

**ANNUAL REPORT OF THE**

**VIRGINIA RECYCLING MARKETS  
DEVELOPMENT COUNCIL**

**TO THE GOVERNOR AND  
THE GENERAL ASSEMBLY OF VIRGINIA**



**HOUSE DOCUMENT NO. 3**

**COMMONWEALTH OF VIRGINIA  
RICHMOND  
2000**



**1998 REPORT OF  
THE VIRGINIA RECYCLING MARKETS DEVELOPMENT COUNCIL**

**TO: The Honorable James S. Gilmore, III  
and  
The General Assembly of Virginia**

The Virginia Recycling Markets Development Council, established by the General Assembly in 1993, is directed by statute (Section 9-145.47, Code of Virginia) to develop and monitor the implementation of a plan to strengthen Virginia's recycling infrastructure and markets by improving the supply and quantity of recyclables available, expanding the capacity of collectors, processors and manufacturers to handle and use secondary materials, and developing strategies to increase the use of specific materials.

In carrying out the charge that the General Assembly provided to the Council, the Council is to undertake the following activities:

- A.
1. Promote and coordinate state agencies' and authorities' efforts to enhance markets for recycled or recovered materials.
  2. Promote the purchase of products made from recycled or recovered materials.
  3. Identify and evaluate financial and other incentives which may attract new businesses that can use recycled or recovered materials generated in Virginia.
  4. Identify barriers to the development of markets for recycled material, including existing state policies, regulations and procedures, and recommend alternatives to overcome such obstacles.
  5. Develop recommendations for the establishment of a regional or interstate marketing system for recycled materials.
  6. Encourage the use of uniform recycling definitions and standards throughout the state.
  7. Promote and encourage public/private market development initiatives.
  8. To report annually its findings and recommendations to the Governor and the General Assembly; and

9. To determine the volume of materials by varying categories or commodities which is being recycled in the Commonwealth and to report its findings in its 1998 report. The Council shall investigate the frequency of situations in which, because of market conditions or other factors, materials collected for recycling are otherwise disposed of, and determine measures to avoid the recurrence of such situations. The Department of Environmental Quality (DEQ) shall provide staff to the Council for the purposes of this subdivision and shall cooperate with the Council in the preparation of the report.
- B. The Council shall develop and monitor the implementation of a plan to strengthen Virginia's recycling infrastructure and markets which (i) improve the supply and quantity of recyclables available; (ii) expand the capacity of collectors, processors, and manufacturers to handle and use secondary materials, and (iii) incorporate strategies to increase the use of specific measures.

1998 REPORT OF THE  
VIRGINIA RECYCLING MARKETS DEVELOPMENT BOARD

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**1998 REPORT OF  
THE VIRGINIA RECYCLING MARKETS DEVELOPMENT COUNCIL**

**Executive Summary:**

**VRMDC RECOMMENDATIONS**

Based on its deliberations during 1998, the Virginia Recycling Markets Development Council has a number of recommendations.

- A. The HB 2881 Subcommittee made several recommendations, which were accepted by the Council at its December 8, 1998 meeting. The Subcommittee recommended that two new subcommittees be convened in 1999 to undertake the following activities:
  - 1. Research and report its findings on an enhanced public education/awareness campaign to address the contamination problem. The subcommittee should contact and work closely with the Litter Control and Recycling Fund Advisory Board to explore the opportunities to utilize that Board's statewide public education grant program.
  - 2. Study tax incentives and other financially based solutions suggested to address the unfavorable market conditions. The subcommittee should be encouraged to review previous legislative reports on the subject.
  
- B. The Council focused considerable energy on the issue of the appropriate form of staffing to coordinate recycling efforts in Virginia and to provide technical support to the Council. The Council recommends that the Subcommittee addressing this Issue continue its work during 1999 and that a recommended approach to staffing be developed for consideration during the 2000 Session of the General Assembly.
  
- C. The Council should review its legislative mandate to determine if it is addressing all of its responsibilities, in particular, its progress toward meeting Section 9-145.47.B. Completion of the plan to strengthen Virginia's recycling infrastructure

and markets is critical to completion of Recommendation B. above.

D. The Council should continue its efforts to develop a plan to strengthen Virginia's recycling infrastructure and markets. These efforts should include the following:

1. Provide public information and education on the reasons for recycling and conserving landfill space, as well as encouraging consumers to demand the use of post-consumer recycled content materials in new products.
2. Support maintenance of current recycling equipment tax credits.
3. Include evaluation of the appropriateness of current statewide recycling goals.



## **1998 ACTIVITIES OF THE COUNCIL**

### **MEETINGS**

The Council met several times during the course of the year. All meetings were held in the Conference Room of the Central Virginia Waste Management Authority, Interstate Center, 2104 West Laburnum Avenue, Richmond, Virginia. Meetings of the Council were held on the following dates.

- |                    |  |
|--------------------|--|
| March 3, 1998      | The Council received status reports on HJR 597 (House Document 26), the HB 2881 study and the 1997 annual report, an update on the 1998 General Assembly Session, and a presentation from the Virginia Housing and Environment Network.  |
| June 9, 1998       | The Council received reports from its 1997 Subcommittees, a status report on the HB 2881 study, a presentation from Secretary of Natural Resources Woodley and a presentation on the City of Virginia Beach's Curbside Recycling Program.  |
| August 11, 1998    | The Council held a Strategic Planning Session to identify priority activities that should be pursued during 1998 and 1999. Issues addressed included potential constraints to recycling in Virginia, the role of the Council, the legislative process and staffing.              |
| September 15, 1998 | The Council received reports from the Department of Environmental Quality on the legislative process and previous recycling legislation and policy, received a status report on the HB 2881 study, and reviewed the priorities identified during the Strategic Planning Meeting. |
| December 8, 1998   | The Council accepted the HB 2881 Subcommittee report, received reports on state staffing and recycling goals, received a report on the legislative process and elected officers for 1999.  |

During the course of the meetings, the Council heard presentations from individuals, agencies and businesses on the status of recycling in Virginia. Reflecting the perspective of the presenters, these presentations addressed specific market components, local and

regional recycling program experience and innovative activities, which have the potential to increase the market for specific recyclable materials.

## **SUBCOMMITTEES**

The Council Subcommittee, established in 1997 to address the new charge to the Council, contained in Section 9-145.47.A.9 (House Bill 2881), was continued. A Subcommittee was established to examine potential recycling of construction and demolition debris. A Subcommittee was also established, following the Council's Strategic Planning Meeting, to examine the question of staffing to promote recycling and development of markets for recyclable materials.

### **House Bill 2881**

This legislation, enacted by the 1997 Session of the General Assembly, directed the Council to determine the volume of materials, by category/commodity, which is being recycled in the Commonwealth and to report on its findings in its 1998 Annual Report. The Council was further directed to investigate the frequency of situations in which, because of market conditions or other factors, materials collected for recycling are otherwise disposed of, and determine measures to avoid the recurrence of such situations. The Subcommittee Report to the Council (December 1998) is included as Appendix I to this Report.

### **Recycling Coordinator/Council Support**

At its August 11, 1998, Strategic Planning Meeting, the Council identified the lack of a State Recycling Coordinator/Council Staff as a barrier to continued growth in the market for recyclable material in the Commonwealth. A Subcommittee was established to meet with the various state agencies charged with some aspect of recycling to quantify the need for this position and to determine a potential "home" for this position. Subcommittee members met with the Departments of Business Assistance, Environmental Quality and General Services. The Council will continue to explore this issue during 1999, in order to complete discussions with the state agencies and to further refine the potential functions of this position. The preliminary position description and agenda for Subcommittee meetings with the state agencies is included as Appendix 2.

### **Construction and Demolition Debris**

At its March 3, 1998, meeting, the Council established a Subcommittee to examine recycling in the construction and demolition debris segment of the disposal industry to determine potential recycling opportunities. This effort will continue during 1999.

## **MACREDO**

MACREDO is the Mid-Atlantic Consortium of Recycling and Economic Development Officials. The Departments of Business Assistance and Environmental Quality are both members of MACREDO and actively support its activities.

The MACREDO Semi-Annual Meeting, held in May 1998, addressed "Buy Recycled Materials" and Electronics Recycling. The latter is a growing field. Old computers are taken by a Silver Spring, Maryland company for renovation and donation to schools. This market is becoming saturated. Issues associated with recycling of electronics components are the lead content in computer screen glass and separation of the various types of glass.

The Virginia Department of Business Assistance hosted the Fall 1998 Semi-Annual Meeting in Winchester. Tours of TREX and Seaward International, two large users of recycled materials, were given to attendees.

## **PRESENTATIONS**

During the course of its deliberations during 1998, the Council received presentations from several organizations and individuals on recycling programs and issues.

### **Virginia Housing and Environment Network**

Ms. Annette Osso, Virginia Housing and Environment Network (VHEN), briefed the Council at its March 3, 1998, meeting on the VHEN and opportunities for recycling of construction and demolition debris. Ms. Osso advised the Council that VHEN planned to publish a Resource Directory, hold a workshop for businesses and establish a Material Reuse Center in cooperation with Habitat for Humanity. The Council established a Subcommittee to examine ways that this model could be used to support recycling of construction and demolition debris.

### **Secretary of Natural Resources Woodley**

Secretary of Natural Resources John Paul Woodley briefed the Council at its June 9, 1998, meeting. Secretary Woodley reviewed the legislative charge to the Council and urged the Council to review that charge and determine the status and relevancy of the various aspects of the Council's charge. Secretary Woodley also reviewed prospects for legislative initiatives to be considered during the 1999 Session of the General Assembly,

indicating that interstate transportation of waste would be a major consideration. Secretary Woodley suggested that the Council consider recommending that state agencies develop an education program on the need for recycling.

#### **Virginia Beach Curbside Recycling Program**

Ms. Debbie Devine, Recycling Coordinator for the City of Virginia Beach, briefed the Council at its June 9, 1998, meeting on the Virginia Beach Curbside Recycling Program. This program is a partnership between the City and Tidewater Fibre Corporation. Council member Mike Benedetto represents Tidewater Fibre. Ms. Devine indicated that non-sorted recyclables are collected from over 100,000 participating households. At the time of the briefing, 3,000 tons of material were being collected per month. Less than ten (10) percent of the material is non-recyclable. Other communities have expressed interest in the program.

#### **Allied Signal Carpet Recycling**

Council Chairman Ed Duffy briefed the Council on the carpet recycling program that his firm, Allied Signal, was pursuing. He indicated that he had presented this program at the Ford Recycling Expo. He reviewed the patented process that had been developed to process used nylon carpet to produce virgin quality Nylon 6. Allied Signal is encouraging carpet pad recyclers to also collect the used carpet and bring it to them for recycling. At present, most carpet is disposed of through traditional waste disposal operations.

#### **Legislative Process**

At its December 8, 1998, meeting, the Council was briefed on the legislative process by staff from the Department of Environmental Quality. The 1999 General Assembly schedule was presented to illustrate the process. The Council was advised of two alternative approaches that it could follow in pursuing legislative initiatives: Submit through a state agency package, which requires completion of the proposal and a budget impact study, by August; or, Obtain directly a patron(s) to sponsor the bill. If a legislative proposal would involve more than one state agency, it was suggested that the bill be submitted to all affected agencies.

### **STATE AGENCY INITIATIVES**

#### **DEPARTMENT OF BUSINESS ASSISTANCE**

The Department of Business Assistance (DBA) continued its efforts to support the creation and nurturing of businesses in the recycling sector, as well as assisting existing

companies in other sectors to increase or improve their recycling programs. During 1998, twenty-five (25) Virginia companies received direct assistance with recycling questions or problems from DBA Project Managers in the Existing Industry Development Division. Fifty-seven (57) companies or individuals making inquiries regarding Virginia's Recycling Tax Credit received literature regarding the credit. Additionally, VDBA made recommendations for implementing new recycling tax credit provisions contained in legislation passed by the 1998 Session of the General Assembly.

## **DEPARTMENT OF ENVIRONMENTAL QUALITY**

During 1998, the Department of Environmental Quality (DEQ) continued its administration of the annual grant program of the Litter Control and Recycling Fund. For the grant cycle, beginning on July 1, 1998, the Fund balance was approximately \$2.1 million. Of this amount, seventy-five (75) percent (\$1,575,000) was made available to local governments and regional organizations for implementing their litter prevention and recycling programs. Another twenty (20) percent (\$420,000) was awarded through grants for statewide or regional educational programs about litter prevention and recycling.

DEQ provided leadership and technical support in accomplishing the Council's legislative charge under the 1997 amendments to Section 9-145-47 of the Code of Virginia. This amendment (HB 2881) directed the Council to determine the volume of recycling in Virginia and to determine the extent of disposal of materials collected for recycling and to report its findings in its 1998 Annual Report. DEQ developed, distributed and analyzed the results of, a survey of local government recycling programs. DEQ drafted the summary report and presented it to the Council. A copy of the report as approved by the Council, is included as Appendix 1.

During 1998, DEQ redefined the duties of one of its staff positions to include responsibilities for developing and maintaining a "clearinghouse" for recycling information. This position now serves as the primary point-of contact for recycling information compiled by DEQ and also coordinates referrals of information requests to the appropriate agency or organization when the request pertains to information outside of DEQ's purview. To accomplish these tasks, DEQ is extensively utilizing on-line technology.

## **DEPARTMENT OF GENERAL SERVICES**

The Department of General Services (DGS) is actively recruiting a full-time State Recycling Coordinator to work with state agencies. This position will involve developing contracts and other vehicles to increase recycling levels and produce more collection efficiencies; developing partnerships within and outside of state organizations to facilitate this effort; and, revising and implementing measures to support and increase the use and procurement of recycled materials. It is anticipated that this position will be filled early in 1999.

## MARKET UPDATE

### STATUS OF RECYCLING

#### National

Recycling in the United States is supported by many strong programs and expanding community collection systems. An annual survey of state solid waste and waste reduction officials, conducted by *Biocycle* magazine for the past 11 years, shows a steady increase in the amount of recycling and composting in the nation. As of 1998, 139.5 million people are served by curbside programs.

The evaluation of recycling programs is a complex issue, and methods of calculation vary greatly from location to location and industry to industry. There has been an effort at the Federal level to standardize the reporting of recycling data. Several common issues are shared among the industries which are involved in recycling. One issue is the lack of uniformity of reporting on rates of recycling and disposal: this makes accurate analyses and market predictions for a given area, and comparisons between areas, difficult. Foreign markets with weaker economies and less stringent quality control and production requirements are importing higher amounts of some materials, which causes decreases in domestic production. The demand for post-consumer recycled materials used in production is decreasing in several industries, such as the steel industry, partly in response to imported materials. Contamination of recyclables and reductions in municipal recycling programs due to bottle-bills are also common issues for curbside pick up programs. Finally, various economic incentives and disincentives discourage the use of recycled materials and encourage the use of virgin raw materials. For recycled markets to succeed, there is a need for economic equality in regulations governing the use of recycled or virgin raw materials.

#### Virginia

It is difficult to provide an overall assessment of the status of recycling in the Commonwealth. Reporting of amounts and recycling rates varies from locality to locality, and the changing solid waste industry has affected systems that have traditionally been in place. Solid waste issues in 1998 have precipitated much discussion of the industry. The Virginia Recycling Association reports that there are eighty-one (81) curbside programs serving cities, counties and towns and 575 drop off sites in Virginia. The *Biocycle* survey cited above reports that 4,500,000 people in Virginia are served by curbside programs, and that recycling rates overall have increased by five (5) percent over last year's survey results.

The most recent official DEQ Recycling Report was published in 1993, and more recent numbers are forthcoming from DEQ officials. Numbers reported from several metropolitan areas show that recycling is still increasing, but recycling rates are not comparable. Reasons for this include the methods used to calculate the rates, and the totals used for the calculations. The importing of out-of-state waste adds another variable to the problem.

Based on its discussions, the Council believes that the issues identified in the HB 2881 report (Appendix 1) are the most pressing issues facing recycling in Virginia. They are:

1. The need for increased public education/awareness about recycling.
2. The unfavorable market conditions a for wide range of the materials commonly collected for recycling.
3. The decline in tipping fee revenue going to public sector waste management operations due to growth in disposal at large private landfills. Traditionally, tipping fee revenues have supported recycling, household hazardous waste and other similar programs.

## **GLASS**

### **National**

In 1997, there was a decrease in national production of glass and an increase in imports which contributed to an overall decrease in use of recycled cullet. The Glass Packaging Institute gives an estimated recycling rate of 35.2 percent for 1997, a decrease from the 1996 estimated rate of 37.9 percent.

Higher quality cullet is used for new glass production, while cullet which is contaminated with ceramics or mixed glass types and colors is used for secondary applications. Commingled curbside collection can greatly increase the amount of contaminated recycled glass, and the glass industry is working on ways to maintain the quality of the recycled glass it needs. There is an increase in secondary applications such as roadbed aggregate and fiberglass insulation manufacturing.

### **Virginia**

Based on numbers from larger localities in Virginia, glass recycling amounts increased in 1998. Glass is increasingly taken out of state due to a lack of facilities in Virginia.

## **PLASTICS**

### **National**

**PET - The PET bottle market continued strong growth in 1997: growing by 16% over the previous year. The growth was related to the increased use of 20 oz. bottles, family size juice and juice drinks, and an unprecedented growth in still water containers. PET was used in dairy containers for the first time in 1997.**

**Another potential growth area is the use of PET in beer bottles. In November, 1998, Miller Brewing Company introduced three of its beers in PET bottles (2 amber and 1 clear). These bottles will be considerably lighter than those made of glass, which results in significant energy savings in production and transportation. The weight reduction is approximately 85% for a 32 oz. container. The American Plastic Council (APC), National Association for PET Container Resources (NAPCOR), and American Plastics Resource (APR) are working on new technologies to ensure successful introduction of the plastic beer container. Continental PET Technologies (CPT) has offered to pay a premium for amber PET over the price of mixed color PET for a period of at least one year.**

**According to NAPCOR, recycling of PET increased 1% in 1997 over 1996. In 1997 approximately 578 Million pounds were recycled as compared to 572 Million pounds in 1996 and 622 Million in 1995. The reasons for these trends are:**

- 1. Increased capacity of virgin PET**
- 2. Increased use of 20 oz drink bottles that are not generally recycled**

**The market price of PET started 1997 at historic lows but prices rebounded through the year.**

#### **PET Bale Prices (\$/lb) Picked Up at Sellers Dock**

<b>Month</b>	<b>Low</b>	<b>High</b>
<b>January</b>	<b>\$0.01</b>	<b>\$0.06</b>
<b>March</b>	<b>\$0.04</b>	<b>\$0.09</b>
<b>June</b>	<b>\$0.05</b>	<b>\$0.10</b>
<b>September</b>	<b>\$0.04</b>	<b>\$0.10</b>
<b>December</b>	<b>\$0.07</b>	<b>\$0.12</b>



The recycling rate for PET bottles has decreased over the past 3 years from 39.7% in 1995 to 27.1% in 1997 due to a significant increase of use of PET in bottles and a rather flat reclaimed volume.

#### PET RECYCLING RATE

Year	Total U.S. <sup>1</sup> RPET (M lbs)	Bottles on US Shelves (M lbs)	Recycling Rate
1995	775	1,950	39.7%
1996	697	2,198	31.7%
1997	691	2,551	27.1%

<sup>1</sup> Amount of PET bottles which were bought in the US and recycled either in US or exported.

The major end uses in the US for recycled PET are shown below.

#### Recycled PET Consumption by US Converters by Category

Category	1995 (M lbs)	1996 (M lbs)	1997 (M lbs)
Fiber	277	292	320
Sheet & Film	64	69	71
Strapping	66	66	58
Engineered Resin	15	24	26
Food & Beverage	45	24	41
Non-Food Bottles	72	71	53
Other	8	1	1
Total US Converter PET Consumption	547	547	570

#### Virginia

According to the most recent data, 286 Virginia communities reported providing plastics recycling programs, involving 62 curbside and 224 drop-off programs. There are 26 companies that process post-consumer and post-industrial plastic articles. Two (2) of these companies are reclaimers (clean/wash, pelletize, and perhaps are end-

users), while 21 are handlers (sort material and prepare it for reclaimers). In addition, three are producers of end-use products from post-industrial plastic material.

The American Plastics Council (APC) provided assistance on a commercial level to various entities. These are listed below.

1. United States Postal Service (USPS)

APC assisted the USPS with researching the marketability of specific plastic mailing equipment and supplies and provided information on plastic recycling and waste reduction strategies.

2. Technical Assistance

Numerous technical assistance requests for plastics markets were processed through the APC database. Canon Virginia gathered assistance in locating markets for large amounts of expanded polyethylene forms.

3. Central Virginia Waste Management Authority (CVWMA)

APC worked with the CVWMA to educate consumers about recycling of #1 and #2 plastic bottles. An increase was noted in amounts of plastic recycled in the time when consumer advertisements were run.

4. Wise County

As part of a program with Keep America Beautiful, NAPCOR provided assistance to the county through special publicity and educational materials to promote PET bottle recycling and reducing litter.

A representative of Tidewater Fibre Corporation has identified plastic as the number one recycling issue. The coding system used currently does not distinguish between the #2 HDPE milk jug plastic and the #2 butter tub plastic - these are identified as the same number, but they actually need to be separated as some programs only accept the milk jugs.

## **USED OIL**

### **National**

The state of oil recycling is being evaluated currently at both the national and state levels. As with other categories, it is difficult to assess the amounts and rates of recycling. Oil sent to recyclers is either re-refined for use in motor vehicles, or it is cleaned and used as a fuel. An additional issue is the recycling of oil filters, which are made of a steel body, but which may contain, even after normal draining, a half-pint or more of used oil.

### **Virginia**

The state of oil recycling in Virginia is also being examined. The variability in the methods used for reporting oil recycling is a recognized problem in the state. There are three (3) private companies in Virginia which take used oil filters, and another twenty (20) out of state companies recycling oil filters according to the Virginia Recycling Association (VRA). The VRA also estimates that 13 million gallons of used oil and 10.4 million used oil filters are generated annually in the Commonwealth. Only about ten (10) percent of the filters are recycled. The Northern Virginia Planning District Commission, with grant funding from the DEQ, is presently conducting a comprehensive review of Used Oil and Antifreeze recycling and disposal in Virginia. That study is expected to be complete in 1999.

## **PAPER**

### **National**

The national recovery rate for paper was reported by the American Forest and Paper Association (AF&PA) as coming closer to the 50 percent goal. AF&PA reports that 1998 rates reached 44.7 percent, as compared to 1997 rates of 43.9 percent, nationally. The paper industry's commitment to recycling is shown by the investment in equipment used to process the recycled materials.

### **Virginia**

Tidewater Fibre reports that recovered paper prices fell slightly in 1998, however, Virginia paper mills continue to import recycled paper, and to use large quantities of newspaper, corrugated cardboard, office paper and mixed paper. Competitive costs, steady freight rates and labor relations also allow excess waste paper exporting to overseas locations.

## CONSTRUCTION AND DEMOLITION DEBRIS

### National

The issue of construction and demolition debris (C&D) continues to be a large problem for recycling and disposal operations. C&D is broken into the following categories by *World Wastes* magazine: drywall, roofing, asphalt/concrete/brick/dirt, wood, plastics, cardboard/paper, metals, and other miscellaneous materials. Increasingly, concrete is being recycled as aggregate for sidewalks, roads, and building. Programs are in place in some areas to reuse components of old building interiors in new construction or remodeling. One example is the reuse of components in the new EPA Region III offices. However, C&D debris has not been addressed as a whole, and large volumes of potentially valuable materials continue to be landfilled.

### Virginia

The assessment of C&D debris in Virginia is complicated by the presence of private landfills. Materials sent to private landfills may not be accurately analyzed for content, making it difficult to assess how much of a particular waste stream, such as C&D debris is ending up in those landfills. This is of particular concern to some state officials who are trying to determine recycling and disposal rates of categories such as C&D waste. As noted previously, the Virginia Housing and Environment Network and a Council Subcommittee are both exploring this issue.

## SCRAP METAL

### National

The scrap metal industry has experienced major decreases in the market for recovered metals. The primary effects have been felt in the steel industry. The Asian economy is pointed to as supplying cheap imported steel which has greatly reduced the production by American steel mills. According to *ScrapBeat*, an industry publication, scrap steel prices have dropped by as much as 50 percent, causing lower demand for scrap steel and less production in the steel mills. Based on comparisons between the first two months of both 1998 and 1999 as reported in *ScrapBeat*, it is obvious that, while some categories such as aluminum and lead have increased, overall there have been very large decreases in the amounts of scrap exported. The *Recycling Magnet*, a publication from the American Steel Institute, shows decreases in the following categories of steel recycling from 1997 to 1998:

<b>Category</b>	<b>1997</b>	<b>1998</b>
Steel Cans	60.7%	55.9%
Automobiles	97.6%	92.0%
Appliances	81.0%	72.1%

Industry representatives indicate that they are hopeful that the market will turn around. Until that time, some recyclers are accepting material with charges for transportation and processing, a previously unheard of practice, in order to keep operating.

#### Virginia

The status of the scrap recycling market in Virginia is also currently slow, but improvement appears to be on the horizon. A new facility, the Chaparral Steel mill, is to open in Petersburg, and this will increase the demand for scrap in Virginia. The scrap prices are not expected to rise immediately, but the increased demand will improve local markets for scrap. Local industry representatives indicate the importance of promoting domestic steel purchases in order to keep this industry going.

## TIRES

#### National

Nationally, the largest use of waste tires continues to be tire derived fuel (TDF). However, waste tires are currently used for at least forty (40) other uses.

#### Virginia

The Virginia Waste Tire Management Program is still proceeding. The DEQ is developing the statewide Tire Pile Database, which is to be available in July 1999. The program has documented the recovery and processing of 26.7 million waste tires in Virginia at a cost of about 11.6 million dollars. 1997 activities included the following:

Regional waste tire projects begin:

Cumberland Plateau/Lenowisco PDCs (southwest Virginia)

Mount Rogers PDC (southwest Virginia)

Central Virginia PDC (service expansion to Central Shenandoah and

Rappahannock-Rapidan PDCs)

Demonstration tire pile cleanup begins:

Axton tire pile, Henry County

Virginia Department of Health and DEQ approve use of tire chips (2" x 2") in septic field construction in place of aggregate (new market for Virginia waste tire material).

Each of the regional waste tire projects, noted above, includes collection, cleanup of tire piles at public landfills and other public properties, operation of amnesty days and provision of tire recycling services. Information on the progress, methods, and results of the Waste Tire Management Program is available from the DEQ in public documents.

## **PURCHASE OF RECYCLABLES**

### **National**

Certain industries, such as steel and aluminum, point to the fact that most of their products contain significant amounts of recycled materials. Aluminum cans are estimated by the industry to contain 85% recycled aluminum, and new steel products contain anywhere from 28% to 100% recycled steel, according to the Institute for Scrap Recycling.

### **Virginia**

No information, specific to Virginia, was available.

## **SOLID WASTE INDUSTRY**

### **National**

The *Biocycle* survey, completed in early 1999, reports that national solid waste generation increased to 375 million tons for 1998, as compared to 340 million tons for 1997. Of the 375 million tons, 31.5 percent of the waste was recycled, 7.5 percent was incinerated, and 61 percent was landfilled. The amount recycled was the highest for any year since the survey began, and the amount incinerated was the lowest for the same time span. The number of landfills is at 2,314, a decrease from last year's figure of about 2,500 and incinerators have also declined in number from about 130 to 119 nationally. There are still over 30 states in which less than 50 percent of the population is served by recycling programs.

### **Virginia**

Of the 10,000,000 tons of municipal solid waste reported in the *Biocycle* survey to be generated in Virginia in 1998, 40 percent was recycled, 18 percent was incinerated, and 42 percent was landfilled. The *Biocycle* survey also reported that 2.8 million tons of solid waste were imported to Virginia for disposal.

An upcoming Solid Waste Association of North America (SWANA) conference will highlight the following issues for the Virginia, North Carolina, and South Carolina Chapters:

Transfer Station Design,  
Construction, Operation  
C & D Debris Recycling  
Subtitle D Landfill Problems/Solutions  
Natural Disaster and Solid Waste Management Responses  
Innovative Solid Waste  
Recycling Collections

The SWANA Recycling Committee also hosts an annual Recycling Workshop to examine new techniques in recycling.

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**Conclusion:**

The Virginia Recycling Markets Council will continue to explore opportunities to support and to promote recycling in the Commonwealth in 1999 based upon the recommendations put forward in the Executive Summary of this report.

Respectfully submitted,

Members, Virginia Recycling Markets  
Development Council

**Appendix 1**

**REPORT IN RESPONSE TO HOUSE BILL 2881 (1997) OF THE  
VIRGINIA RECYCLING MARKETS  
DEVELOPMENT COUNCIL**

**TO THE GOVERNOR AND  
THE GENERAL ASSEMBLY OF VIRGINIA**

**HOUSE DOCUMENT NO. \_\_\_\_\_**

**COMMONWEALTH OF VIRGINIA  
RICHMOND  
1999**



## **INTRODUCTION**

In 1997, the General Assembly amended § 9-145.47 of the *Code of Virginia* by adding a directive to the Virginia Recycling Markets Development Council (Council) to determine the volume of materials by varying categories or commodities which is being recycled in Virginia. This legislation also directs the Council to investigate the frequency of situations in which materials that are collected for recycling are otherwise disposed of, and to determine measures to avoid the recurrence of such situations. Lastly, the legislation requires the Council to report its findings in its 1998 annual report. A copy of § 9-145.47 is included in APPENDIX 1.

The Council Chairman appointed a subcommittee to address the new legislation and report its findings and recommendations to the full Council. In order to obtain the information necessary to make recommendations about the 1997 legislation, a local government recycling program survey form was developed by the Department of Environmental Quality and mailed to over 450 local and regional government officials and other interested parties. Assistance in the preparation and distribution of the survey was provided by the Planning District Commissions and the Virginia Municipal League. A copy of the survey is included in APPENDIX 2.

### **PART 1.     Survey Results**

One hundred and fifty-three (153) completed survey forms were returned to the Department of Environmental Quality. The completed forms contained information about the recycling collection programs of 201 local governments. The survey solicited information about the following:

- The types of materials collected through each program
- The amount of each material collected by each program in 1997
- Whether a program had experienced situations in which materials collected for recycling had been disposed of in a manner other than recycling
- If the above situation had been encountered, how frequently had the situation occurred and for which materials
- If the above situation had been encountered, what was the cause
- Whether the respondent had any suggestions for measures to avoid the recurrence of the above situation

APPENDIX 3 contains a summary table of the survey information about which types of materials and the amount of each type that were collected for recycling in 1997.

The primary purpose of the survey was to obtain information from local governments about the frequency of situations in which materials that are collected for recycling are otherwise disposed of, and to determine measures to avoid the recurrence of such situations. Of the 153 surveys which were returned, 45 indicated the above situation had been encountered at least once. The reported frequency for the above situation ranged from daily/weekly to once or twice per year. The above situation was reported at least once for every material listed on the survey form.

The reported causes for the situation in which materials collected for recycling were disposed of in a manner other than recycling included contamination and unfavorable market conditions. The reported unfavorable market conditions included:

- Low tipping fees charged at waste disposal facilities
- Low prices paid for recyclable materials/fluctuating prices paid for recyclable materials
- Low generation rates of recyclable materials in rural areas
- Lack of funding
- Insufficient demand for recycled-content products

Contamination was the most frequently reported cause for the situation in which materials collected for recycling were disposed of in a manner other than recycling.

The completed surveys contained several possible solutions for addressing the contamination problem and the unfavorable market conditions. The majority of survey respondents indicated an enhanced public education/public awareness program would be the best way to avoid the contamination problem. Another solution suggested for addressing contamination would be to establish processing centers where commingled and some contaminated materials could be separated and then marketed.

There were a number of suggestions included in the completed surveys for addressing unfavorable market conditions. These included:

- Establish tax incentives for companies which collect or process recyclable materials
- Establish tax incentives for companies which manufacture recycled-content products
- Establish tax/price incentives for purchasers of recycled-content products
- Eliminate existing tax incentives for virgin materials
- Stimulate research and development for recycled-content products
- Promote/support buy-recycled campaigns
- Establish processing centers where materials collected for recycling could be separated, de-contaminated, and densified to improve their overall marketability.

## **PART 2      Subcommittee Recommendations**

The subcommittee recommends the Council Chairman appoint two new subcommittees in 1999 to consider means to implement the solutions suggested in the completed surveys. One subcommittee should be assigned to research and report its findings on an enhanced public education/awareness campaign to address the contamination problem. The subcommittee suggests the new subcommittee should contact and work closely with the Litter Control and Recycling Fund Advisory Board to explore the opportunities to utilize that Board's statewide public education grant program.

The other new subcommittee should study the tax incentives and other financially based solutions suggested to address the unfavorable market conditions. The subcommittee recommends the new subcommittee, as part of its study, be encouraged to review previous legislative reports on the same subject.

The subcommittee further recommends that the Council Chairman establish the new subcommittees on a voluntary basis. The two studies will require additional meetings other than the Council's regularly scheduled quarterly meetings.

Finally, the subcommittee recommends it be discontinued upon the Council's acceptance of this report. DEQ will provide the subcommittee's final report to the compiler of the Council's 1998 Annual Report. DEQ will also archive the completed surveys and make them available to the new subcommittees or other Council members upon request.

# APPENDIX 1

§ 9-145.47

The Virginia Recycling Markets Development Council established; duties and responsibilities

A. The Virginia Recycling Markets Development Council is hereby established and shall be referred to in the chapter as the Council. The Council shall have the following functions:

1. To promote and coordinate state agencies' and authorities' efforts to enhance markets for recycled or recovered materials;
2. To promote the purchase of products made from recycled or recovered material;
3. To identify and evaluate financial and other incentives which may attract new businesses that can use recycled or recovered materials generated in Virginia;
4. To identify barriers to the development of markets for recycled materials including existing state policies, regulations and procedures, and recommend alternatives to overcome such obstacles;
5. To develop recommendations for the establishment of a regional or interstate marketing system for recycled materials;
6. To encourage the use of uniform recycling definitions and standards throughout the state;
7. To promote and encourage public/private market development initiatives;
8. To report annually its findings and recommendations to the Governor and the General Assembly; and
9. To determine the volume of materials by varying categories or commodities which is being recycled in the Commonwealth and to report its findings in its 1998 annual report. The Council shall investigate the frequency of situations in which, because of market conditions or other factors, materials collected for recycling are otherwise disposed of, and determine measures to avoid the recurrence of such situations. The Department of Environmental Quality shall provide staff to the Council for the purposes of this subdivision and shall cooperate with the Council in the preparation of the report.

B. The Council shall develop and monitor the implementation of a plan to strengthen Virginia's recycling infrastructure and markets which will (i) improve the supply and quantity of recyclables available, (ii) expand the capacity of collectors, processors and manufacturers to handle and use secondary materials, and (iii) incorporate strategies to increase the use of specific materials.

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## **APPENDIX 2**

### **Local Government Recycling Program Survey Form**

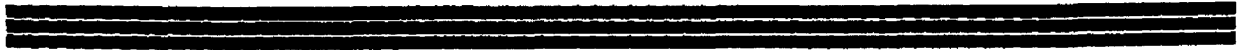
# 1998 Virginia Local Government Recycling Program Survey

LOCALITY: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

**Please Respond by September 30, 1998**



1. Which of the following materials are collected for recycling in your jurisdiction? (Please place an x next to each material that is collected. If there is no recycling collection program in your jurisdiction, please place an x next to \_\_\_ No Program.)

- Newspapers (ONP)
- Cardboard (OCC)
- Mixed Office Paper
- Mixed Household Paper
- Yard Waste
- Aluminum
- Tires
- Used Motor Oil
- White Goods (Household Appliances)
- Post Consumer Plastics
- Glass Containers
- Steel Containers
- Other Scrap Metals
- Automobile Bodies
- Construction/Demolition Debris (CDD)
- Other (Please List): \_\_\_\_\_
- \_\_\_\_\_
- No Program

2. If possible, please list the amount (by volume or weight) for each material collected for recycling by your jurisdiction's program in calendar year 1997. (If 1997 information is not available, please include your most recent information and indicate the year. If no information about amounts collected of an individual material is available, please write N/A under the Amount column for that material. If no information about amounts collected of ALL materials is available, please place an x next to \_\_\_ No information Available.)

Material	Amount (Indicate Tons or Cubic Yards)	Calendar Year
Newspapers (ONP)	_____	_____
Cardboard (OCC)	_____	_____
Mixed Office Paper	_____	_____
Mixed Household Paper	_____	_____
Yard Waste	_____	_____
Aluminum	_____	_____
Tires	_____	_____
Used Motor Oil	_____	_____
White Goods	_____	_____
Plastics	_____	_____
Glass Containers	_____	_____
Steel Containers	_____	_____
Other Scrap Metals	_____	_____
CDD	_____	_____
Other	_____	_____
	_____	_____

\_\_\_ No Information Available

3. Has your jurisdiction's recycling collection program encountered a situation(s) in which materials collected for recycling had to be disposed of in a manner other than recycling? (i.e. landfilling or incineration.)

\_\_\_ Yes \_\_\_ No.

4. If you answered Yes to question number 3 above, for each material collected for recycling by your jurisdiction's program, how frequently do you encounter this situation(s)? (Please write in how frequently this situation is encountered [i.e. weekly, monthly, quarterly, etc.] next to each material. If this situation has not been encountered for a particular material, please write Never next to that material.)

Material	Frequency
Newspapers (ONP)	_____
Cardboard (OCC)	_____
Mixed Office Paper	_____
Mixed Household Paper	_____
Yard Waste	_____
Aluminum	_____
Tires	_____
Used Motor Oil	_____
White Goods	_____
Plastics	_____
Glass Containers	_____
Steel Containers	_____
Other Scrap Metals	_____
CDD	_____
Other	_____



**5. If your jurisdiction's recycling collection program has encountered a situation(s) in which materials were disposed of in a manner other than recycling, please describe what you believe to be the cause. (i.e. market conditions, other factors, etc.)**

**6. If possible, please describe any measures you believe would help to avoid the recurrence of situations in which materials collected for recycling are otherwise disposed.**

**Thank You for Completing this Survey.  
Please Return Your Form by September 30, 1998**

### APPENDIX 3

#### Amount and Types of Materials Collected for Recycling in 1997

<b>MATERIAL</b>	<b>AMOUNT COLLECTED FOR RECYCLING IN 1997*</b>
Newspapers (ONP)	102,602
Cardboard (OCC)	391,091
Mixed Office Paper	32,613
Mixed Household Paper	59,524
Yard Waste	307,436
Aluminum	18,068
Tires	40,744
Used Motor Oil	
White Goods (Household Appliances)	29,071
Post Consumer Plastics	28,315
Glass Containers	286,279
Steel Containers	412,620
Other Scrap Metals	196,151
Construction/Demolition Debris (CDD)	21,046
Other	48,281
Commingled	107,293
<b>TOTAL MATERIAL COLLECTED</b>	<b>2,081,134</b>

\* Not all surveys included information about which types of materials were collected for recycling during 1997. All amounts rounded to nearest whole ton.

**RECYCLING COORDINATOR  
PRELIMINARY POSITION DESCRIPTION  
AND AGENCY MEETINGS AGENDA**

**RECYCLING COORDINATOR  
PRELIMINARY JOB DESCRIPTION**

1. **Coordinate recycling activities and information within state agencies:**
  - **Data collection and analysis.**
  - **Recycling projects/opportunities.**
2. **Develop a description and analysis of Virginia's existing recycling industry.**
3. **Develop a consolidated Recycling Policy for the State.**
4. **Co-Chair the Virginia Recycling Markets Development Council and supply continuing support for initiatives identified by the Council.**
5. **Represent Virginia in Inter-state meetings.**
  - **Mid-Atlantic Consortium of Recycling and Economic Development Officials.**
  - **Southeast Recycling Investment Forum.**
  - **National Recycling Coalition.**
6. **Participate in recycling meetings, sponsored by the U.S. Environmental Protection Agency.**
7. **Represent Virginia in official communication with Federal agencies regarding recycling.**
  - **Federal purchasing preferences.**

**STATE AGENCY MEETINGS**

**PURPOSE**

Review proposal by the Virginia Recycling Markets Development Council (VRMDC) for a State Recycling Coordinator, who would also co-chair the VRMDC.

**EXPECTATIONS**

State agencies (DEQ, VDOT, DGS, DBA) would prepare a formal response for the VRMDC's proposal. Response would be the basis for a proposal to the Secretary of Natural Resources and the Governor for appropriate action.

**BACKGROUND**

The Virginia Recycling Markets Development Council was established in 1993 by the General Assembly and is directed by statute (Section 9-145.47, Code of Virginia) to develop and monitor the implementation of a plan to strengthen Virginia's recycling infrastructure and markets.

Council members are appointed by the Governor and represent private citizens, various industries involved in recycling, municipal governments, county governments and planning district commissions.

The following state agencies also participate on the Council:

- Department of Business Assistance
- Department of Environmental Quality
- Department of General Services
- Department of Transportation

The General Assembly has directed the Council to undertake a number of activities, including the following:

- Enhance markets for recycled and recovered materials.
- Identify barriers to the development of markets for recycled materials in Virginia.

**1998 RECYCLING MARKETS DEVELOPMENT COUNCIL**

<b><u>APPOINTEES</u></b>	<b><u>REPRESENTING</u></b>
Edward A. Duffy (Chairman)	Plastics Industry
Michael Benedetto	Paper Industry
John M. Carlock	Urban Planning District
Mike Dobson	Solid Waste Collection Industry
Diane L. Jones	Rural Planning District
Richard M. Lerner	Scrap Metal Industry
Richard S. Weber	Virginia Association of Counties
Betty H. Boswell	Glass Industry
Andrew T. Carrington	Citizen Member
Robert J. Kerlinger, Jr.	Organic Waste Industry
John H. Mitchell	Recycling Industry
Douglas C. Wine	Virginia Municipal League
Grady A. Wood	Oil Industry
Vacant	Tire Industry
Vacant	Aluminum Industry
<b><u>STATE AGENCY</u></b>	
Christopher Steele	Department of General Services
William R. Bailey III	Department of Transportation
Michael P. Murphy	Department of Environmental Quality
Will Vehrs	Department of Business Assistance

