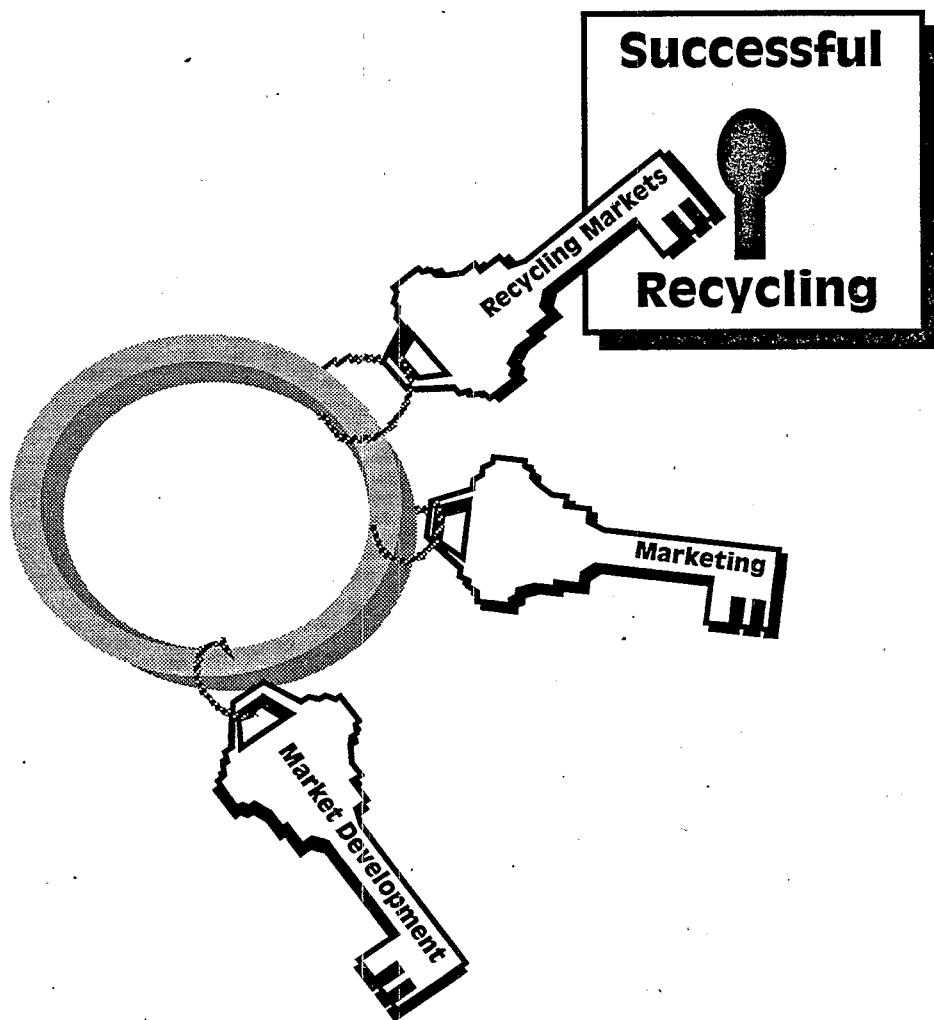
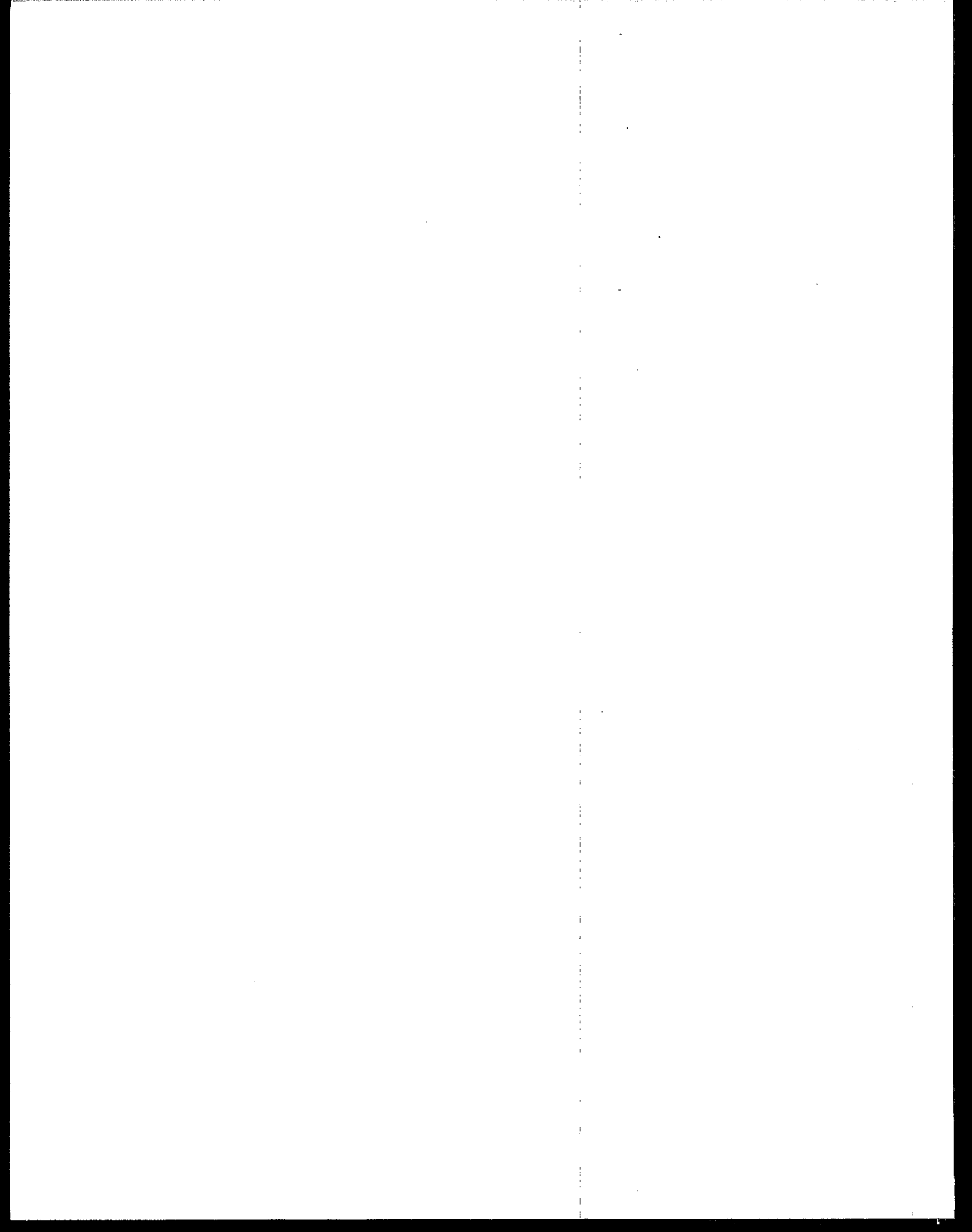


# Recycling Markets, Marketing and Market Development

A Primer For Government Officials



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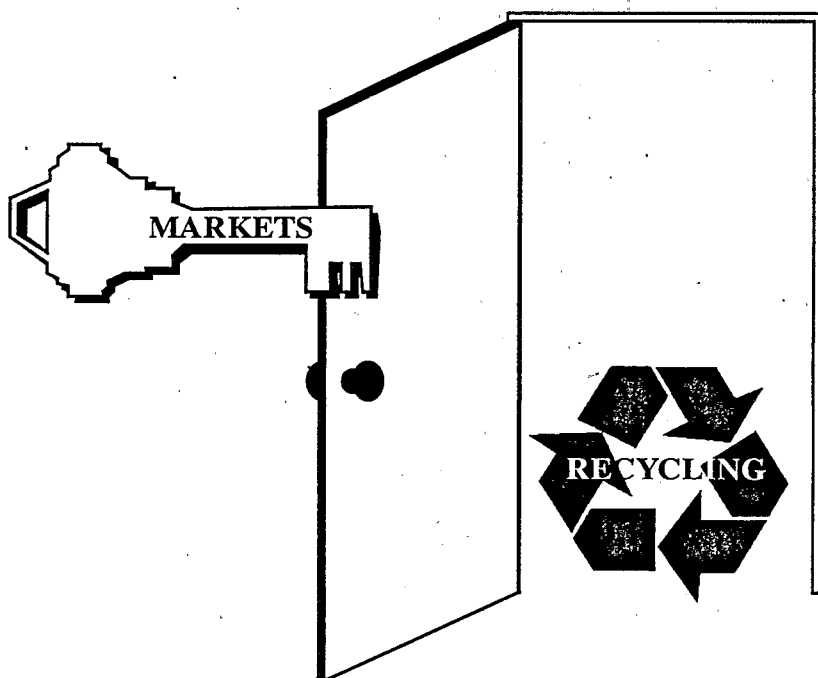
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## INTRODUCTION

It's been said that the three key elements of successful recycling programs are Markets, Markets, and Markets. The importance of markets and marketing to recycling cannot be overemphasized. If you can't market a material, no matter how plentiful and high-quality it may be, you can't recycle it. It's as simple as that.

### Markets Unlock the Door to Recycling



In fact, it's strongly recommended that the place to start in establishing any recycling program is with markets. Identify the markets first and design the recycling program around those markets. Experience has shown that to collect certain materials and then to look for markets is going about the process backwards. Start with markets and go from there.

We often view recycling as solely an environmental issue or program. But as anyone who has been in the recycling business for some time will tell you, it's increasingly becoming an economic issue or program. Recycling is truly a business venture subject to the free market laws of supply and demand. Government officials who undertake recycling programs may find

themselves inadequately prepared (unless they have considerable business experience) to effectively market their recyclables. The marketing of recyclables can be very challenging, indeed, so the more we understand about recycling markets, the better prepared we will be to meet that challenge.

This brings us to the purpose of this primer - which is to present a comprehensive review of the business of recycling markets. It is written for municipal officials and designed to cover all of the major aspects of markets and marketing and to provide some guidance on how to work effectively with recycling markets.

The primer is organized into three major parts, each dealing with separate, yet interrelated, topics.

**Part 1 Markets:**

- Examination of the different types of markets categorized by location, activity and material
- Assignment of markets for each major recyclable material



**Part 2 Marketing:**

- Explanation of the lengthy and often complex process of marketing recyclables
- Major needs of marketplace cited
- Tips to keep in mind



**Part 3 Market Development:**

- Description of the nature and scope of market studies
- Identification and description of several economic incentives designed to strengthen and expand markets

In Part I we examine **MARKETS** - the different types of markets categorized by location, activity, and material. We also present a general assessment of the markets for each major recyclable material.

**MARKETING** is the subject of Part II in which we explain the lengthy and often complex process of marketing recyclables. We also cite some major needs of the marketplace and some tips to keep in mind.

Part III focuses on **MARKET DEVELOPMENT** in which we describe the nature and scope of market studies, and identify and describe several economic incentives designed to strengthen and expand markets.

## **PART I: MARKETS**

### **ESSENTIAL TERMS**

When talking about recycling and markets, it's easy to get very confused if one doesn't understand the language. So let's begin with the definitions of some key terms.

First, there's the word MARKET. Simply stated, a MARKET is a customer (or group of customers) who is willing and able to accept the product or commodity that is being offered. When we add the term RECYCLING to the term MARKET, we are referring to those customers that accept the recyclables that are collected from the municipal solid waste stream. Sometimes the term is extended to also encompass the procurement of recycled products, but for the purpose of this primer, the term will apply only to recyclables.

Recycling markets may be POSITIVE or NEGATIVE, that is, the customer may pay for the recyclables (POSITIVE MARKET) or the collector of the recyclables may pay the customer to accept them (NEGATIVE MARKET). And this leads us to another term which is often applied to recycling - ECONOMIC MARKET.





Marketing: Process of identifying recycling markets and arranging for acceptance of recyclables.

Finally, there is the term MARKET DEVELOPMENT (which is addressed in Part III). Like marketing, MARKET DEVELOPMENT is a process whereby we attempt to establish, enhance, strengthen, and expand recycling markets. Because we primarily utilize economic incentives to do this, MARKET DEVELOPMENT is essentially an economic development (rather than an environmental) activity.

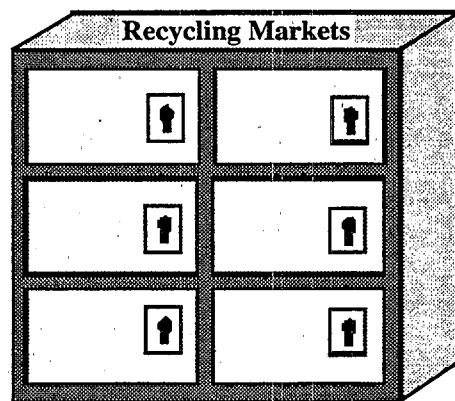
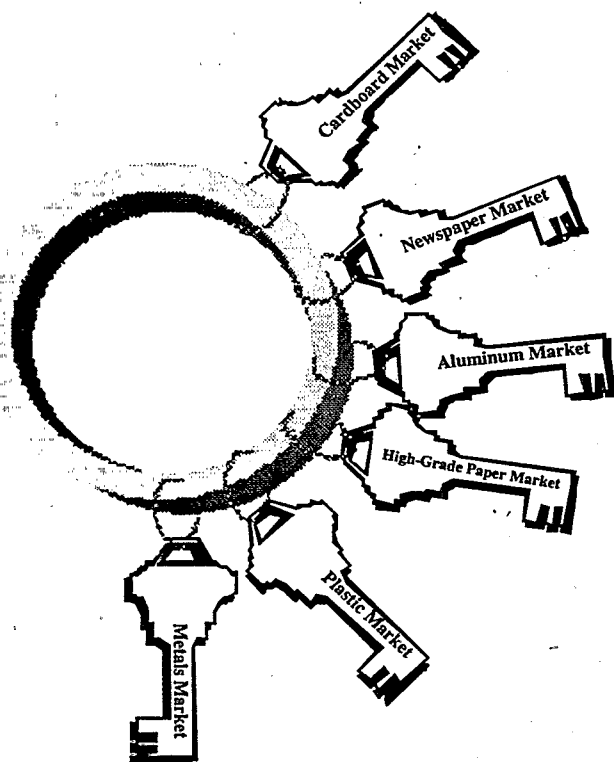
Market Development : Process that attempts to establish, enhance, strengthen and expand recycling markets.

Another term often used relative to markets is VENDOR. This is a generic term that may be applied to either a party or company that seeks to acquire recyclables for subsequent processing or manufacturing, or to a party or company that seeks to sell commodities such as recycled products.

Vendor: A party or company that acquires recyclables for processing or manufacturing. A party or company that sells recycled products.

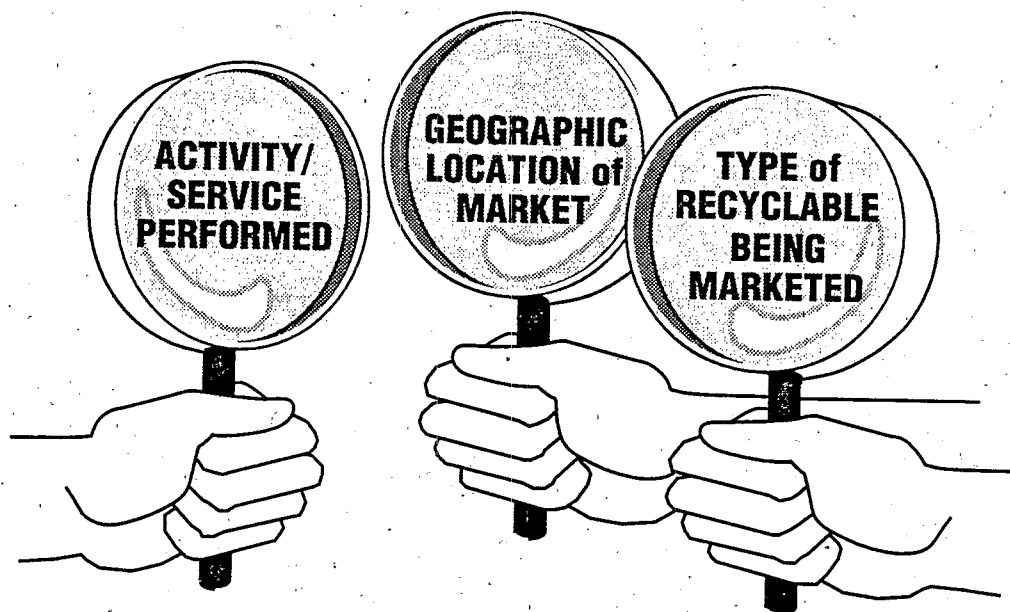
## TYPES OF RECYCLING MARKETS

There is a tendency among recyclers to think in terms of "The Recycling Market" as if there was only one market for recyclables. In reality, there are many markets not only for recyclables in general but for specific types and grades of different recyclables. A term that is often used as a synonym for markets is vendor.



There are three ways to look at recycling markets - by activity or service performed, by geographic location of the market, and by the specific type of recyclable or commodity being marketed.

## Recycling Markets Examination

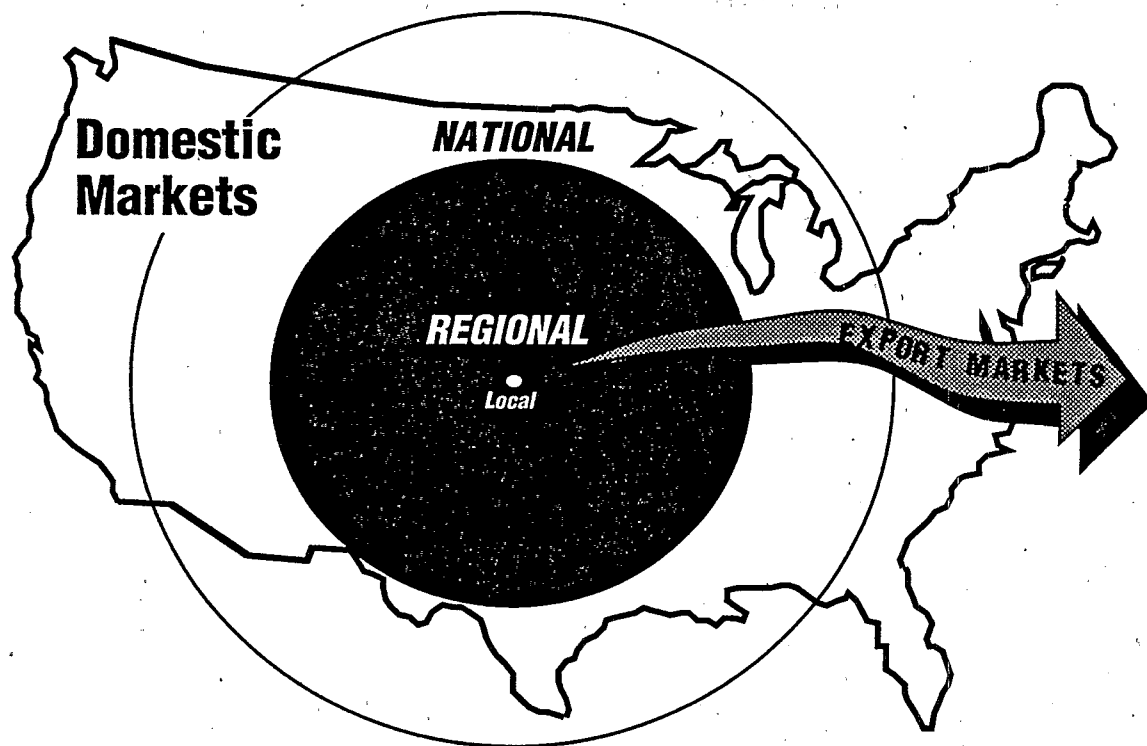


Let's start by examining markets according to activity or service performed. First there are the collectors or haulers and the processors. These companies include those that collect the recyclables at curbside or at drop-off sites and subsequently prepare or process them for the end-user. Processing may include sorting, baling, crushing, cleaning, chipping, or other physical activity. These companies are often referred to as intermediate markets. The end-user markets are manufacturers that use the recyclables to make new products. These end-users include paper mills, metal smelters, glass factories, and plastics fabrication plants. Another type of market are the brokers who handle all of the financial and shipping transactions involved in moving recyclables through the marketplace, but who don't necessarily ever own or physically handle the recyclables.

We can also classify recycling markets by location or geography. One such category is "domestic" which refers to markets located within the continental United States. These domestic markets may be local, that is, located within or immediately adjacent to the communities in which the recyclables are collected. Other domestic markets, based on location, may be regional (up to

a couple of hundred miles from the community). Terms generally applied to domestic markets include local, regional, and national. Those markets located beyond the boundaries of the United States are referred to as "export" markets. They range from our neighbors to the north and south (Canada and Mexico) to countries in Europe, South America, and the Far East (the Pacific Rim countries are major markets for American recyclables).

## Market Classifications



Finally, we can classify markets by the specific types of recyclables or commodities collected. In most communities, the recyclables include waste paper, metals, glass, and plastics.

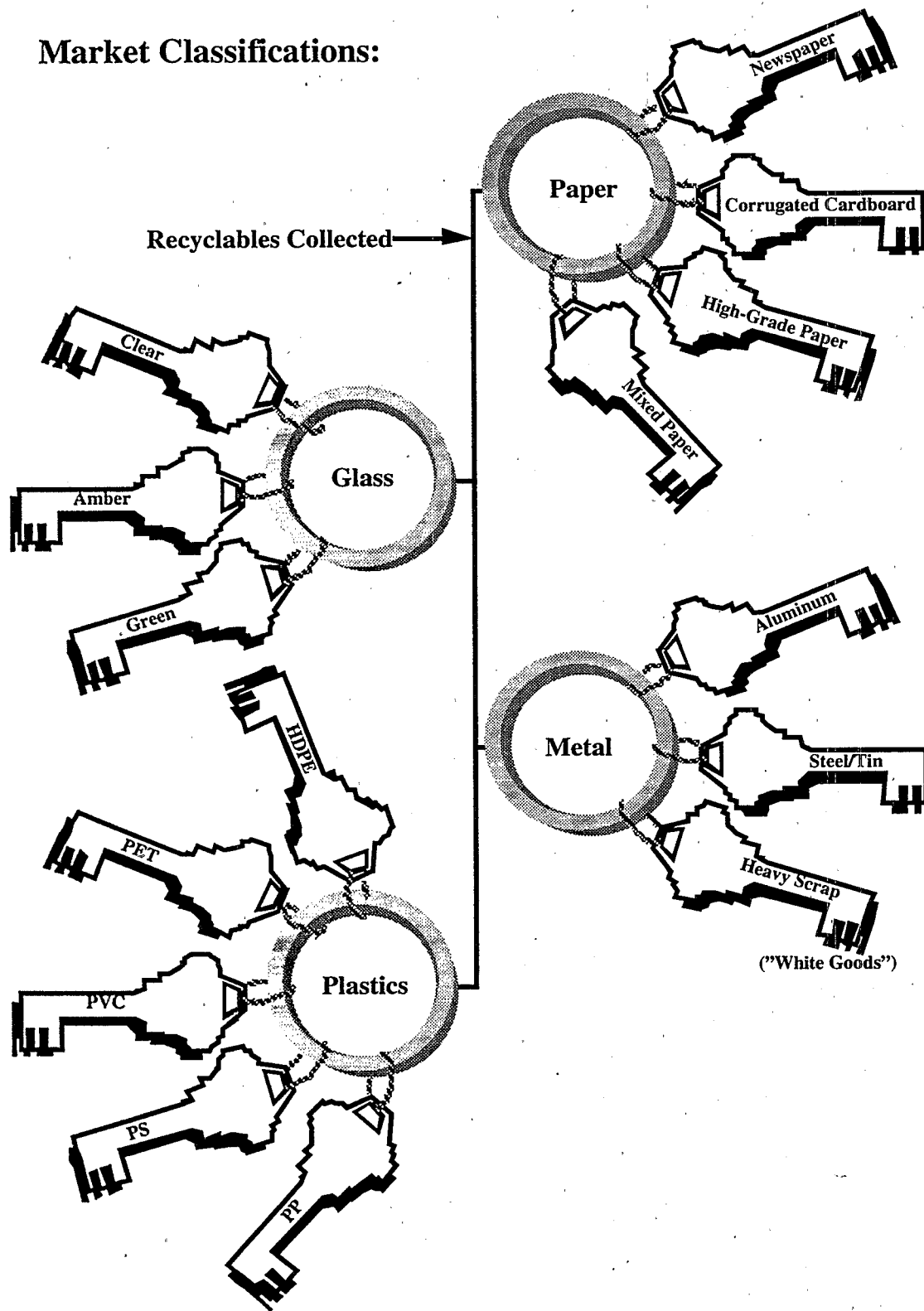
Common grades of waste paper include old newspaper (ONP), old corrugated cardboard (OCC), high-grade paper (bond and ledger paper, computer printouts) for de-inking, and other mixed papers (including telephone directories, magazines, catalogs).

Recyclable glass usually consists of clear (flint), amber (brown), and green bottles and jars that contained foods and beverages. Plate glass can also be recycled but is a totally different material from bottle glass.

Aluminum beverage cans, steel/tin cans that contained food, and heavy metal scrap (such as major household appliances called "white goods") are their most commonly collected metals for recycling.

Of the six major plastic resins and the dozens of different formulations, the most common plastic materials recycled are soda bottles, milk bottles, and certain other containers made of polyethylene terephthalate (PET) or high-density polyethylene (HDPE). In some communities, packaging made from polyvinyl chloride (PVC), polystyrene (PS), and polypropylene (PP) may also be collected for recycling as are other types of containers made of PET and HDPE.

# Market Classifications:



## STATUS OF DOMESTIC MARKETS

The following is a brief general summary of current market conditions and outlook for the major recyclables recovered from municipal solid waste. It is important to keep in mind that many of these markets are cyclical in nature, exhibiting considerable fluctuations in demand and prices. Furthermore, export markets are very significant outlets for some of the recyclables, especially waste paper and scrap metals. Some of the markets are supply-limited, that is, there is an adequate supply of a recyclable for the mills, while others are demand-limited, there being an inadequate demand for the products made from the recyclables.

### Waste Paper Markets

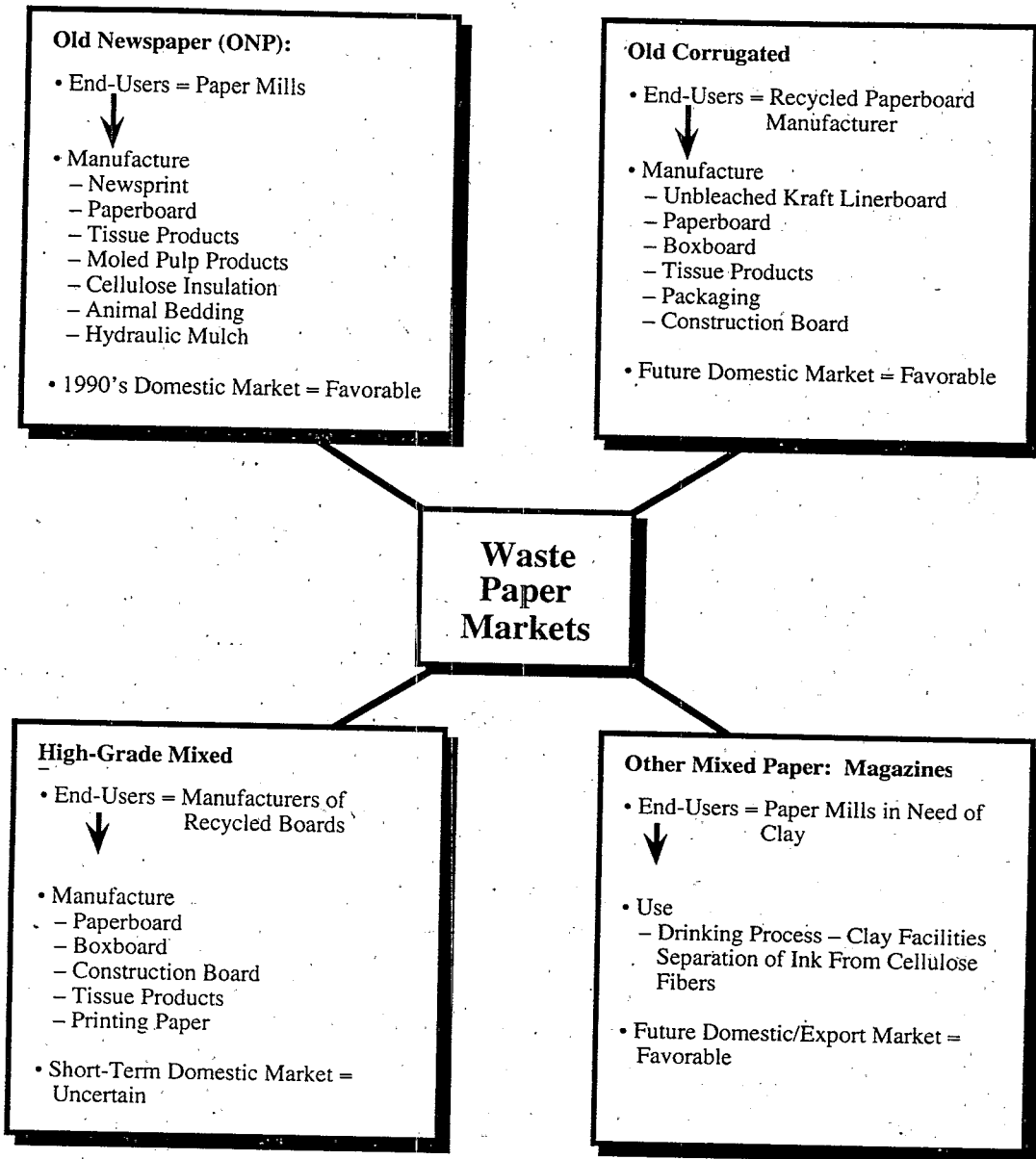
Waste disposal economics, rather than paper production economics, have been driving much of the recycling of old newspaper (ONP), old corrugated cardboard (OCC), and high-grade mixed office paper in recent years. In other words, the supply of waste paper has been driving the market rather than the demand for recycled paper products. This has caused imbalances in markets and has contributed to the decline in the prices formerly paid by intermediate and end-user markets for these materials. Poor quality of the waste paper collected in some recycling programs has also caused the decline in prices.

1. **ONP:** The major end-users of ONP are paper mills that manufacture newsprint, paperboard, tissue products, molded pulp products, cellulose insulation, animal bedding, and hydraulic mulch. Although all of these users may increase their demand for ONP, newsprint production is the primary sector of the paper industry capable of absorbing large supplies of ONP in the future. Some new domestic newsprint mills have gone on-line recently and several more are being planned and/or built in the United States and Canada. Key to the future demand for ONP is the use of recycled newsprint by newspaper publishers plus a steady, reliable, high-quality supply of ONP. If these are met, the domestic market outlook for ONP during the 1990s is favorable. In fact, some marketing analysts predict regional shortages of ONP by the mid-90s.
2. **OCC:** Most of the OCC is consumed by recycled paperboard manufacturers for use in unbleached Kraft linerboard. Some is also used to make paperboard and boxboard, tissue products, packaging,

and construction board. Domestic demand for OCC is increasing gradually and a few new mills that use OCC are being planned and/or constructed. The future domestic market outlook for OCC looks generally favorable and capable of absorbing the supply of OCC that will be generated by recycling programs.

3. **High-Grade Mixed Paper:** This category includes several types of waste papers generated primarily in offices. The major end-users of such mixed papers are the manufacturers of recycled paperboard and boxboard and of construction board. Some mixed paper is also used to make tissue products and printing papers. While there has been an increasing demand for mixed papers on the export market, there has been a decline in the domestic market. The demand is highest for well-sorted, uncontaminated white bond and ledger and for computer printouts. The outlook for the domestic market over the short term is quite uncertain.
4. **Other Mixed Papers:** In recent years, there has been little or no market for such other mixed papers as telephone directories and old magazines (OMG). However, the market for telephone directories is emerging as is also true for OMG. Pre-consumer OMG have been used for years to make tissue products, but post-consumer OMG have not been acceptable to most mills. With the expansion of paper mills to de-ink ONP, however, a market for post-consumer OMG has emerged. One type of de-inking process uses clay to facilitate the separation of ink particles from the cellulose fibers. A major, relatively inexpensive source of the clay is OMG, of which clay is a major ingredient. Thus, the future domestic and Canadian market outlook for OMG is favorable.

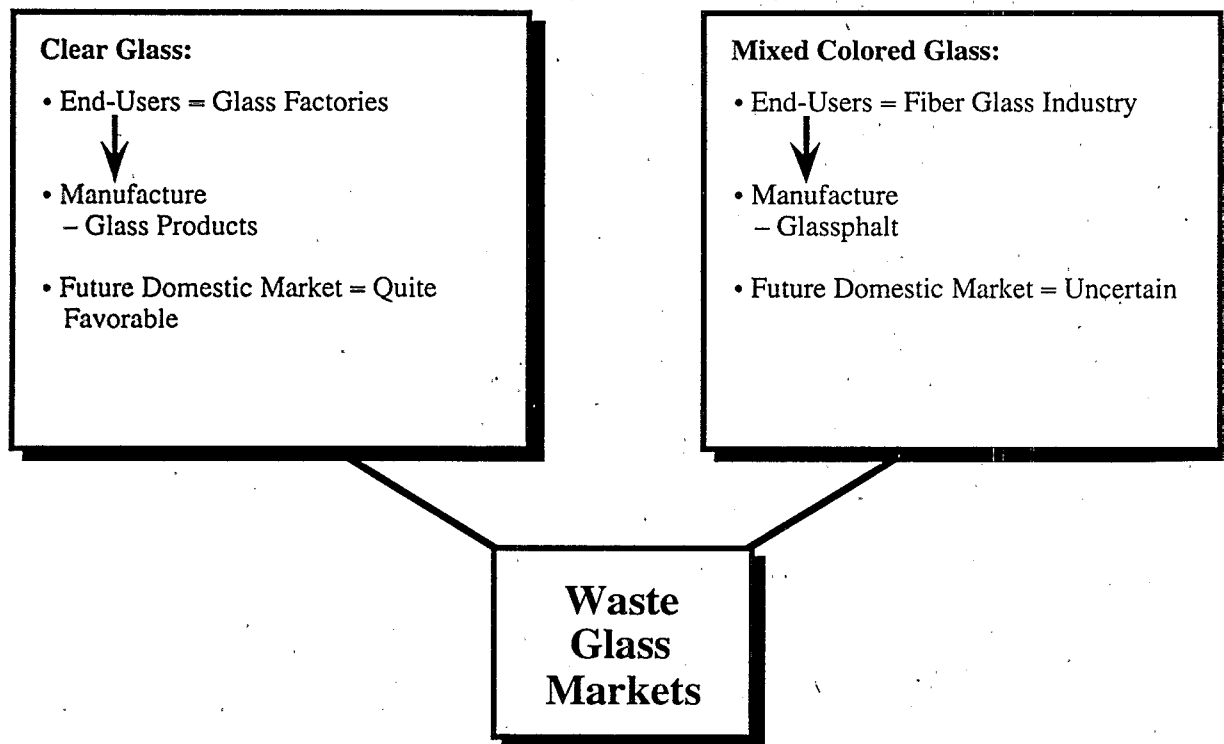




## Waste Glass Markets

The major end-users of glass bottles and jars are glass factories that use the ground glass (called cullet) as a raw material. There are numerous glass factories with the combined capacity to absorb much of the glass collected in recycling programs. However, the glass must be color-sorted and free of contaminants. Another domestic market for cullet is the fiberglass industry. Although it can use mixed colored glass, this industry's specifications relative to

contaminants are very stringent. Poor quality mixed glass can be crushed and used for glassphalt (mixed with asphalt used to pave roads) and roadbed construction. Recently, the market for green glass used primarily for wine and beer bottles has declined significantly since the domestic glass factories cannot use the colored cullet. Most of the green glass bottles are imported from other countries. The future domestic market outlook for clear glass is quite favorable, although the market for colored glass is uncertain.

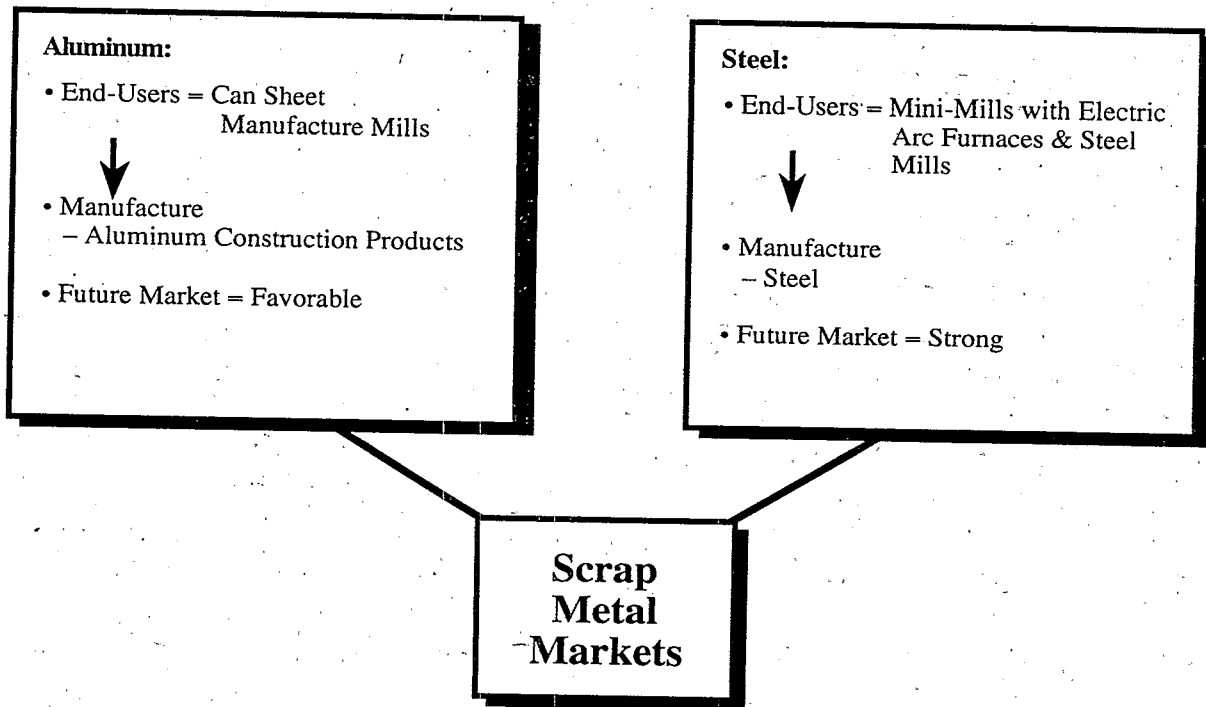


## Scrap Metal Markets

The most common scrap metals collected in municipal recycling programs are aluminum beverage cans, steel/tin food and beverage containers, and large household appliances collectively called white goods.

1. **Aluminum:** Historically, the market for scrap aluminum has been strong. The major end-users are can sheet manufacturers and mills that make aluminum construction products such as siding for houses. Although the prices paid for scrap aluminum have dropped recently, the future market outlook is favorable.

2. **Steel (Ferrous Scrap):** Steel cans and white goods are categorized by the steel industry as "obsolete scrap." With the recent growth of mini-mills equipped with electric arc furnaces which use mostly obsolete scrap, the demand for ferrous metals has increased dramatically. Steel/tin cans may be marketed directly to steel mills, however, since the tin is a contaminant, the amount of cans which steel mills may accept is limited. This has created renewed interest in detinning plants which remove the tin and prepare the steel for the mills. However, detinners may require that paper labels be removed from the cans. The white goods market has declined in response to the concerns about the presence of PCB in some electrical components. Unwilling to handle materials that might subsequently be considered hazardous, many scrap metal dealers have refused to accept white goods although they pose only a minimal hazard when baled (rather than shredded). A new federal law now requires that the freon and other ozone depleting chemicals in refrigerators must be removed in a manner that prevents its escape into the atmosphere. Despite all of these concerns and restrictions, the future market outlook for ferrous scrap metal is strong.

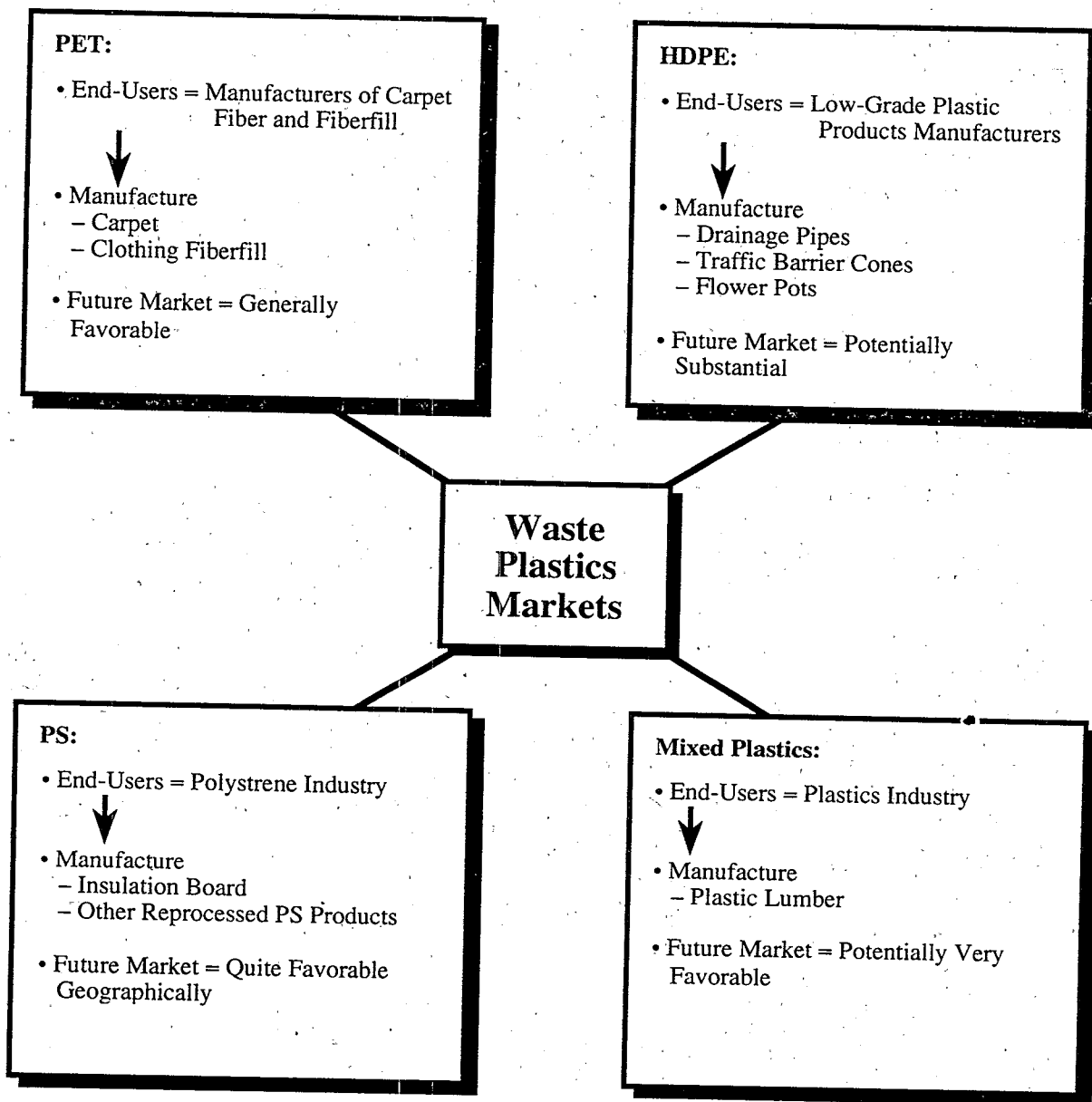


## Waste Plastics Market

Since the recycling of post-consumer plastics is a relatively new activity, the market for such plastics is in its infancy. The market is growing rapidly, especially for certain high-value resins. Although most plastic resins can be recycled, the two that are most commonly collected are PET (Polyethylene Terephthalate) and HDPE (High Density Polyethylene).

1. **PET:** Soft drink bottles are the most common PET product in municipal solid waste, although certain other foods also come in containers made of this resin. The major end-users of PET are manufacturers of carpet fiber and fiberfill used in clothing. The market demand for PET resin appears strong in several geographic areas and the future market outlook is generally favorable.
2. **HDPE:** Milk and liquid detergent bottles are the most prominent HDPE household containers although several other types of products, such as motor oil, are also sold in such bottles. Recycled products manufactured from post-consumer HDPE include drainage pipes, traffic barrier cones, flower pots, and other low-grade plastic products. The market demand for HDPE is potentially substantial.
3. **PS:** Polystyrene is another very common plastic resin used in both foam and rigid forms. The foam form is used extensively as packaging to protect products and also for food containers (cups, plates, clamshells, etc). The rigid form is used extensively to make food containers. Because PS is quite common in municipal solid waste, many communities have targeted it for recycling. The polystyrene industry has responded by constructing a few major PS recycling plants and manufacturers are making insulation board and other products from the reprocessed PS. In those geographic areas where such plants are located, the market outlook for PS is quite favorable.
4. **Mixed Plastics:** The major use of mixed resins is in the production of plastic lumber. Virtually any and all of the resins may be incorporated into the lumber, depending on the desired characteristics of the final product. Where strength is important, the lumber may be made solely of HDPE or a mixture of PET and HDPE. Plastic lumber may be used for docks, bulkheads, outdoor furniture, and fence posts. There appears to be a growing market for plastic lumber and the future

market is potentially very favorable, pending research on the economic and environmental aspects and on product development.



## PART II: MARKETING

### MARKETING DEFINED

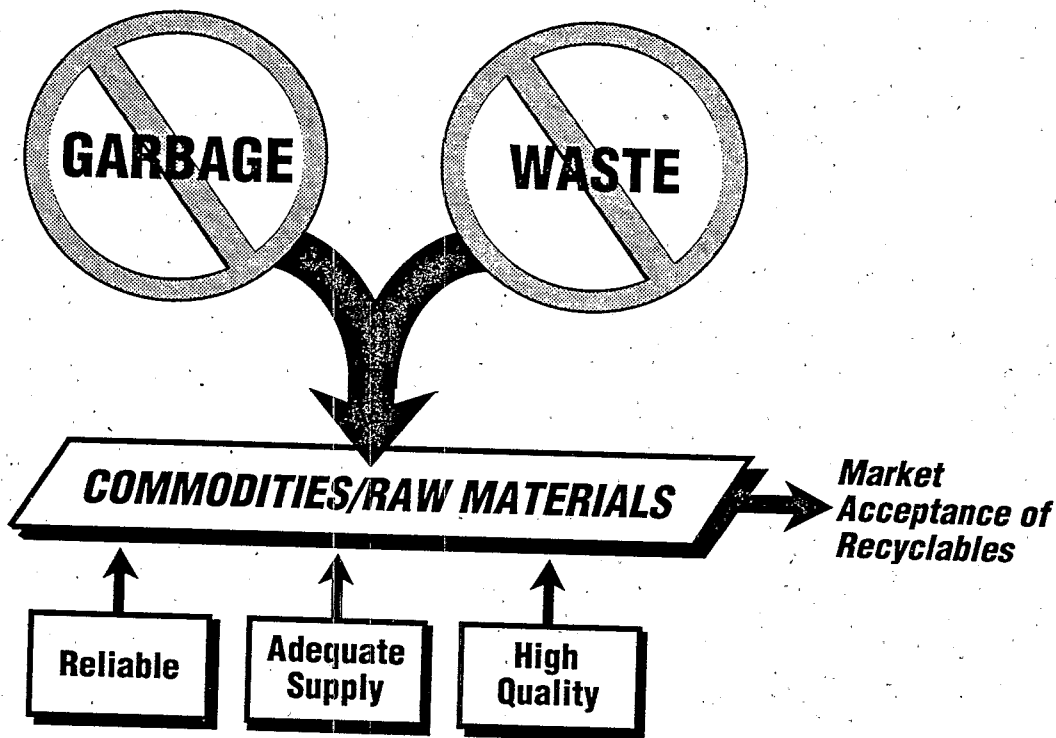
As previously stated, MARKETING refers to the process of identifying intermediate and end-user markets and making arrangements for those markets to accept recyclables. This process can be quite complex and time-consuming.

### MARKET NEEDS

While we may be primarily concerned about meeting our own market needs, it is essential that we also understand the needs of the marketplace which we hope will accept our recyclables. Seeing the other side of the process can help us meet both our own needs and those of the market.

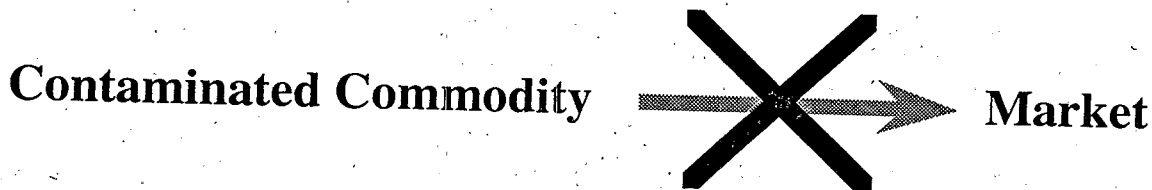
Upon entering the marketplace, we must understand that we are no longer dealing in "garbage" or "waste." We are now offering "commodities" or "raw materials" which must meet industry specifications. In essence, the market needs a reliable, adequate supply of high quality material on a consistent basis. If we cannot assure that, then the market may not accept the recyclables we have collected.

# Market Place



The projected quantity of recyclables can be estimated by conducting a waste stream analysis and then calculating the generation and recovery rates for the different recyclables in the municipal waste stream.

Quality standards can be met by ensuring that extraneous and non-recyclable materials are not mixed in with the recyclables that we seek to market. Contamination is one of the biggest impediments to successful marketing. Recyclables must compete with virgin raw materials, therefore, the higher the quality of the recyclables, the better they can compete in the marketplace. An entire load of a material might be rejected by a market if it is contaminated by only a few unwanted items.



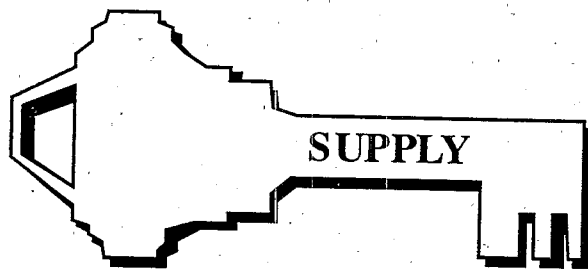
Therefore it is imperative that information about industry specifications be conveyed to the generators and collectors of recyclables. Complete, easily understood printed instructions to all generators (households, businesses, institutions, etc.) coupled with careful collection and handling of recyclables are essential to minimizing contamination problems.



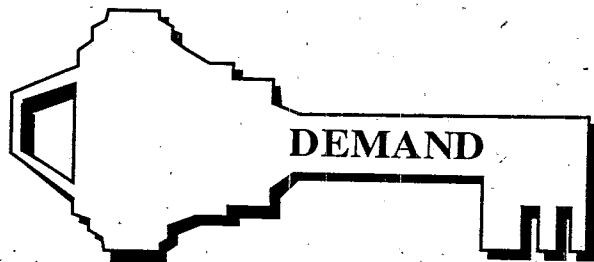
## MARKET FORCES

There are many factors or forces that drive markets in general and recycling markets in specific. The following are some major factors that must be considered when developing a marketing plan.

1. **Supply:** The quantity (tonnage) or supply of a recyclable that is available is of critical importance. If there is too little available, there may be no market even if the material is of high quality. Conversely, if there is an overabundance of a material, the market may be overwhelmed which, in turn, may "kill" the market.



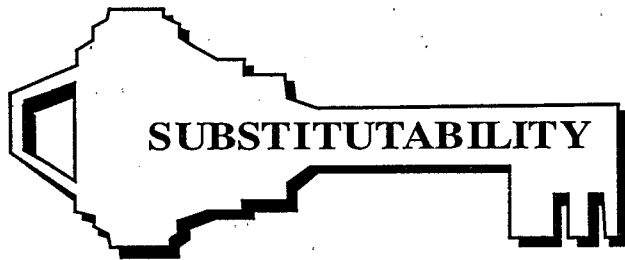
2. **Demand:** There must be a need or demand for the material by the industries that might use it as a raw material. If an industry already has an adequate supply of the material, then demand for additional material will be limited despite the adequacy and quality of the supply. On the other hand, if there is an unmet demand for the recyclable material, the market will be strong, provided the industries have the ability and willingness to pay appropriate prices for the material.



3. **Quality:** Post-consumer recyclable materials must meet the specifications of the end user industries. Since recyclables compete with virgin raw materials in the marketplace, the quality of the recyclable materials must be of sufficiently high quality that they may be used as substitutes for the virgin materials.



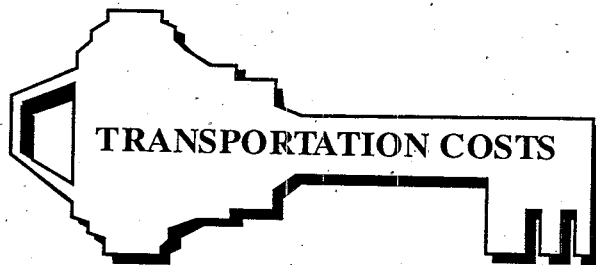
4. **Substitutability:** Recyclable materials must have characteristics that permit them to be readily substituted for their virgin counterpart. If not, there may be no market for them.



5. **Handling costs:** For some recyclables (such as plastics), the cost of collecting and processing them may be such that it is not technically or financially feasible to market the material. It may be less costly to use virgin materials.



6. **Transportation costs:** The distance to some markets and the associated transportation costs may be such that it is not feasible for a municipality to recycle a material. Plastics, for example, may be so lightweight that the value of the material may be less than the cost of transporting it in an unprocessed and undensified form. As a general rule, the closer the markets are to the source of recyclables, the more cost-effective it will be to transport the materials.



7. **General economy:** The general economic climate of a region or the nation can significantly affect, positively or negatively, the markets for recyclables. For example, many products used in the construction of housing (roofing shingles, tar paper, wallboard, siding, insulation) are made in whole or part from recyclables. If the housing market hits a slump and new construction declines, the demand for these recycled products also declines, affecting the markets for recyclables. Conversely, as home heating fuel prices rise, more insulation may be sold as homeowners seek to conserve energy. This could create a great demand for cellulose and fiberglass insulation made from recyclables.



## GENERAL SPECIFICATIONS FOR RECYCLABLES

If municipalities are to find stable markets for their recyclables, they must meet the specifications of the industries that will use the recyclables in their manufacturing processes. Always keep in mind that we are not dealing in waste or garbage. The recyclables are the raw materials of industries.

Specifications may be different for processors and for end-users. Furthermore, the specifications of processors may be less stringent than those of the end-users, and specifications may vary among end-users in the same general industry.

As a general rule, municipalities should strive to meet current market specifications, yet maintain sufficiently high quality to permit easy switching to other markets if that should become necessary.



There are certain specifications or quality standards that are generic for all recyclables and markets. For example, materials must be clean and free of contaminants. "Clean" means not soiled with food, chemicals, or other similar substances. "Contaminants" refer to grades and types of materials that differ from the recyclable being marketed (such as newspaper mixed with high-quality office papers or plate glass mixed with bottle glass).

The following is a brief summary of the general specifications for each of the major recyclables as stipulated by both processors and end-users. Keep in mind that these are only generic specs and that each market may have more precise standards.

1. ONP: Processors usually accept newspapers in paper sacks or as bundles tied with cotton twine. They usually do not want the glossy inserts and do not want the paper placed in plastic bags or tied with nylon twine. Furthermore, there should be no cardboard, phone directories, magazines, and non-paper materials. End-users usually stipulate the same and usually want the paper baled (although some paper mills prefer to have the paper loose for ease of inspection).
2. High-Grade Office Papers: Processors may specify only selected grades of white paper such as white bond or ledger and computer printouts. Other grades of paper, including colored ledger, telephone directories, books, newspapers, and chemically treated papers may be excluded. End-users usually prefer well-sorted high-grade papers that are baled.
3. Glass: Processors invariably accept only bottle and jar glass free of plate glass, light bulbs, crystal, and ceramics. The glass must be color-sorted (clear or flint, green, and brown or amber). Labels need not be removed but lids and metal neck rings should be. End-users have the same specifications and may also require that the glass be crushed so that particles are no greater than a certain size.
4. Aluminum cans: Processors stipulate that aluminum cans be clean and free of contaminants (such as soda straws). They usually do not require that the cans be flattened. End-users, which are usually secondary aluminum smelters, have the same cleanliness standards and may require that the aluminum be shredded or baled (the small bales are referred to as "biscuits").

5. Steel cans: Processors stipulate that the cans be clean and free of other contaminants. As for paper labels, processors that sell directly to steel mills don't require that the labels be removed since the paper is consumed in the furnaces. However, cans that are shipped to detinning plants where the tin is removed first, require that the paper labels be removed. Cans that are shipped to steel mills are usually baled (although some may be shredded). However, cans shipped to detinning plants must be loose or loosely baled so the individual cans can easily be separated.
6. PET and HDPE: Processor and end-user specifications for these two plastic resins are similar. Processors stipulate that containers must be clean and free of contaminants (such as metal neck rings). Paper or plastic labels may be left on. Containers which held toxic or hazardous products (such as pesticides, solvents, and motor oil) may not be accepted. Containers may be delivered loose or baled depending on how far the material must be transported (it is usually too costly to ship loose containers long distances). End-users usually require that the different resins be kept separate (some will accept only one resin). They may also specify that the containers be shredded or chipped and washed (to remove labels) and the chips placed in large corrugated cardboard boxes called gaylords.

# Generic Specifications

## Commodity

## Processor Standards

## End-User Standards

Old Newspaper

- In Paper Bags or Tied with Cotton Twine

- No Glossy Inserts
- No Plastic Bags
- No Nylon Twine
- No Cardboard
- No Phone Books
- No Magazines
- No Non-paper Materials

- Standards of Processors
- Baled paper

High-Grade Office Paper

- Selected Grades of White Paper – e.g., bond, ledger, computer

- No Colored Paper
- No Phone Books
- No Books
- No Newspapers
- No Chemically Treated Papers

- Well sorted High-grade papers
- Baled paper

Glass

- Bottled and Jar Glass Only
- Color Sorted (Clear, Green, Brown)

- No Plate Glass
- No Light Bulbs
- No Crystal
- No Ceramics
- No Lids
- No Metal Neck Rings

- Standards of Processors
- Crushed to specific particle size



# Generic Specifications

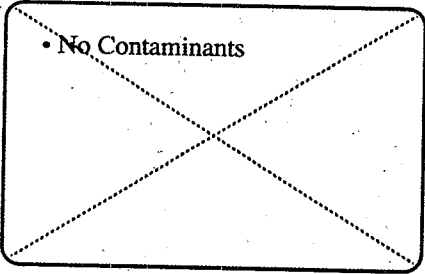
## Commodity

## Processor Standards

## End-Users Standards

Aluminum Cans

- Clean

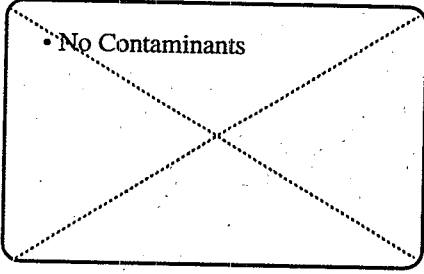


- No Contaminants

- Standards of Processors
- Shredded or baled aluminum

Steel Cans

- Clean

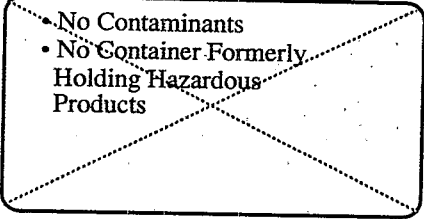


- No Contaminants

- Steel mills – Labels okay and cans baled
- Detining Plants – No labels and cans loose/loosely baled

PET & HDPE

- Clean
- Labels okay
- Loose or Baled Depending on Transportation Distance

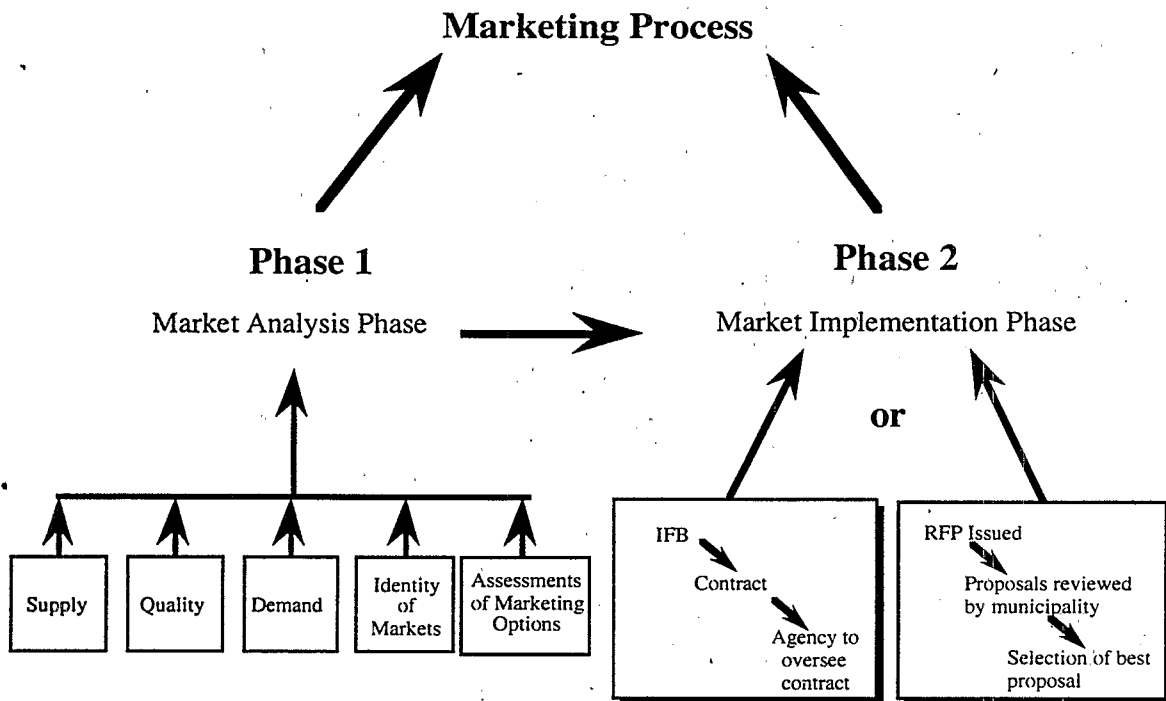


- No Contaminants
- No Container Formerly Holding Hazardous Products

- Different resins – Separated
- Containers shredded (chipped)
- Chips in large corrugated cardboard boxes
- Washed – No labels

## THE MARKETING PROCESS

The many individual steps in the marketing process can be grouped into two major phases - the market analysis phase and the market implementation phase.



The market analysis phase is essentially a data and information gathering activity. The following information needs to be acquired and documented:

- **Supply** (quantity) of each recyclable collected: This should include both current and future anticipated tonnages. The supply available per week, per month, and per year should be estimated.
- **Quality** (condition) of each recyclable collected: This should stipulate whether the recyclables will be commingled or separated and whether the recyclables will be totally unprocessed or partially processed (such as baled).

- **Demand** for each recyclable collected: This should include the quantity (tonnage) that can be accepted by each market per week, per month, and per year.
- **Identity of Markets:** These should include brokers, processors, and end-users located locally and in the region. The name and address of each company plus the name of a contact person should be obtained. This type of information can be found in marketing studies, trade publications, market databanks, and telephone directories.
- **Assessment of marketing options:** Decisions must be made from among many options including the following:
  - work with one single market for all recyclables or work with a separate one for each recyclable;
  - deal with brokers, intermediate processors, end-users, or all three types of markets;
  - sign long-term contracts with one or a few markets or play the open market;
  - negotiate your own contracts or hire a professional marketing firm to do so;
  - market your recyclables independently or in cooperation with other municipalities through a cooperative marketing agreement.

In assessing these many options, it is always helpful to consult with several markets. All of the information acquired should be compiled in a report to facilitate its analysis.

When the market analysis is completed, the **market implementation phase** can begin. This phase involves the selection of one or more markets and the negotiation of marketing agreements.

The municipality begins this phase by publishing an Invitation For Bids (IFB). This should fully describe just what services the municipality needs such as processing and transporting, the quantity and quality of the recyclables that must be achieved, dates or schedules that must be met, and the cost of all services. To ensure the legality and fairness of the competitive bidding process, municipalities must comply with all procedures stipulated in state and local laws. Upon receipt, opening, and review of bids by the municipality, the best offers can be identified and the bidders invited to discuss contract terms. Once the parties reach agreement, the bidder should submit a letter of intent which summarizes the services to be provided.

Next, a formal agreement or contract is drafted. The terms of such an agreement or contract typically address the following:

- the parties to the contract;
- the responsibilities of the contractor;
- the price to be paid or received for the recyclable and the means by which this will be determined (if variable);
- the types and specifications of materials that will be accepted by the contractor;
- how, when and where the contractor will collect and transport the recyclables, or how, when and where the municipality will deliver the materials;
- the effective date and duration of the contract and procedures for its cancellation.

Once the wording of the agreement is acceptable to both parties, the contract is signed. The municipality must then assign a responsible party or agency to oversee implementation of the contract. This will ensure that the contractor complies with all of the contract terms and will facilitate any adjustments that subsequently may be necessary.

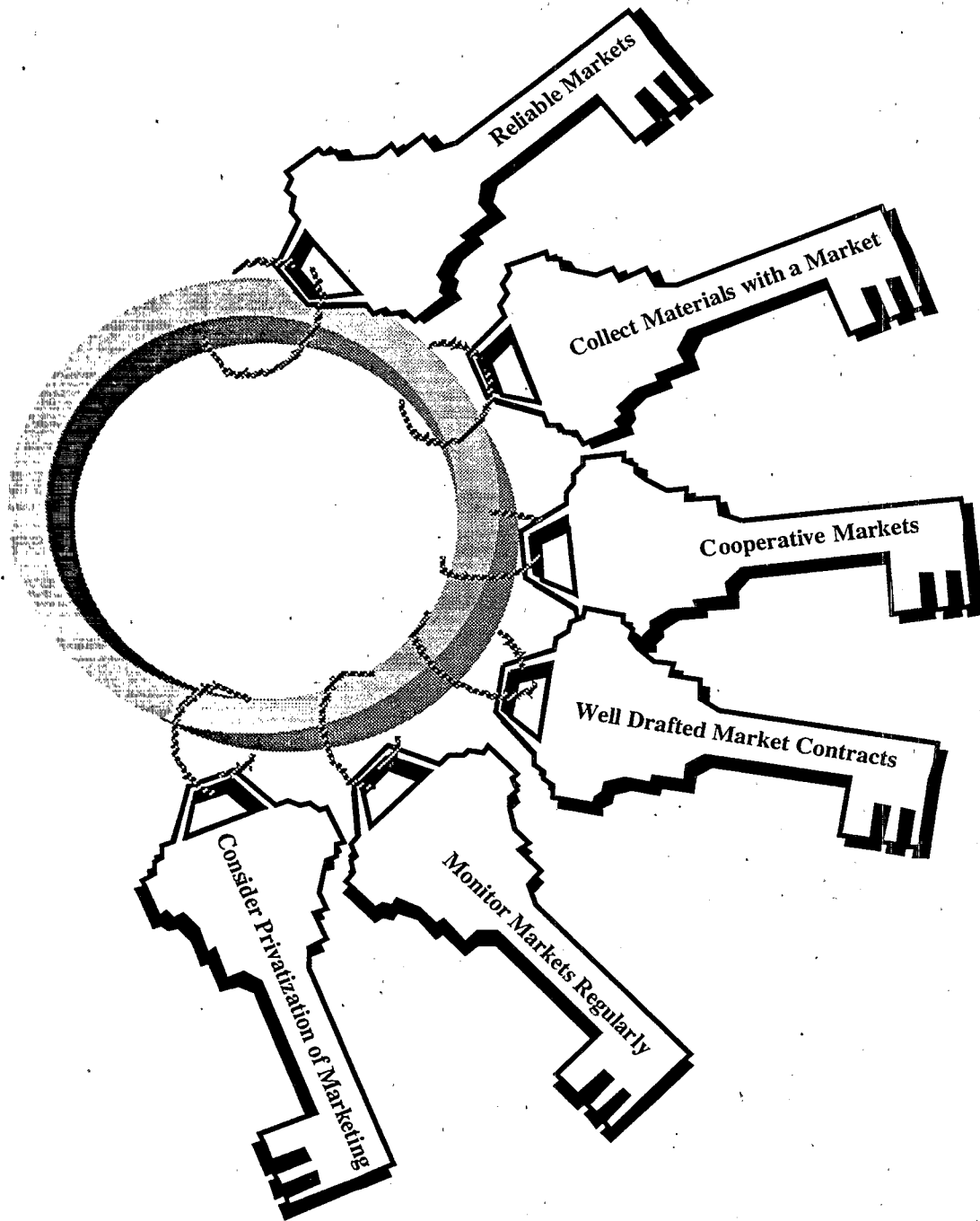
If a municipality wants to avoid all of the work involved in the preceding process, it can simply issue a Request For Proposal (RFP). Such a RFP would describe the type of service or program desired and allow the potential markets to suggest how they would establish and implement such a service or program. In other words, the municipality describes what is needed and the potential markets present their plan for meeting that need. The municipality then reviews each proposal and selects the one that best meets its needs.

## MARKETING TIPS AND OTHER CONSIDERATIONS

There are many things to consider and decide when marketing recyclables. The following are a few tips to keep in mind.

- Always seek stable, reliable markets. These can be identified by studying past, present, and future market trends.
- Collect only those materials that can be readily marketed. If you can't market the materials, you can't recycle them.
- Keep materials clean and free of contaminants. Quality of recyclables is the key to successful marketing. The generators of recyclables must be educated about quality and constantly reminded of specifications.
- Consider marketing recyclables in conjunction with other municipalities. Cooperative marketing is becoming fairly common.
- Don't overlook the small local end-user markets. Don't automatically seek the big manufacturer.
- Always write clear, complete agreements and contracts with markets. Well-drafted contracts can prevent a lot of future problems.
- Reassess existing markets and other potential markets regularly and monitor their status. Always be on the lookout for new markets.
- Consider turning over the entire marketing component of your program to a private company. Privatization of marketing can have advantages such as alleviating the municipality of many time-consuming administrative duties.

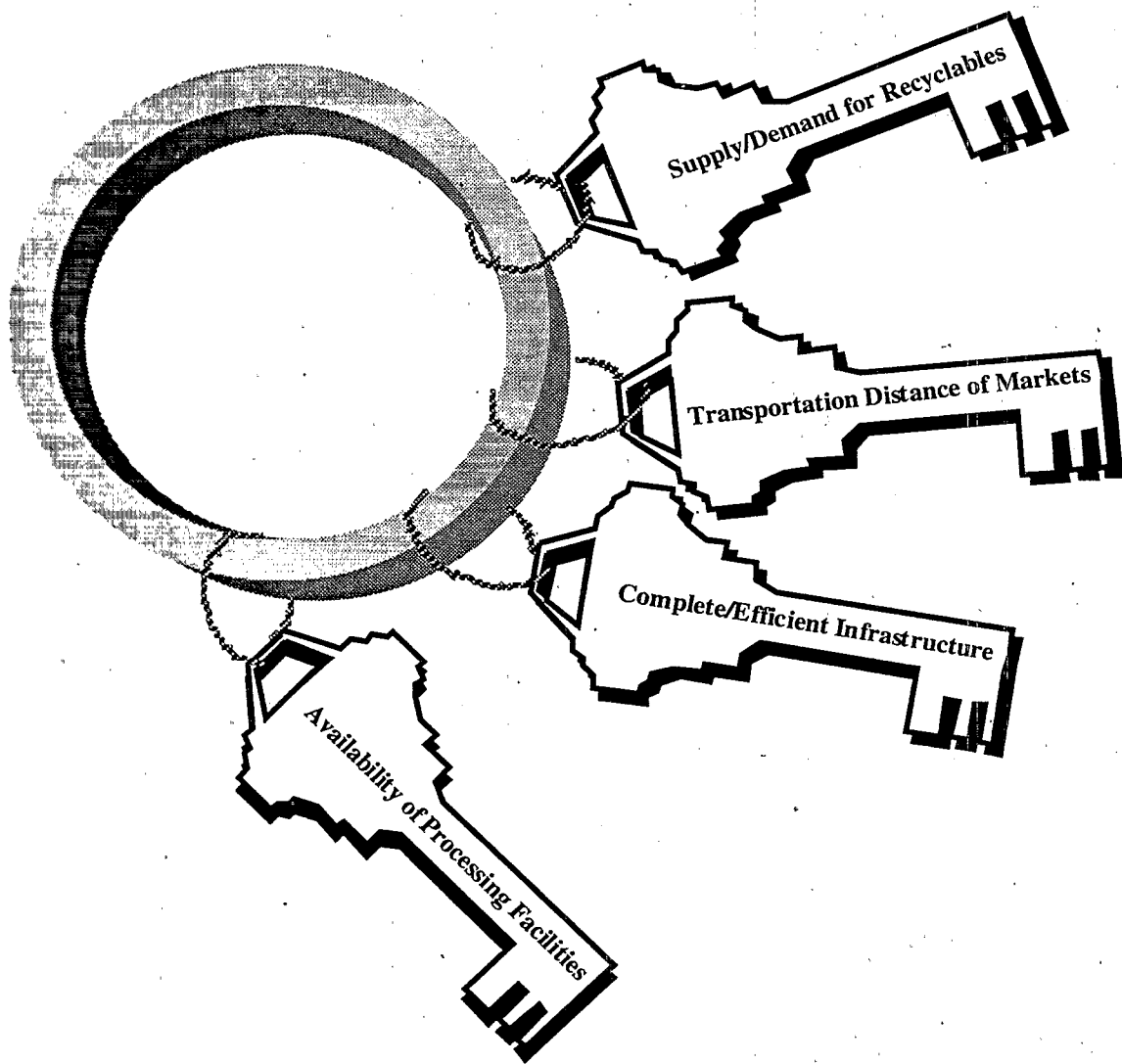
# Keys to Marketing Recyclables



In addition to these tips, the following should also be taken into consideration.

- The supply of and demand for recyclables should be in balance to avoid over-supply and under-demand.
- Markets must be within relatively short distance of the supply of recyclables. It is usually not cost-effective to ship low-value and low-density recyclables long-distance.
- A complete, efficient infrastructure must be in place to collect, process, and transport recyclables.
- The technology and facilities needed to process and use recyclables must exist and be readily available.

# Other Keys To Consider





## PART III: MARKET DEVELOPMENT

### MARKET DEVELOPMENT DEFINED

Like MARKETING, MARKET DEVELOPMENT is a process - the process of implementing various economic and legislative/regulatory incentives which will facilitate the strengthening and expanding of existing markets and of creating new markets for recyclables.

### PURPOSE AND NEED

Although recycling markets have existed for decades, the markets have handled primarily commercial and industrial scrap and waste. With the growth of municipal solid waste recycling, several of these markets have been periodically inundated with vast amounts of new materials that often do not meet established industry specifications. This flooding of existing markets has, in some cases, created an oversupply which has, in turn, forced prices to plummet. As a result, municipalities may have to pay to have the recyclables removed.

If recycling is to succeed over the long run, there must be adequate domestic markets for the bulk of the recyclables collected by municipalities. There is a very large export market as well, especially for waste paper and scrap metals, and many marketers currently rely heavily on these export markets because the domestic markets cannot absorb all of the materials. Therefore, market development initiatives are designed to strengthen and expand the capacity of domestic markets.

### MARKET DEVELOPMENT STUDIES

The initial step in market development is (or should be) to conduct a study of:

- Existing markets; and,
- Present and Future Market Trends.

One must have a considerable amount of information before pursuing a market development strategy.

Usually, market development studies are conducted by state governments or by regional authorities and made available to counties and local municipalities. However, the latter may also choose to conduct more detailed, small-scale studies in lieu of or as a supplement to a state or regional study.

A market development study should, at a minimum, achieve the following.

- Obtain accurate estimates of the different types and quantities (supplies) of recyclables available currently and in the near future.
- Identify major local and regional existing markets for the recyclables and to identify industry plans for future markets.
- Assess market trends during the immediate past, at the present time, and in the near future, including the capacity to accept various recyclables and the prices paid or charged.
- Identify existing regulatory and economic incentives that might be used to strengthen and expand markets and to identify additional incentives that might be implemented.

A review of numerous published recycling markets studies reveals that most are essentially similar in that they include at least the following basic information.

- Geographic and demographic information about the study area. Data may be categorized by county, by municipality, by planning region, and even by school district. The population information usually includes age distribution, individual and/or household income, housing categories, and household size.
- Waste stream, including recyclables, data. This includes estimated tonnages of each recyclable in the waste stream currently and in the near future. Estimated recovery rates projected into the future are also included.

- Description of the status of existing markets for recyclables including the current and near-future capacity or demand of each. The historic performance of such markets may also be summarized.
- Future market projections and their capacity to absorb recyclables.
- Economic incentives that are designed to stimulate the recycling markets. This would include incentives already in place plus others that might be employed.
- Summary of major findings and of recommended actions that might be implemented.

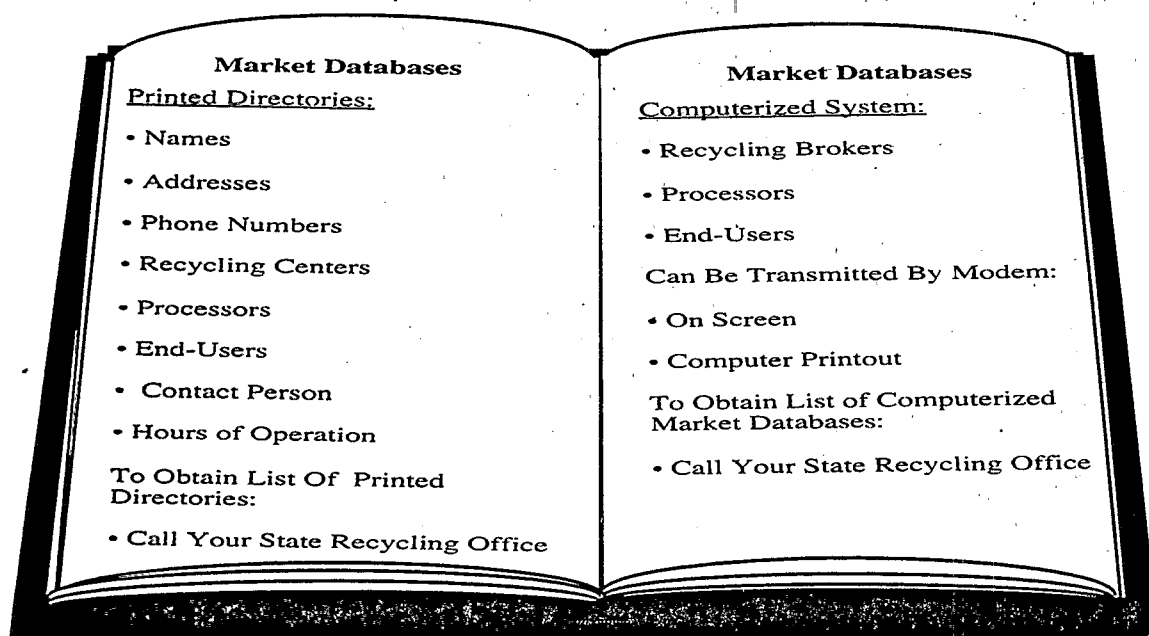
## MARKET DATABASE

Much of the information acquired about recycling markets can and should be made readily available to potential users such as municipalities. Several states have established market databases available in one or a combination of formats.

One format, and probably the most common and least expensive, is the printed directory. The information listed usually includes the names, addresses, and phone numbers of recycling centers, processors, and end-user industries that accept recyclables. Some may also identify a contact person and hours of operation. Detailed information about the types and minimum quantities of various recyclables accepted may be provided in the more comprehensive directories.

The other major format, and the one that is becoming essential for quick and easy access to market data, is the computerized system. Data about recycling brokers, processors, and end-users is computerized. This data can then be transmitted from a central databank by modem to distant locations and subsequently viewed both on a screen or computer printout.

To obtain printed lists of recycling markets and/or market directories, or to access the computerized market databases, please contact your state recycling office.



## MARKET DEVELOPMENT INCENTIVES

State and local governments, through legislative and financial channels, can do much to shape the economic climate within their jurisdictions. Actions can be taken which help the economy in general or which can be targeted to assist specific businesses such as the recycling industry. The following are the most common types of incentives used by states and municipalities to stimulate recycling markets.

### **Economic Incentives**

#### 1. Tax relief

Businesses must pay a wide array and large amount of taxes which can place a heavy economic burden on them. Providing relief, even if only temporarily, is one thing that government can do to reduce this burden. They may take the form of property tax relief on land and buildings or sales tax exemptions on the purchase of recycling equipment and supplies. Another potential measure is the use of tax credits for major capital investments. Industries, by applying such credits, may reduce their corporate income taxes.

#### 2. Grants and Loans

In addition to such indirect financial assistance, states may also provide direct assistance to industries in the form of loans, grants, and bonds. Grant programs usually require that eligible companies provide matching funds. Low-interest loans with extended repayment terms and guarantees by the state may also be used to underwrite certain risky business ventures. The use of industrial development revenue bonds is also a common economic development measure wherein the businesses may receive up to 100 percent financing at below market interest rates. Both the business and bondholders also receive tax-exempt benefits.

#### 3. Job Training Funds

Another avenue for indirect financial assistance is through job training. Several states help pay for the cost of training and employing low-skill workers in certain industries. This benefits both the businesses and society in general.

#### 4. Enterprise Zones

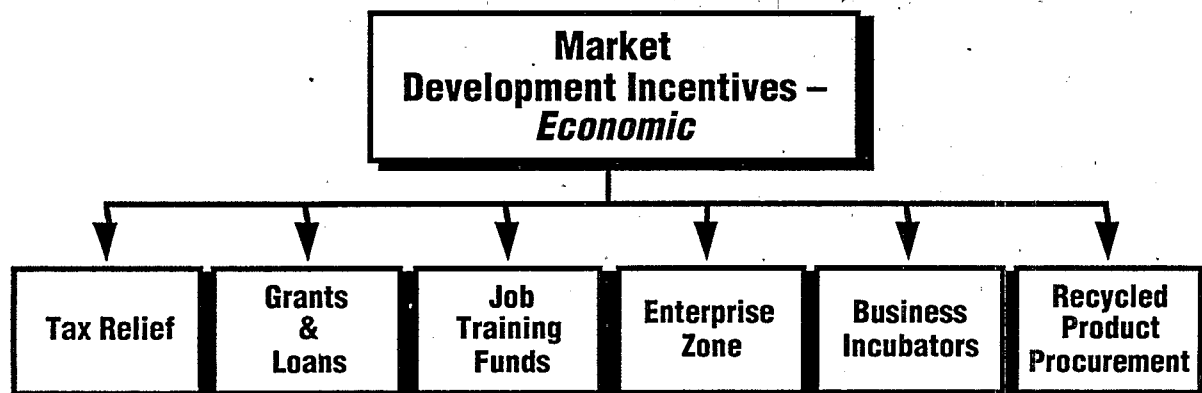
Several states have designated economically distressed areas for special economic development assistance. Industries that locate in these "enterprise zones" may be eligible for a package of incentives such as those cited above plus regulatory relief and utility bill reductions.

#### 5. Business Incubators

Another form of economic assistance is the business incubator for fledgling companies. States and local governments may provide assistance in the form of low-cost or rent-free space, professional business counseling services, and access to investment capital. Companies remain in the incubator until they are self-sufficient (usually no more than three years).

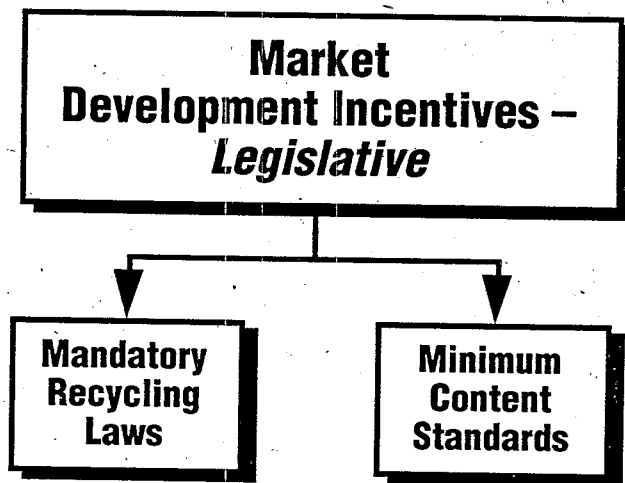
#### 6. Recycled Product Procurement

Another, but often overlooked, economic incentive is the procurement by government (as well as institutions and businesses) of the products made from the recyclables collected. This involves identifying recycled products that might be substituted for the virgin materials currently in use, assessing the specifications for these products, modifying the bidding and other procurement documents to remove any discrimination against recycled products, and buying/using the recycled products that meet performance standards. Government, because it is such a large purchaser of products and materials (federal, state, and local government purchases account for about 20 percent of the Gross National Product), can be a major factor in strengthening and creating markets for recyclables.



## Legislative Incentives

1. Mandatory Recycling Laws: Most states and large municipalities have enacted mandatory recycling legislation and have established minimum recovery rates for recyclables. Such laws ensure that large quantities of certain recyclables will be collected and this, in turn, sends a message to industries that the raw materials will be available. This encourages industries to make capital investments in processing and manufacturing facilities.
2. Minimum Content Standards: Some states have enacted laws requiring that a minimum content of secondary materials (recyclables) be used to manufacture certain products. A notable example is newspapers which must contain at least a certain minimum percentage of fiber from waste paper. Such minimum content standards ensure manufacturers that there will be a market for their recycled products, encouraging them to make the necessary capital investments to produce the products.



## Technical Assistance

State and local government may also offer a wide array of technical assistance including business development and management counseling, plus help in locating appropriate sites, complying with government regulations, and solving problem related to utilities, environmental protection, and site planning. Assistance may also be provided in identifying and contacting markets.

## CONCLUSION

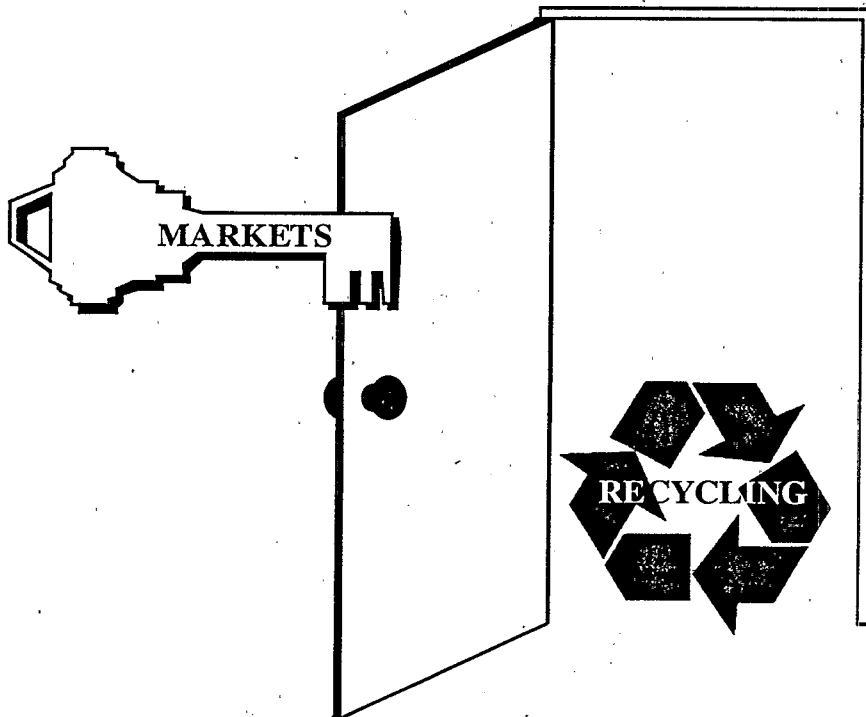
This primer summarizes the basic elements of recycling markets, marketing, and market development. Understanding these three aspects of recycling is essential to anyone who is involved in establishing and operating recycling programs.

The future of successful recycling programs depends largely on the existence of adequate markets, especially domestic ones, for the many recyclables being collected from the solid waste stream. The development and strengthening of such markets must be of the highest priority in the forthcoming years.

Market development is the task not only of state and local government recycling officials but of economic development professionals as well - for recycling is as much an economic issue as an environmental one.

It is hoped that this primer provides the reader with both an understanding of the mechanics of recycling markets and an appreciation of the importance of markets and economics in the recycling process.

### Markets Unlock the Door to Recycling





## APPENDIX

### SOURCES OF INFORMATION AND ASSISTANCE

The purpose of this primer has been to present general information on recycling markets, marketing, and market development. Obviously, considerable detail and specifics have been omitted. Therefore, it may be necessary to consult with various agencies and resource materials to obtain additional information. The following is a listing of agencies and a bibliography of some publications that we recommend.

