hazardous waste laws and regulations. These “conditionally exempt small quantity generators” have the responsibility of identifying their hazardous waste and never accumulating more than 1,000 kilograms on their property. Unlike federal law established by the Environmental Protection Agency, in Colorado, state regulation prohibits conditionally exempt small quantity generators from disposing of any amount of hazardous waste anywhere excess in a landfill permitted to accept hazardous waste.

Household hazardous waste has major environmental problems associated with its waste disposal. Disposal may involve serious environmental and health risks. Poured down storm sewers, they can flow directly into rivers and aquifers where they may decompose very slowly and accumulate in the food chain, or react to form hazardous compounds. In a landfill, they commingle with other wastes and may produce leachate. In a poorly sited or improperly operated landfill, leachate can leak into the environment, contaminating local water supplies. Household hazardous waste, and conditionally exempt, small quantity generator waste, can also cause fires, explosions, or release

toxic fumes. Their incineration could cause explosions or releases of toxic fumes into the atmosphere. Toxic material could also become concentrated in the combustion ash.

The risks associated with household hazardous waste and conditionally exempt small quantity generators can be significantly reduced through education, reduction, and proper use, storage, and disposal techniques.

BARRIERS TO THE MANAGEMENT OF HOUSEHOLD HAZARDOUS WASTE AND CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR WASTE MANAGEMENT

1. Since household hazardous waste products are so common and used in so many different situations, consumers may assume they are not very hazardous.

2. Conditionally exempt small quantity generators may lack awareness of the hazardous nature of the products they use. Generators may not have the time, interest, or resources to implement new techniques.

3. Because these wastes are generated in small quantities and are heterogeneous, economics of scale are hard to achieve in reuse or proper disposal. Different management methods may be needed for the large variety of compounds.

4. Few markets exist beyond community reuse and exchange. Industry is not equipped to accept the small, heterogeneous quantities of household hazardous waste.

5. Labeling is often inadequate. Quantities of the active ingredients may not be specified. Inactive ingredients are usually not listed, despite being hazardous (e.g., solvents). Long-term (chronic) hazards are usually not specified. Proper disposal instructions are often minimal.

Some special waste of note is discussed because they are common and illegally dumped.

BATTERIES

The main components of a battery are two electrodes, which usually are composed of a metal. Several of these metals -- cadmium, lead, and mercury -- are especially toxic and may pose a hazard to human health after the cells are discarded. Batteries also contain a corrosive acid or alkaline electrolyte that contributes to the corrosion of cell

casings in landfills. When batteries are thrown away, their metals are disbursed into the air and soil through incineration, or to water and soil through decomposition in landfills.

PUEBLO HOUSEHOLD HAZARDOUS WASTE ROUND UP

Batteries Recycled

1997	1998	1999
446	**140**	**180**

Extrapolating from national figures, Pueblo residents dispose over 1,000,000 batteries yearly. Environmental Protection Agency's consultant, Franklin and Associates, reports 65% of the lead, 75% of the cadmium, and 15% of mercury in the municipal waste stream comes from batteries (despite the current 85 to 90% recycle rate of vehicle batteries). Roughly, this is 15,000 pounds of lead, 170 pounds of cadmium, and 22 pounds of mercury in our municipal waste stream (excluding the military and industrial batteries). Mercury, which was used to prevent corrosion of the zinc in alkaline and carbon-zinc battery cells, has been phased out of these batteries making vast numbers of batteries non-hazardous. A collection program for the remaining types -- mercuric-oxide (35% mercury), lead-acid (90% lead), and nickel-cadmium (15% cadmium) -- would require transportation to one of several companies that accept these types in order to recover their valuable metals.

USED OIL

Used oil is "any oil that has been refined from crude oil, used, and...contaminated by physical or chemical impurities." It may come from automobiles, trucks, or industrial equipment. The Environmental Protection Agency estimates that private individuals generate about 200,000,000 gallons of used oil per year. Automotive or industrial uses may generate six times that much. According to a 1988 study, over 450,000,000 gallons of used oil from all sources end up in landfills, sewers, or on the land in the US each year.

PUEBLO HOUSEHOLD HAZARDOUS WASTE ROUND UP

Volumes Recycled

	1997	1998	1999
Oil/Antifreeze	2,106 gal	N/A	N/A
Used Oil	N/A	1,000 gal	1,300 gal
Oil Filters	188 filters	30 gal drum	30 gal drum

(N/A: Not Available; gal: gallon)

Because of the potential for groundwater contamination and the threat of hazardous waste regulations, large generators of used oil usually contract with haulers to remove their waste. It may

eventually be burned for energy recovery or re-refined for use as a fuel or lubricating fluid. Landfills are prohibited from accepting bulk liquid wastes for disposal. As of March 1993, the Environmental Protection Agency prohibits the use of oil as a dust suppressant on dirt haul roads.

Private individuals are far less likely than large generators to handle their used oil in an environmentally sound manner. There are no regulations for used oil disposal from private individuals. The Environmental Protection Agency estimates that only 10% of the used oil generated by private individuals is properly collected and eventually recycled. It is often emptied into sewers, dumped directly on the ground, or thrown into the trash and subsequently taken to the landfill.

Used oil can be a serious threat to the environment if not managed properly. When dumped in sewers or storm drains, oil can disrupt treatment plants or discharge directly to surface waters. From landfills or dust suppression application, oil can find its way to ground water or surface water. Just one gallon of used oil can foul a million gallons of fresh water. Films of oil on the surface of water disrupt plant and animal life. Oil has toxic affects on aquatic organisms. Dumped on land, oil can reduce soil productivity.

Used oil is often burned for energy recovery in space heaters of repair shops. Because of the potential for toxic air emissions from contaminants in the oil, this activity is regulated under federal law.

Re-refining used oil to certified lubricant quality takes only one-third the energy of refining crude to the same standard. A gallon of used oil contains about 140 British Thermal Units of energy when burned, and is competitive in price and performance to other fuels. If all private individuals' used oil were recycled, it would save the U.S. an estimated 1,300,000 barrels of oil per year.

WASTE TIRES

According to the Environmental Protection Agency about one tire per person is scrapped in the U.S. each year. The figure may be higher for rural states where residents generally have more vehicles, and where distances between urban centers are greater. Local figures are not available, but thousands of tires have been recovered in local recycling programs and neighborhood cleanups. Almost all tires are landfilled, stockpiled, or dumped. A few are incinerated and still fewer recycled into new products.

Stockpiled tires may cause environmental and health hazards. Uncontrolled fires produce toxic air emissions and oil seepage to water supplies. Moisture in tire wells can

cause mosquito infestations and spread of disease. In landfills, whole tires take up a large volume of valuable space, may collect gas and harbor rodents, and tend to rise to the surface destroying the final cover.

Disposal of tires represents a loss of resources. It takes about 22 gallons of oil to manufacture a new truck tire, but only seven gallons to retread it. Tires have an energy value of 15,000 British Thermal Units per pound, which is greater than most coal.

PUEBLO HOUSEHOLD HAZARDOUS WASTE ROUND UP

Tires Recycled

1997	1998	1999
4,405	1,453	2,100

Whole tires can be reused in a variety of ways. When one or two tires are worn out, consumers may replace the entire set of four. The other tires could be used on another vehicle. Many tires can also be retreaded. Whereas tires from large trucks, buses, and airplanes are often retreaded, there has been a decline in retreading of passenger vehicle tires. This is primarily due to public misperception about safety and durability. Whole tires are also used as breakwaters, highway crash barriers, and for land erosion control.

Tires collected at a neighborhood clean-up. Photo by Sarah Bruestle.

Old tires can be split and made into floor mats, belts, baskets, shoe soles, and dock bumpers. They can be shredded and used as a gravel substitute for playgrounds or as

lightweight fill for road beds, parking lots, or other construction projects. They can be reduced to “crumb” and used in such products as flooring, truck bed liners, railroad crossings, and mudguards. A major use of crumb rubber is in asphalt for highways. The Federal Aid Highway Act encourages the use of rubberized asphalt for highways. Recently crumb rubber has been used to improve turf growth on athletic fields and heavily trafficked areas.

Finally, old tires can be incinerated for energy recovery. The technology to derive energy from scrap tires has been developed. Whole or shredded tires are being used in other states as a supplemental fuel at power plants, cement kilns, and pulp and paper mills. There are also facilities dedicated solely to burning tires for energy production.

WHITE GOODS

White goods are large, discarded appliances that are made primarily of metals. They may be either from homes or industry, and include such items as stoves, refrigerators, freezers, air conditioners, water heaters, washers, and dryers. Some white goods are separated for reuse or scrap metal salvage, but many are discarded in landfills with other solid waste. Landfilling of white goods represents a waste of natural resources and landfill space. Scrap processors can recover the metal for reuse in mills and foundries to produce new steel.

Some scrap dealers are also concerned about the presence of PCBs in electrical components in a small fraction of old appliances. PCB-containing lubricating oils are a contaminant in the scrap metal process and a potential threat to water supplies when landfilled.

PUEBLO HOUSEHOLD HAZARDOUS WASTE ROUND UP

Appliances Recycled

1997	1998	1999
60,000 lbs	41,000 lbs	40,000 lbs

(lbs: pounds)

Most often, recycling of white goods is an expense to waste managers. The additional cost of up to $35 per appliance for removing the freon, applies whether the white goods are landfilled or recycled, and thus will not effect the comparative cost-effectiveness of recycling.

CONSTRUCTION AND DEMOLITION WASTES

Construction and demolition wastes are any material and debris resulting from building, repairing, remodeling, or razing structures. They may be homes, commercial or public buildings, pavements, bridges, or other structures. The materials include steel, asphalt, concrete, brick, masonry, glass, wallboard, wood, rock, piping, insulation, wiring, and plastic.

The percentage of construction debris waste in municipal solid waste in Colorado is unknown. A recent study in Iowa found that construction and demolition waste comprised about 12% of the waste stream while other states report up to 30%. Across the country, most construction and demolition waste is discarded, even though the potential for better uses exist.

Most construction and demolition waste is discarded at landfills. Regulations prohibit unlicensed on-site disposal of construction and demolition waste on private land. Because much of the material is relatively inert, and could be disposed of in a landfill, separation may not be cost-effective. In some states, special construction and demolition landfills have been permitted. They are generally regulated less stringently than solid waste landfills on the belief that they are less likely to have negative impacts to human health and the environment.

Many of those states are now reviewing their regulations with new evidence indicating ground water impacts. Lead is present in solder, flashing, and some old paints. Treated wood and old paints can also contain high quantities of other heavy metals such as lead, chromium, copper, arsenic, mercury, barium, and cadmium. Drywall and plaster consist of gypsum, which contains high levels of sulfate and occasionally asbestos. Asphalt, roofing tar, and tarpaper contain leachable petroleum products. All of these are commonly found in construction ands demolition waste and have the potential to contaminate water supplies if not properly disposed.

In properly sited, designed, and operated solid waste landfills, construction and demolition wastes do not pose a significant threat to groundwater. However, the volume of this debris can be very large, taking up valuable space and shortening the life of the landfill.

Source reduction or decreasing the amount of waste generated at construction sites, must be the highest priority method for waste management. This will depend on contractors examining their operational practices and implementing source reduction techniques.

Reusable materials, which generally have high value, can be separated and sold for small building, repair, or craft projects. Some communities have reuse centers where

contractors bring usable construction materials. See Chapter 7 for more discussion on reuse centers.

The major barrier to the reuse and recycling of construction demolition wastes is the need for source separation. The profit margins in construction are low and landfill tipping fees are relatively cheap. The instability of markets for recyclables are also a major barrier.

Construction contract administration managers should not overlook the possibility for writing bid specifications to encourage recycling. They can require or encourage the use of recycled materials in new construction. Specifications could also require the designer of a facility to consider waste reduction during construction and ease of salvaging in the long run.

CONTAMINATED SOILS

Landspreading: the process of remediating contaminated soils that are spread thinly on the land surface and occasionally tilled, allowing sunlight, air, and soil microorganisms the opportunity to breakdown or evaporate the contaminants.

When petroleum products, solvents or other toxic chemicals leak or are spilled onto soils, corrective action must be taken to prevent the migration of the contaminants to ground water or surface water. Sometimes these soils are determined to be hazardous and are regulated under hazardous waste regulations, but petroleum contaminated soils from underground storage tanks are not considered hazardous. When a corrective action plan involves the removal of the contaminated soils from a site rather than on-site treatment, and when the soils are not hazardous, they are considered solid waste. Ideally, these soils should be remediated until they meet cleanup standards and reused, rather than deposited in landfills.

Contaminated soils are often landspread on-site or they are taken to a solid waste landfill for landspreading. Solid waste landfills may accept petroleum-contaminated soils that do not test hazardous and bury it with other refuse. Solid waste landfills often landspread soils priors to disposal, but these activities have been largely unregulated.

INDUSTRIAL WASTE

Industrial solid wastes are all non-hazardous wastes generated by the industries and businesses listed below:

1. Agriculture, Forestry & Fishing
2. Mining
3. Transportation, Communication & Utilities

4. Manufacturing
5. Construction
6. Wholesale Trade
7. Retail Trade
8. Finance, Insurance & Real Estate
9. Services
10. Public Administration

The wastes associated with activities 5 through 10 generally go into the solid waste stream. The remaining industries -- agriculture, forestry, fishing, mining, and manufacturing (including oil and gas production, utility coal combustion, cement production, and other manufacturing processes) -- have not been considered in this plan.

Recommendations and strategies enhancing Integrated Waste Management in Pueblo are provided in Chapters 10 and 11 of this Plan.

CHAPTER 10

RECOMMENDATIONS: SHORT TERM

All recommendations listed in this Chapter are considered short term and will be completed within three years of the approval of this Plan.

EDUCATION-BASED RECOMMENDATIONS

1. Increase the number of public education, recognition, and voluntary programs promoting integrated waste management.

   EPAC, the Pueblo Environmental Coordinator, and the Colorado State University Cooperative Extension Office will be a clearinghouse for integrated waste management education by increasing the materials and technical assistance available, and implementing model education programs throughout Pueblo. These groups will become known by the communities of Pueblo as the local source for educational material fostering effective integrated waste management.

   EPAC and the Pueblo Environmental Coordinator will offer a “green seal” of approval for businesses that promote expanded educational efforts.

   EPAC and the Pueblo Environmental Coordinator will promote integrated waste management through media and public outreach campaigns, school curricula, consumer workshops and seminars, printed materials, office waste reduction programs, voluntary goals and standards for integrated waste management, awards for waste reduction, and waste management measures.

   The Pueblo Environmental Coordinator will expand its existing internet web-site to provide comprehensive integrated waste management information to Pueblo.

ECONOMIC-BASED RECOMMENDATIONS

1. Identify funding opportunities for integrated waste management programs.

   The Pueblo Environmental Coordinator will identify funding opportunities, identify existing local, state and federal grant and loan programs, and assist grant applicants

to obtain funding needed to establish and promote integrated waste management strategies.

2. Provide economic incentives for integrated waste management programs.

   EPAC, the 2010 Commission, and the Pueblo Environmental Coordinator will encourage local officials to implement integrated waste management programs by establishing surcharge and encouraging their use to implement approved source reduction programs.

   The Pueblo Economic Development Corporation and City and County Governments will give tax credits to businesses specializing in repair, restoration, or remanufacture of products; or to businesses participating in efforts to standardize products to facilitate repairablility and interchangeability of parts.

3. Investigate regional cooperative relationships with adjacent counties.

   EPAC will determine if funds currently exist associated with out-of-county solid waste disposal that could be obtained and used to benefit current waste management programs; specifically, determine if a portion of tipping fees collected at El Paso County landfills can be obtained.

GENERAL WASTE MANAGEMENT RECOMMENDATIONS

1. Increase public participation in solid waste decision-making.

   The Pueblo Environmental Coordinator will increase efforts to include the public by sponsoring more community forums and educational programs.

   EPAC will continue to explore integrated waste management issues and work to implement and revise this Plan.

   EPAC will increase efforts to include the public at meetings and sponsored events through enhanced communication and advertising efforts.

2. Implement mechanisms to measure waste reduction.

   The Pueblo Environmental Coordinator will compare disposal data reported each year by landfills and look for a measurable per capita decline in disposal amounts each year.

The Pueblo Environmental Coordinator will consider performing a waste audit by sorting, measuring and categorizing samples of the actual waste coming into local landfills, and will use any other applicable means to measure waste generation in Pueblo.

3. Provide assistance to institutional and commercial establishments.

   EPAC and the Pueblo Environmental Coordinator will encourage businesses to implement reduction measures by setting up model programs and sharing information on cost savings realized; increasing information flow between commercial establishments and institutions; and encouraging worker education and purchasing guidelines focused on waste reduction.

4. Increase government participation in integrated waste management activities.

   Local government will serve as a model for implementing waste reduction activities. Other entities including schools, agencies, and courts will implement waste reduction plans and lead the way with purchasing and operational practices, which increase source reduction, reuse, recycling, and composting. EPAC and the Pueblo Environmental Coordinator will expand its assistance to local agencies in this regard.

RECOMMENDATIONS PROMOTING REUSE

1. Expand swap programs, yard sales, and thrift stores.

   EPAC and the Pueblo Environmental Coordinator will actively promote yard sales, which happen informally in many communities. The Pueblo Environmental Coordinator could assist communities to organize a centralized yard sale or flea market.

   The Pueblo Environmental Coordinator and local citizens groups will help promote collections for thrift stores or non-profit groups who provide goods to low-income residents.

2. Promote waste exchanges.

   The Pueblo Environmental Coordinator and local citizens groups will develop and implement a local waste exchange for many kinds of chemicals, materials and other unwanted items.

RECOMMENDATIONS PROMOTING RECYCLING

1. Expand community collection events.

   EPAC, the Pueblo County Environmental Pride Association, and the Pueblo Environmental Coordinator will increase levels of assistance to expand community collection events.

2. Increase purchasing of recycled products and materials.

   In order to encourage businesses, industries, and institutions to voluntarily establish procurement guidelines that favor recycled materials, EPAC and the Pueblo Environmental Coordinator will offer a publicity incentive such as a "green seal" of approval for business that purchase recycled materials and to retailers to encourage them to stock and advertise recycled products.

3. Concentrate local recycling efforts on easily recycled products.

   Efforts for the widespread collection of recyclable commodities will focus on materials that have strong local markets. The Pueblo Environmental Coordinator will explore ways to foster local end uses and investigate solutions for strengthening markets for commodities that constitute a large amount of the waste stream.

RECOMMENDATIONS PROMOTING COMPOSTING

1. Increase public education and voluntary programs.

   EPAC and the Pueblo EC, with the assistance of the Colorado State University Extension Office will increase educational efforts into the area of composting as an educational clearinghouse.

2. Create a community wide composting operation

   Utilize existing programs at the Pueblo Zoo and the Greenway Nature Center. Increase the amounts of composting materials handled there by purchasing tools to help turn and water the compost. In turn, the compost will decompose faster, thus the community can drop off their own household yard waste. Both the communities and the public can use the product.

3. Increase backyard composting.

   EPAC and the Pueblo Environmental Coordinator, with the assistance of the Colorado State University Extension Office will promote composting to communities

and the public by providing demonstration projects, workshops, and instructional materials; by subsidizing composting bins; and by involving community organizations.

4. Promote composting of agricultural wastes and residues.

   EPAC and the Pueblo Environmental Coordinator, with the assistance of the Colorado State University Extension Office will promote composting of agricultural wastes and residues to the agricultural community by providing demonstration projects, workshops, and instructional materials.

RECOMMENDATIONS ASSOCIATED WITH LANDFILLING

1. Evaluate other priority waste management methods in the application process for new landfill permits.

   Pueblo City and County Planning and Development Departments will consider all waste management methods prior to permitting a landfill and will develop a mechanism for landfill applicants to evaluate the potential for source reduction, reuse, recycling, and composting options during the application process. The evaluation will provide information that local communities can use to make decisions about landfilling options.

2. Investigate regional cooperative relationships with adjacent counties.

   EPAC and the Pueblo Environmental Coordinator will evaluate current cooperative relationships and examine the potential for expanding agreements.

   Pueblo officials will consider establishing regional cooperative relationships with adjacent counties to share landfill space and other higher priority waste management strategies.

3. Examine current enforcement practices and pursue methods for increasing effectiveness of contaminated solid waste management facility clean-ups.

   The Pueblo City-County Health Department must work closely with the Colorado Department of Public Health and Environment to implement and enforce corrective action and remediation measures at contaminated solid waste management facilities.

RECOMMENDATIONS ASSOCIATED WITH INCINERATION

1. Consider the entire waste management hierarchy before choosing incineration.

   A mechanism will be developed that requires communities to carefully examine the higher priority waste management methods before investing in incineration.

2. Review economic and technology research on incineration.

   The possibility exists that the technology for environmental controls will improve and become more cost-effective. For this reason, incineration will remain on the hierarchy as a method to consider, although it remains the lowest priority. The Pueblo Environmental Coordinator will monitor and assess new incineration technologies and developments and promote incineration, if and when it becomes a viable waste management method.

RECOMMENDATIONS ASSOCIATED WITH SPECIAL & INDUSTRIAL WASTES

Household Hazardous Wastes and Conditionally Exempt Small Quantity Generators of Hazardous Wastes

1. Support regional waste exchange programs.

   The Pueblo Environmental Coordinator will make information on regional waste exchanges more available in print, hotline, and electronic formats.

2. Encourage community collection events and waste exchanges.

   The Pueblo County Environmental Pride Association, which coordinates household hazardous waste collection events will identify additional funding to ensure that collection events will continue to be available to Pueblo communities.

3. Establish model demonstration sites and a “green seal of approval” program for conditionally exempt small quantity generators .

   Pueblo Environmental Coordinator will identify model businesses and sponsor an award program for conditionally exempt small quantity generators. By placing a “green seal” in the window, proper waste management is advertised to customers and encouraged in competitors. It is important for the award to be worth something to a business by not being awarded indiscriminately.

4. Establish a public/private partnership for collection and transfer of hazardous wastes from conditionally exempt small quantity generators.

   The Pueblo Environmental Coordinator will identify conditionally exempt small quantity generators interested in participating in a coordinated pick-up event with a hazardous waste disposal company in order to reduce the amount of wastes from conditionally exempt small quantity generators from entering local landfills.

5. Educate conditionally exempt small quantity generators regarding Colorado regulations restricting the placement of hazardous wastes in local landfills.

   The Pueblo Environmental Coordinator will work with conditionally exempt small quantity generators to understand hazardous waste regulations and to identify alternate means of disposal.

Batteries

1. Support battery-specific education programs.

   The Pueblo Environmental Coordinator will support an education program capitalizing on the many recent positive developments in battery technology and teach proper battery use (maximizing their life and reuse), potential substitutes (rechargeables and matching the type with the use), recycling opportunities, and proper disposal.

Used Oil

1. Support used-oil specific education programs.

   The Pueblo Environmental Coordinator will increase its educational efforts for private residents to understand the consequences of improper management of used oil.

2. Expand the collection system for used oil.

EPAC and the Pueblo Environmental Coordinator will increase efforts to educate the public on the many locations where used oil is collected by publishing used oil management brochures to be offered to consumers at the point of sale.

Waste Tires

1. Encourage the use of retread tires.

As part of its education clearinghouse function, the Pueblo Environmental Coordinator will obtain information on the use of retread tires. The Pueblo Environmental Coordinator will make this information available to all government, institutional, and business groups operating fleets of vehicles in order to reduce the numbers of waste tires entering local landfills.

2. Utilize funds from Colorado's program to assess a $1 fee on tires when they are replaced.

The revenue from this fee on tires has been used to give grants to counties to clean up illegal tire dumps and has established a loan fund to support private recycling businesses. The Pueblo Environmental Coordinator has received grants beginning in 1999 and will continue to obtain funding for local waste-tire cleanups.

White Goods

1. Promote material-specific education programs.

The Pueblo Environmental Coordinator will work in coordination with other educational programs to provide information on rules on the handling of refrigerants containing freon, including the penalties that can be incurred, and become familiar with the equipment and services available.

2. Encourage repair and reuse of white goods.

Some discarded appliances are still in working condition and will be sold for reuse. Other appliances will be made useable through repair.

Construction and Demolition Wastes

1. Promote construction-waste-specific education programs.

The Pueblo Environmental Coordinator will work with the Planning Commissions and permitting offices to identify construction professionals. The Pueblo Environmental

Coordinator will set up training opportunities with construction professionals to discuss source reduction and encourage them to make the commitment separate construction and demolition wastes to such debris out of landfills.

RECOMMENDATIONS FOR IMPLEMENTING INTEGRATED WASTE MANAGEMENT SYSTEMS

1. Maintain the EPAC for the Pueblo Area Council of Governments as the local solid waste advisory committee.

   Citizens' solid waste advisory committees are essential in providing a forum for a variety of opinions, tapping into local expertise, generating community commitment, and organizing volunteer efforts. A balance of interests will be represented on the committee, such as local elected officials, municipal employees, community or neighborhood groups, landfill operators, waste haulers, recyclers, environmentalists, major waste producing industries, regulatory agencies, and citizens. Since the planning area encompasses more than one municipality, geographic representation will also be provided.

2. Build on existing programs.

   Waste education groups and recyclers, either for-profit or not-for-profit, exist in Pueblo. By building on existing programs, communities can minimize capital costs and benefit from local expertise. EPAC, the Pueblo 2010 Commission, the Pueblo Environmental Coordinator, and other local citizens' groups will continue to promote existing programs. They will also work to develop addition waste management opportunities until they meet the disposal needs of the community.

CHAPTER 11

LONG-TERM STRATEGIES

The following long term strategies have been identified as potential directions for integrated waste management activities in Pueblo. EPAC should review the following recommendations and promote strategies that will advance integrated waste management in Pueblo.

1. Implement full-cost accounting and reporting to ratepayers.

   Garbage disposal fees should be based on full-cost accounting. This full-cost accounting method includes all costs associated with a landfill from siting through post-closure. Costs associated with siting, engineering, construction, closure, and post-closure, are the fastest growing areas of cost and are often paid out of general tax revenues.

2. Adopt requirements so that haulers and landfill operators provide all citizens with the opportunity to recycle.

   An “opportunity to recycle” should be made a contract requirement for haulers and landfills so that a menu of recycling options, including yard waste collection and composting, appliance pick-up, commercial and institutional curbside collection, multi-family dwelling curbside collection, and residential curbside collection of recyclables is provided.

3. Provide economic incentives for recycling.

   Design disposal fee schedules to reward those who recycle. Garbage rates based on volume, accompanied by public education and collection or drop-off opportunities, can increase recycling. If consumers pay more to throw more away, they will have an incentive to recycle.

   EPAC and the Pueblo Economic Development Corporation should provide incentives to encourage the development of businesses who use post consumer materials. These incentives can take the form of investment tax credits, research and development tax credits, technical assistance, or accelerated depreciation of recycling equipment and facilities.

4. Establish drop-off centers and expand commercial collection.

The Pueblo Parks and Recreation should offer drop-off centers for tourist traffic. Commercial collection programs can be effective at removing large quantities from the waste stream because the waste is more concentrated and homogenous.

5. Implement unit pricing or a pay as you throw disposal fee.

EPAC should encourage integrated waste management by identifying ways to provide consumers with an economic incentive to reduce waste. With garbage rates based on volume or weight (often called unit-pricing or pay as you throw), residents are charged for the amount of garbage they produce. If they know they will pay more to produce more trash, residents will have an incentive to reduce, reuse, recycle, and compost.

EPAC should encourage unit pricing carefully, to make sure the rate will guarantee a minimum revenue to support waste management services. Unit-pricing must be accompanied with a strong public education program and readily available alternatives to disposal. The public must have information and convenient options if the new rate structure is to work. If unit-pricing is approved, more restrictive ordinances and stiffer penalties for illegal dumping may need to be imposed and enforcement efforts increased.

6. Increase the use of reusable packaging and explore the issues and feasibility of increasing the use of refillable containers.

Refilling containers of products such as beverages, motor oil, pesticides, household cleaning products, bulk foods, or personal care products is one important method of reuse. Public education to increase consumer demand for refillable containers may encourage manufacturers to meet that demand. A deposit system, reuse tax, or voluntary industry initiatives may also increase the use of refillables.

7. Join with major western markets to demand high quality products and packaging standards.

Changes in packaging and product durability and design are major source reduction initiatives that are difficult for Pueblo to influence because of its small market share. EPAC should encourage participation in regional efforts to exert influence and to monitor other western states' legislation to determine whether Pueblo communities can “piggy-back” on their efforts.

8. Build materials recovery facilities.

Pueblo should establish materials recovery facilities that can accept mixed source-separated recyclables to achieve a high-quality reusable product.

9. Enact taxes or fees on certain items or materials.

Consider imposing taxes or fees on items or materials that are either hard-to-dispose-of or that have costly environmental impacts. Toxic chemicals, auto batteries, used motor oil, pesticides, white goods (see appliances), and tires are examples of such materials.

10. Implement disposal bans.

When products are banned by law from going to landfills or incinerators, recycling may increase. Bans are most effective when they are highly publicized and are phased in over a period of years. This gives the four steps in the recycling loop -- collection, processing and transportation, remanufacture, and end-use markets -- a chance to develop as each process prepares to accept the banned material. Implementation and enforcement of disposal bans carry additional costs. Bans are known to be effective for the wastestreams shown below:

- Yard Waste
- Batteries
- Used Oil
- Waste Tires
- White Goods

11. Encourage private composting operations.

There are potential waste disposal savings and business opportunities in composting. The wood products industry has shown interest in composting some of their wastes. Public/private composting operations can be encouraged where governmental units lack tool to effectively market the product.

12. Long term strategies for used oil

- Discourage burning of used oil in furnaces or space heaters not equipped with proper pollution prevention devices.
- Encourage vendors to accept used oil from their customers or provide an alternative.
- Tax the sale of new oil and subsidize used oil haulers and recyclers.
- Require verification of proper disposal from commercial and industrial generators.
- Require government recycling of used oil and procurement of re-refined and reprocessed motor oil.

13. Long-term strategies for waste tires.

- Encourage retailers to accept old tires and verify disposal methods.
- Encourage development of the crumb rubber industry and the use of crumb rubber in asphalt and other products.

14. Build reuse centers for construction and demolition wastes.

Pueblo should establish reuse centers for construction and demolition such wastes for the separation and salvage of construction and demolition wastes.

15. Adopt policies or rules for proper siting and operation of oil-contaminated soil landspreading operation an establish clean-up standards.

Set up a task force with appropriate personnel and other knowledgeable persons to evaluate landspreading issues and recommend a plan of action.

16. Require reporting of non-hazardous industrial waste.

Investigate reporting systems in other states and work with representatives of industries to develop and implement a similar system.

17. Target large industrial waste components.

Obtain the cooperation of local businesses and industries to efficiently reduce their waste stream and acting as a model for other local businesses.

CHAPTER 12
FUNDING INTEGRATED SYSTEMS

POTENTIAL FUNDING MECHANISMS

A random survey of Colorado communities, as well as those in other states, indicates that a variety of funding mechanisms are used to finance solid waste management programs. The most common mechanisms appear to be:

- ◊ Public/private donations and grants
- ◊ Municipal general funds
- ◊ Unit-based pricing or pay-as-you-throw programs
- ◊ Utility or enterprise funds
- ◊ User surcharges (typically collected at the solid waste facilities)

EPAC evaluated each of these mechanisms with regard to Pueblo's needs.

PUBLIC/PRIVATE DONATIONS AND GRANTS

Public and private donations can provide some limited funding for recycling programs. When donations are suggested, many event participants donate from $1 to $5. These donations can generate up to about $1,000 for well-attended functions. The funds can be used to defray costs of advertising and some limited costs associated with events. A number of local recycling programs are supported by donations of services from local businesses; for example, chipping is provided by Zupan Enterprises, a local landfill operator during yard waste recycling events; WestPlains Energy, the local electric utility provides chipping for the annual Christmas Tree Recycling event, as well as covering the cost of advertising in the local newspaper; and Pueblo Disposal Services, a local waste hauler and landfill operator, provides roll-off containers for neighborhood clean-ups.

Federal, state and local grants and grants from private institutions are available to provide start-up funds for programs. Two grants from the Governors Office of Energy Conservation have provided funding for this Plan. Unfortunately, grants typically are for a limited time period, typically one to two years, and do not provide funding for ongoing programs.

EPAC believes that until other funding mechanisms are established, a strong effort should be made to collect donations and identify grants that will continue to support

local integrated waste management programs. Corporate sponsors should also be identified and long term commitments obtained to assure future participation.

MUNICIPAL GENERAL FUNDS

As in most communities across the country, Pueblo's general funds are allocated to a variety of community services that are typically held in higher regard by the public than waste management issues (police, fire, human services, etc.). As a result, EPAC did not feel it would be appropriate allocate general funds for new waste management services.

UNIT-BASED PRICING OR PAY-AS-YOU-THROW PROGRAMS

Because the communities of Pueblo County do not currently mandate trash collection services for all its constituents, a pay-as-you-throw program may be difficult to implement. Competition between local facilities and haulers continue to deflate the cost of landfilling in this community, and in fact throughout the state. Colorado has the second to lowest landfill tipping fees in the country.

These lower than average tipping fees and the wide-open spaces Puebloans enjoy can easily lull the unsuspecting observer into thinking that landfill capacity will be an endless supply. Unfortunately, as communities grow and land becomes more valuable, residents will begin to limit the expansion opportunities of local waste facilities, while at the same time contributing even more burden to the wastestreams going to those facilities.

Pay-as-you-throw programs, by their very nature, require a community to have control of its solid waste system. It would be nearly impossible to enforce such a program on competitive private companies. For this reason, EPAC/2010 Environmental Task Force does not believe this would be a viable option for Pueblo at this time, however, conceptually it is a good mechanism that may be appropriate at a future date.

UTILITY OR ENTERPRISE FUNDS

Many communities have included their solid waste program in their utility billing systems. Money collected through the utility is then deposited into an environmental enterprise fund, which in turn provides the resources to ensure environmental services for the community. Pueblo currently uses utility billing only for water and sewer services.

The 2010 Infrastructure Task Force is currently in the process of expanding the utility billing service to accommodate stormwater utility fees at a cost of several hundred

thousand dollars. Because of the burden already being placed on the utility billing service with the proposed stormwater drainage improvements, and the fact that Puebloans have never considered waste management as a utility service, EPAC/2010 Environmental Task Force has concluded that utility billing would not be an option for the community at this time.

The concept of an enterprise fund, however, would be worth considering further. By depositing any funds generated into a specific enterprise fund directed to further that same program would provide advantages to the communities of Pueblo County while removing those funds from TABOR consideration.

USER SURCHARGES

The last option evaluated by EPAC/2010 Environmental Task Force is provided by Colorado Revised Statute §30-20-115, which states:

> "Any governing body having jurisdiction is authorized to establish a solid waste disposal site and facility fund. The governing body may levy a solid waste disposal site and facility tax, in addition to any other tax authorized by law, on the taxable property within such county or municipality, the proceeds of which shall be deposited to the credit of said fund and appropriated to pay the cost of land, labor, equipment, and services needed in the operation of solid waste disposal sites and facilities and for any other solid waste management purpose in or on behalf of that county or municipality. Any governing body having jurisdiction is also authorized, after a public hearing, to fix, modify, and collect service charges from users of solid waste disposal sites and facilities or transfer stations for the purpose of financing solid wastes management in that county or municipality. In the event that a countywide solid waste disposal site and facility tax has been imposed with the consent of a majority of the voters in the county, that tax may continue to be collected countywide and may accrue to the county's solid waste disposal site and facility fund, notwithstanding any subsequent taxes as may be levied by any municipalities within the county under this section."

EPAC/2010 Environmental Task Force believes that, under existing conditions, a user surcharge would be the most efficient and equitable means to generate the funds necessary to provide Puebloans with the environmental services they need and deserve. Funds generated by the surcharge could be deposited into an enterprise fund from which recycling programs and other activities could receive the funding to provide community environmental services.

Based on the pilot projects undertaken by EPAC/2010 Environmental Task Force using a variety of grant funds, EPAC/2010 Environmental Task Force estimates that the

annual budget required to sustain the current programs to be about $100,000. The budget includes funding for public outreach activities (school curricula, county and state fair demonstrations, coordination with the Colorado State University Cooperative Extension, a permanent Environmental Coordinator position, etc.), and recycling projects (community cleanup campaigns, anti-litter campaigns, recycling events, etc.). A significant portion of the budget is dedicated to a household hazardous waste collection event during which specialty contractors provide collection, transportation, and disposal services on behalf of the community.

In order to generate the required funding through a user surcharge, EPAC/2010 Environmental Task Force surveyed other Colorado communities (El Paso, Larimer, Weld, Prowers, Gunnison, and Logan Counties) to determine what surcharge amount was being assessed. User surcharges of $0.25 per cubic yard of waste received at the landfill will generate over $100,000 of dedicated revenue per year based on 1997 figures of waste volumes received by local landfills as reported to Colorado Department of Public Health and Environment (428,700 cubic yards).

To determine the acceptance of a user surcharge, EPAC/2010 Environmental Task Force conducted an informal survey of people at the Pueblo Mall over a period of several months. Among other questions, people were asked how much they would be willing to pay to have expanded waste management services for the community. The majority of the responses (85%) indicated that people are willing to pay for additional waste management services as proposed for integrated waste management programs. Of those, the most (37%) would be willing to spend an additional $6.00 per year, while 33% would pay $3.00 to $5.00 per year and 26% would pay $7.00 to $10.00 per year.

Assuming that most residents retain a local hauler to collect their trash each week using a company-provided collection cart, each household would produce 96 gallons of trash each week, which is about 0.5 cubic yards of waste. This equals a monthly generation rate of about 2 cubic yards per household per month. If a $0.25 per cubic yard user surcharge were assessed at the landfill, haulers would presumably pass along the $0.50 per month additional fee to their customers (although preliminary discussions with local haulers indicate that they may just absorb the fee as a cost of doing business). At $0.50 per month, each household would experience an approximate increase of $6.00 per year in their service bill, which is what most survey respondents indicated they were willing to spend.

For those individuals who choose not to retain a local hauler and instead haul their wastes directly to a landfill or transfer station, they would be assessed the surcharge

directly (a transfer station would pass the costs through similar to a hauler). Presumably, these individuals would not bear any greater expense than those who use a service, unless they generated considerably more wastes, in which case their expense would be proportional to the amount of wastes generated.

Finally, considering those individuals who are known locally as “prairie dumpers,” they may continue to illegally dump their wastes throughout the community in the hopes of “getting something for nothing.” However, the intention of the Environmental Coordinator program, is to educate those individuals about the impact of their actions on the community, prosecute chronic offenders more vigorously, and provide the means to more efficiently cleanup the illegally dumped materials before they accumulate.

In addition, the funds generated by a user surcharge would grow with the demand for environmental services. As the population continues to increase, the amount of wastes generated will increase; consequently, the funds generated from the surcharge will increase, providing the funding needed to serve a larger population. The “bottom line” will be a coordinated environmental program that responds to the community’s needs and contributes to a more healthful, attractive, and desirable community in which to live and work.

APPENDIX A

DEFINITIONS

Agricultural Waste – Solid waste that results from the rearing and slaughtering of animals and the processing of animal products, and orchard and field crops.

Ash Waste – The residue that remains after a fuel or solid waste has been burned. Bottom ash is a non-airborne combustion residue from burning fuel or waste in a boiler. Bottom ash constitutes approximately 90% of combustion ash. Fly ash includes all solids, including ash, charred paper, cinders, dirty soot, or other matter that rise with the hot gases from combustion, rather than falling with the bottom ash. Fly ash constitutes the remaining 10% of combustion ash.

Biological Waste – Waste derived from living organisms.

Bulky Waste – Items whose large size precludes or complicates their handling by normal collection, processing, or disposal methods.

Commercial Waste – All types of solid waste generated by stores, offices, restaurants, warehouses, and other non-manufacturing activities, excluding residential and industrial wastes.

Compatible Waste – Wastes that can be broken down and compacted; brush, food, lumber, paper, etc.

Construction and Demolition Waste – The waste building materials, packaging and rubble resulting from construction, remodeling, and demolition operations on pavements, houses, commercial buildings, and other structures. The materials usually include used lumber, miscellaneous metals, packaging materials, and other materials.

Designated Waste – Those wastes that have serious potential for causing water pollution, even though they are not hazardous.

Garbage – Solid waste consisting of putrescible animal and vegetable waste materials resulting from the handling, preparation, cooking, and consumption of food, including waste materials from markets, storage facilities, handling and sale of produce, and other food products. Generally defined as wet food waste, but not synonymous with trash, refuse, rubbish, or solid waste.

Hazardous Waste – A waste, or combination of wastes, that may cause, or significantly contribute to an increase in mortality, or an increase in serious irreversible or incapacitating illness, or that pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous wastes include radioactive substances, toxic chemicals, biological wastes, flammable wastes, and explosives.

Household Hazardous Wastes – Those wastes resulting from products purchased by the general public for household use, which, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may pose a substantial known or potential hazard to human health or the environment when improperly treated, disposed, or otherwise managed.

Industrial Waste – Materials discarded from industrial operations, or derived from industrial operations or manufacturing processes, all non-hazardous solid wastes other than residential, commercial, and institutional. Industrial waste includes all wastes generated by activities such as manufacturing, wholesale trade, and mining. A distinction should be made between scrap (those materials that can be recycled for profit) and solid wastes (those that are beyond the reach of economical reclamation).

Infectious Waste – Waste containing pathogens or biologically active material, which because of its type, concentration, or quantity, is capable of transmitting disease to persons exposed to the waste.

Mixed Refuse – Garbage or solid waste that is in a fully commingled state at the point of generation.

Municipal Solid Waste – Includes all the wastes generated from residential households and apartment buildings, commercial and business establishments, institutional facilities, construction and demolition activities, municipal services, and treatment plant sites.

Non-compatible Waste – Those wastes that cannot be broken down and compacted; concrete, tree stumps, tires, etc.

Pesticide Waste – The residue resulting from the manufacturing, handling, or use of chemicals for killing plant or animal pests.

Refuse – All solid materials that are discarded as useless. A term often used interchangeably with the term solid waste.

Residential Wastes – Wastes generated in houses and apartments, including paper, cardboard, beverage and food cans, plastics, food wastes, glass containers, and garden wastes. Sometimes called domestic solid Waste.

Residual Wastes – Those solid, liquid, or sludge substances from human activities in the urban, agricultural, mining, and industrial environments remaining after collection and necessary treatment.

Solid Wastes – Any of a wide variety of solid materials, as well as some liquids in containers, which are discarded or rejected as being spent, useless, worthless, or in excess, including contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community activities.

Special Wastes – The definition can vary by company and location, but usually includes hard or difficult to handle waste; may include wastes that are hazardous if improperly handled. Special wastes include bulky items, consumer electronics, white goods, yard wastes that are collected separately, hazardous wastes, concrete, batteries, used oil, asphalt, and tires. Special wastes are usually handled separately from other residential and commercial wastes.

Trash – Wastes that usually do not include food wastes, but may include other organic materials, such as plant trimmings. Generally defined as dry waste material, but in common usage, it is a synonym for rubbish or refuse.

White Goods – Large worn out or broken household, commercial, and industrial appliances, such as stoves, refrigerators, dishwashers, and clothes washers and dryers.

Wood Pulp Waste – Wood or paper fiber residue resulting from a manufacturing process.

Yard Waste – Leaves, grass clippings, prunings, and other natural organic matter discarded from yards and gardens. Yard waste may also include stumps and brush, but these materials are not normally handled at composting facilities. Also know as yard rubbish.

APPENDIX B

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APPENDIX C

LOCAL RECYCLING DIRECTORY FOR PUEBLO

COMPANY & LOCATION	PHONE	ACCEPTED MATERIALS
American Battery Corporation 2516 North Freeway	**546-2281**	Lead-acid vehicle batteries only
American Iron & Metal 831 Santa Fe Drive	**542-5865**	Aluminum cans/foil, copper, lead, brass, iron, zinc, all appliances (refrigeration units must have freon removed), car bodies (no vehicle batteries), tin cans
Anderson Carpets 110 S. Union	**542-5833**	Foam carpet padding (dry, clean, free of metals & staples, no rubber waffle)
Batteries Plus 1408 U.S. Hwy. 50 West	**583-8766**	Any rechargeable battery (car, motorcycle, Ni-Cd, Ni-HM)
Belmont Tire Car Care Center 711 E. Hwy. 50 Bypass	**545-7040**	Motor oil & transmission fluid (5 gal. max-, no solvents, no antifreeze); Please call first to notify them that you are bringing oil
Blende Plaza Cleaners	**543-4100**	Metal clothes hangers (bundled &

COMPANY & LOCATION	PHONE	ACCEPTED MATERIALS
1805 Santa Fe Drive		tied)
Bonnie's Car Crushers 544 Kennie Road (drop site)	**372-6617**	All appliances (freon extraction of refrigeration units for a small fee), tin cans, scrap iron, junk cars (no vehicle batteries)
Brandt Floor Covering 200 Santa Fe Drive	**543-4530**	Foam carpet padding (dry, clean, free of metals & staples, no rubber waffle)
Checker Auto Parts 3006 W. Northern 1005 Hwy 50 West	**564-4855** **545-6470**	Motor oil (5 gallons max., no solvents, no antifreeze)
Colorado State Fair Grounds Gate 8 - off Euclid and Small Street	**583-4526**	Free Christmas Tree Recycling and Mulch, first weekend in January
Concerned Parents of Pueblo 220 S. Main Street	**546-3577**	Interior or exterior latex paint (1/3 gallon or more)
Dionisio Metal & Iron, Inc. 1004 Palo Alto Street	**544-3488**	All aluminum, brass, copper, lead, tin cans, insulated wire, scrap iron, junk cars, appliances (no refrigerators & no vehicle batteries)
Discount Battery Corp. 501 S. Santa Fe Drive	**544-5533**	Small appliances, housewares, clothing, and furniture in resalable condition
Fred's Waste Paper 330 W. "D" Street	**542-6622**	Newspaper, corrugated cardboard, computer bond & white copy, magazines and phonebooks
Goodwill Industries 1020 Constitution Road	**543-4483**	Small appliances, housewares, clothing, and furniture in resalable condition
King Soopers 3050 W. Northern 102 W. 29th Street	**564-0590** **544-0390**	Aluminum cans (no foil), newspaper
Midway Tire I-25 at Exit 119	**719-382-3020**	Tires of any size
Paint Recyclers LLC.	**542-6910**	Paint collection, distribution and recycling
The Paper Dude	**547-8010**	Office paper recycling, computer bond & copy (white or color),

COMPANY & LOCATION	PHONE	ACCEPTED MATERIALS
		destruction of confidential papers; Call for specifications and pick-up
Pueblo City-County Health Dept. 151 Central Main Street	**583-4526**	Call for information on how to bring a Community Clean-up to your neighborhood, and when the next Waste Tire Disposal Event will be
Pueblo Disposal, Inc. 977 Delta	**545-3321**	Corrugated cardboard, newspaper, plastic
Pueblo Sanitation, Inc. 1440 Stockyard Road	**545-6558**	Customer curbside recycling includes newspapers, aluminum/steel cans
Safeway 617 W. 29th Street **Take inside** 1231 S. Prairie **Take inside** 1332 E. 8th Street **Bin outside**	 **545-1095** **561-1234** **542-2931**	Aluminum cans, newspaper, plastics # 1 & #2 Aluminum cans, newspaper, plastics #1 & #2, Newspapers, plastic #1 & #2
Salvation Army (Drop Site) 326 W. 8th Street 1625 Prairie Pick up Number	 **542-6297** **564-6614** **800-958-7825**	Useable clothing, small and large appliances, furniture
Speken Iron & Metal 310 S. Santa Fe Drive	**544-4837**	All metals including appliances (no refrigerators, no vehicle batteries)
TOMRA (formerly Reynolds Aluminum Recycling Center) 529 Greenwood Avenue	**544-8430**	All aluminum (cans, scrap, foil, cast), copper, brass
Waste Management of Pueblo 1 Environmental Place	**545-9232**	Customer curbside recycling includes corrugated cardboard, newspapers, aluminum/steel cans, clean plastic bottles #1 & #2, office paper
Zupan Enterprises Inc. W. Hwy 78	**564-3672**	Two FREE yard waste recycling days, the last Saturday of April and October (ONLY grass, leaves, tree pruning 8" diameter & 8' long max.)