

The City of Alexandria

**State
Of
Recycling
Report**

Fiscal Year 2011
July 1, 2010 to June 30, 2011

Department of Transportation & Environmental
Services (T&ES)

ECO-CITY  ALEXANDRIA



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Executive Summary

City of Alexandria Recycling - Fiscal Year 2011 Summary

In responding to the challenges established by the City's recently adopted Environmental Action Plan, the Solid Waste Division pursued a number of initiatives during FY 2011 that significantly improved both its Residential and Commercial recycling rate. This report provides a summary of recycling activities measured by the City of Alexandria and reported to the Virginia Department of Environmental Quality (DEQ) for calendar year 2010 including recycling tonnages, participation rates, recycling rates, costs and savings.

Recycling Overview:

The Solid Waste Division reported its highest ever recycling rate of **41.4%** to the Virginia DEQ for CY 2010. This dramatic increase over last years reported 28.6% recycling rate was due primarily to significant increases in overall recycling collections combined with decreasing overall trash tonnages.

Tonnage Recycled	2009 Tons	2010 Tons	Tonnage Change	% Change
Citywide Total Recycling	50,544	77,368	26,824	53.1%

Some of the recycling initiatives that contributed greatly to this unprecedented success included:

- Providing residents with larger recycling carts for increased recycling capacity as part of our new recycling contract which increased both the level of participation and the volume of material collected
- Improving our Commercial Recycling Education and Enforcement program which resulting in a 50% increase in commercial recycling throughout the City
- Collecting over 9,400 tons of seasonal Leaf and Yard Waste from residential properties, a 46% increase over the previous year, which was the single greatest contributing factor to our recycling percentage improvement

Other successful recycling programs this year included:

- The Household Hazardous Waste and Electronics Collection program that increased collections by 24% and prevented over 92 tons of hazardous material from being disposed of at the Covanta Waste to Energy (WTE) facility
- City Facility and Schools recycling and composting program that:
 - Increased by 146% over CY 2009 and recycled 370 tons of material.
- Expanded public recycling collections at over 20 Special Events both large and small throughout the City that promoted recycling by example and served to remind everyone of the benefits of recycling

Consequently, the City of Alexandria...

- Earned over \$ 463,500 in revenue from the sale of recycled materials
- Saved over \$1,375,000 in avoided disposal costs by recycling.

City of Alexandria Recycling Programs - Introduction

Recycling tonnage is measured and reported to the Virginia Department of Environmental Quality on a calendar year basis. For CY 2010, the City of Alexandria recycled 16,772 tons of municipal solid waste (MSW) while spending approximately \$1.6 million to collect, educate and support the following City recycling program:

- Residential curbside recycling collection
- City facilities recycling collection
- Public Drop-off recycling collection centers
- Residential HHW & Electronics recycling drop-off collection
- Special event recycling container loan program
- Commercial and multi-family recycling enforcement
- Recycling education, outreach, and marketing efforts

These programs resulted in a 41.4% City-wide recycling rate reported to the Virginia DEQ for CY 2010. This rate was quantified based on trash and recycling hauler collection reports, and processing facilities reporting annual tonnage figures to the City.

The dramatic increase in our recycling percentage over the previous year's reported percentage of 29% was due primarily to a number of different factors.

1. The Residential Recycling increased dramatically for a total tonnage increase of 4,960 tons or approximately 42%
 - a. The largest single contributing factor to this improvement was the over 100% increase in the recycling of leaf and yard waste (including Christmas trees) which amounted to over 9000 tons.
 - b. The provision of new recycling carts to all residential households also contributed to the improved residential recycling rate in the fourth quarter by offering residents more capacity for recycling the expanded range of materials now capable of being collected by our "Single Stream" recycling system.
2. The Commercial Sector which generates over 70% of the overall trash in the City of Alexandria also dramatically increased its recycling volume for the same period by recycling over 60,000 tons of material, a 56% increase over the previous year.
 - a. Much of this increase can be attributed to the private sector hauler's aggressive sales campaigns to promote recycling as a result of the City's recent ordinance requiring recycling in all Commercial buildings and the Solid Waste Divisions campaign to document such recycling in required Recycling Implementation Plans.
3. Additionally, the total trash generated in the City by all sectors decreased for the same period by approximately 32,000 tons or almost 23%.

These were the primary factors in achieving the City's unprecedented annual recycling rate of more than **41%** which compares favorably to other local jurisdiction's rates:

Fairfax County	42%	District of Columbia	24%
Arlington County	39%	Prince William County	37%

Residential Curbside and City Facilities Recycling Collection Program

The City is responsible for collecting trash and recycling from approximately 19,000 households and City facilities. In FY11, the City's Solid Waste Division continued to provide public trash service and contracted its residential recycling services to AAA Trash and Recycling Services.

All residential curbside customers are defined by City Ordinance as "required users" and are assessed a Solid Waste User Fee on the Real Estate Tax Assessment bill which pays directly for the cost of trash and recycling collection. This fee pays for curbside trash and recycling collection, metal item collection, fall leaf collection, winter holiday tree collection, and "Spring Clean Up" services. Due to a general increase in the cost of operations and the purchase of new recycling carts for all residential customers the Solid Waste User fee increased from \$331 for FY 2010 to \$336 for FY2011 and is expected to remain the same for FY 2012.

Recycling Cart Collection Containers

In October and November 2011, the City distributed new recycling carts and containers to all 19,000 residential recycling customers. These carts came in three sizes: 65 gallon, 35 gallon and 20 gallon to meet the growing residential demand for more recycling capacity and convenience. Public response to the containers was extremely positive and has helped achieved our goals of increasing both public participation and the volume of materials collected.



Yard Waste Recycling

The City provides curbside solid waste customers with annual leaf and Christmas tree collection. The City spent approximately \$370,000 on the collection and mulching of leaves and holiday trees this year resulting in a savings of approximately \$775,000 in avoided disposal costs at our Covanta Waste to Energy (WTE) facility. Processed leaf and wood mulch is made available free of charge to all City residents or delivered to residents by City staff for a fee of \$40 per load.

City Facilities Recycling Program

The City continues to grow and expand the recycling programs at all City Facilities. The change to Single Stream recycling and larger recycling dumpsters at all City Facilities in FY2011 has dramatically improved the volume of recyclable material being captured from the waste stream while simultaneously reducing our disposal costs.

Residential Recycling Tons Collected

The City showed a dramatic increase in residential recycling during CY 2010 while the overall volume of residential trash decreased slightly.

Source	2009 Tons	2010 Tons	Tonnage Change	% Change
Residential Recycling	11,812	16,772	4,960	42.0%
Residential MSW	24,264	24,084	-180	-0.7%
Residential Recycling Rate	32.7%	41.1%	8.3%	25.4%

Residential Recycled materials included:

- 7,272 tons of single stream recycling
- 9,400 tons of leaves, brush and Christmas trees
- 92 tons of electronics
- 122 tons of appliances and other large metal items

Disposal Costs, Revenues & Cost Savings

Recycling is a key component of the City's solid waste management system that not only conserves valuable natural resources, but also defrays the cost of waste disposal. In FY 2011, the City spent nearly \$2 million on trash disposal at the Covanta WTE disposal facility. By diverting 16,772 tons of residential trash from the waste stream, the City avoided paying nearly \$1.4 million in disposal fees while earning substantial revenues from the sale of the recycled materials through our materials processor, Waste Management.

The City earned approximately \$463,500 in revenues from the sale of recyclable materials, including the following:

- \$393,500 from the sale of curbside and City facility recyclables
- \$12,000 from the sale of metal to Davis Industries from curbside metal collection service.
- \$58,000 from the sale of Public Drop-Off Center recycling

Drop-off Recycling Collection Program

The City operates 4 public drop-off recycling collection centers that serve both residents and small businesses throughout the City and consistently collect over 1000 tons of recyclable material per year. These centers are located at:

- Jones' Point, at the end of South Royal Street (under renovation but open)
- 4251 Eisenhower Avenue
- S. Whiting St. at the intersection of Tower Court
- 3224 Colvin St (also the location for our Household Hazardous Waste and Electronics Collection site)

All locations accept the following materials:

- Mixed paper, including newspaper, phone books, junk mail, paperboard (i.e. cereal, cracker and tissue boxes), color/white paper, post-its, etc.
- Cardboard (must be flattened with no plastic wrap or Styrofoam)
- All plastic bottles and jugs
- Glass bottles and jars
- Metal food and beverage containers

For FY 2011, the City earned approximately \$58,000 from the sale of its Drop-Off Center recycling.



Sign at South Whiting Street Drop-off Recycling Site



Eisenhower Avenue Drop-off Recycling Site

Household Hazardous Waste and Electronics Recycling Collection Program

Because the City utilizes a local Waste to Energy (WTE) facility for the disposal of all of its residential waste, it is essential that we make every effort to minimize the volume of potentially toxic or hazardous materials entering the waste stream. To this end, the City operates a Household Hazardous Waste and Electronics Recycling Center that all City residents are eligible to use. This facility was relocated in 2010 from its previous site on Wheeler Ave to its new location at 3224 Colvin St. and is open two (2) days per week on Monday and Saturday (except holidays) from 7:30 a.m. to 3:30 p.m.

During FY2011, the City diverted a record 92 tons of electronic equipment and over 100 tons of hazardous materials from the waste stream, including:

- 39.8 tons of televisions
- 14.2 tons of computer monitors
- 7.3 tons of CPU's
- 28.4 tons of miscellaneous/peripheral components
- 800 drums (approx. 120 tons) of hazardous waste materials

This represents a 24% increase in total tonnage over FY 2010.

Disposal Costs and Savings

The HHW and Electronics recycling drop-off collection program cost the City approximately \$313,000 in FY 2011. The majority of this cost is for the disposal of various hazardous or toxic materials as well as the safe removal and recycling of Cathode Ray Tubes (CRT's) from televisions and computer monitors that would otherwise be disposed of at the Covanta WTE Facility.

While removing HHW and electronics from our waste stream saves the City less than \$20,000 per year in avoided disposal costs, it is critically important for maintaining our low pollution emissions from our Covanta WTE disposal facility. Our goal is to continue to promote this program and to increase collections of these materials in the coming years while exploring options for reducing the cost per unit of disposal. We also expect the total volume of CRT monitors being disposed of by the public to begin to diminish over the next several years as the market continues to shift to more efficient and environmentally friendly flat panel screens.



Computers & TV's to be recycled

Special Events Recycling Container Loan Program

In 2009 the City created the Special Events Recycling Container Loan Program to increase recycling at private and public events. The program has 47 Clear-Stream recycling containers available for residents and organizations to borrow for use at special events. The goal of this program is not only to increase the collection of recyclables from special events, but also to promote recycling to the general public and serve by example as an active reminder to every one of the benefits of recycling.

During FY2011, the City loaned out Clear-Stream containers to over 20 special events and collected over 8,000 pounds of bottles, cans, and cardboard. These events included:

- Art on the Ave
- Comcast Film Festival
- City Birthday
- GW 10k race
- Turkey Trot
- Chirilagua Festival
- Scottish walk
- Del Ray Music Festival
- Festival of Arts
- St. Patrick Day Parade
- GW Parade
- Public Events



Chirilagua Festival



Bottles & Cans collected

Non-residential and Multi-family Recycling Enforcement and Education Program

Alexandria's Eco-City Action Plan goal was to achieve a 35% waste diversion rate by the year 2020. This goal was achieved in CY 2010 with a reported Recycling Rate of 41.2%. However, with more than 70% of the trash produced in the City being generated by the commercial sector it is essential for the business community to engage in recycling efforts in order for the City to maintain this goal. Consequently, in 2006 the City of Alexandria adopted a commercial recycling ordinance that requires all commercial business and multi-family residential properties to implement recycling programs.

Commercial businesses are now required to recycle the two dominant recyclable commodities in the waste stream and Multi-Family properties are required to recycle mixed paper, commingled cans & bottles, and cardboard. All commercial properties must submit a Recycling Implementation Plan (RIP) Form to document their recycling program to the City.

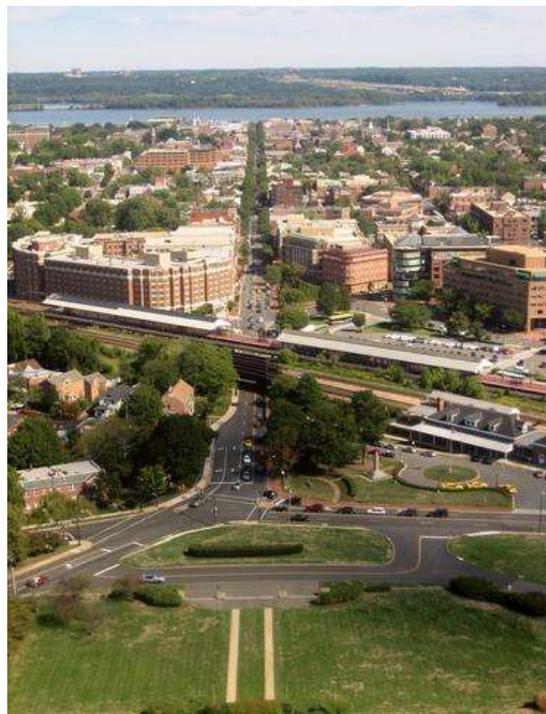
In 2009, the City introduced a new internet based system for submitting RIP forms online that dramatically simplifies the RIP form process and eliminates the need to process paper forms. The convenience of this new system has already produced a significant increase in the number of RIP forms submitted for approval. There are currently over 1200 RIP forms submitted for FY 2011. This system saves the City a considerable amount of money in administrative and document management expenses, while improving our ability to manage the Commercial Recycling Program and provide additional assistance to businesses. Since implementing this new system, the commercial sector's reported recycling rate has increased by over 50%.

Business Recycling Partnership:

The Commercial Recycling Program will also renew its Business Recycling Partnership program for FY2011 by recognizing businesses with outstanding recycling programs. New Business Recycling Partners will be selected for superior achievement and highlighted on the City's Recycling web page. The goal is to encourage other businesses to improve or expand their recycling efforts by promoting successful recycling programs at all types of commercial properties.

Recycling Expos and Outreach:

On September 28, 2010 the Solid Waste Division began its outreach program at the Eco-Friendly Restaurant Expo held at the Lee Center in Alexandria. Round table discussions and presentations were held with local restaurant managers with the goal of improving their solid waste and recycling systems.



Downtown View of Alexandria

Recycling Education and Outreach

With the understanding that public education and outreach is essential to maintaining an effective recycling program, the City utilizes a number of different media to keep the public informed and engaged in the recycling process.

Our primary method of public education and outreach continues to be the City's own Solid Waste Division web page (www.AlexandriaVA.gov/Solidwaste) that staff members update continuously throughout the year with current news and events. Additionally, new web masters are being trained this year to ensure that the web site remains organized and current so that residents can more easily find the information they require. Residents who subscribe to Alexandria e-News also receive monthly updates with information about recycling programs.

In FY 2011 the City of Alexandria again invested \$5,000 in the Metropolitan Washington DC Council of Government's (COG) "Go Recycle" campaign which provides over three weeks of intensive Recycling Campaign advertisements through television, radio and internet providers.

The focus of our public education and outreach campaign for FY 2011, however, was our initiative to provide new recycling carts to all City residents along with an intensive outreach campaign to the commercial sector which have been instrumental in helping us to attain our highest recycling rate percentage to date of 41.2 percent.

Fiscal Year 2012 Outlook

The outlook for FY 2012 remains positive despite continued budget constraints. The Solid Waste User Fee for FY 2012 will remain at \$336 per year and our Division looks forward to returning to full staffing in 2012 following the departure of the senior recycling specialist in 2010. Staff will continue to focus on improving the efficiency of our core recycling programs to ensure that our Citywide recycling rate continues to exceed the State requirements and strives to achieve our new recycling rate goal of 65% waste diversion by 2020.

Curbside Recycling Collection Programs

- **New Recycling Cart Collection Program:** According to EPA estimates, over 60% of the average residents' trash is recyclable through a "single stream", curbside recycling program. The new recycling carts delivered in FY 2011 now provide us the recycling capacity necessary to capture these materials and increase our residential recycling rate while also making it easier for customers to participate in our curbside recycling programs.
 - Beginning in FY 2012, the City will transition from curbside recycling collections to alley collection of recycling carts at all locations that have alley trash collection. This will make it easier for customers who have alley trash collection to set out their recycling carts for service and to store their recycling carts in the same location as their trash carts.

- **Yard Waste Recycling Program:** EPA estimates of the amount of wood and yard waste generated by residents range from less than 5% to as much as 40%, with 20.2% being the national average. Currently, Alexandria only collects leaves and Christmas trees during fall leaf season for recycling as mulch. The rest of the curbside yard waste continues to be sent to the Covanta Waste to Energy facility. Nevertheless, the volume of leaves and yard waste collected in 2010 made up 23% of the City's residential MSW generation. While a definitive waste characterization study is not currently available, the data clearly indicates that Alexandria generates considerably more yard waste than the national average
- The Solid Waste Division currently promotes grasscycling and backyard composting to help minimize the volume of organic materials being sent to Covanta. As we have reported previously, one of the problems associated with sending unsorted yard waste to a WTE facility is that the "green" yard waste in particular increases the NOx emissions at such facilities and adversely affects our local air quality.

Therefore, staff recommends that the City consider piloting a yard waste recycling collection program to divert our excess yard waste from disposal. Not only would a yard waste recycling program save the City money is avoided disposal cost but it would significantly increase the City's recycling rate while reducing the WTE facilities NOx emissions. The implementation of a Yard Waste Recycling program represents the City's best opportunity for reaching our Eco City goal of 65% recycling by the year 2020.

Educational and Outreach Programs

- **Recycling Cart Rollout:** Information regarding our recycling cart rollout was distributed heavily via direct mailings and posted prominently on our web site and other public information outlets.
- **Solid Waste Division Brochures:** Revised and updated brochures for FY 2011 have been created on the following City programs:
 - Curbside Recycling
 - Backyard Composting
 - Household Hazardous Waste and Electronics Recycling
 - Commercial Business / Multi-Family Housing requirements.

These brochures will only be printed in limited quantities to save money and resources and they will be distributed primarily through our City web site. Residents who request these brochures will be able to download them directly from our website rather than requesting a hard copy via mail.

Additional Outreach: Staff regularly attends public events, such as farmers markets and civic association meetings. Staff will provide residents with information about the new cart collection program and other available recycling programs. Further, additional recycling information will be posted on social media outlets, the recycling web pages, and Channel 70.

City Facility Recycling Collection Programs

- **Rechargeable Battery Recycling Program:** The Solid Waste Division will continue to work with City facilities to ensure all City generated rechargeable batteries are recycled.
- **Interior Recycling Collection Containers:** Funding for interior recycling containers remains limited. Therefore, in order to increase recycling collected from City facilities, the Solid Waste Division encourages all City Departments to budget for the provision of interior recycling containers for all Staff. Those Departments who have already implemented internal recycling collections have recorded significant improvements in their recycling collections.

Public Recycling Programs

- **Recycling at Parks:** The Solid Waste Division is preparing funding requests to establish recycling collection at City parks, athletic fields and other public places.
- **Recycling at Special Events:** Staff will continue to encourage recycling at special events, with a goal of having recycling at all events in the City.

Recycling Goals for FY 2012:

- Feasibility analysis for establishing a permanent yard waste recycling program.
- Expanding the curbside residential cart recycling collection system to alleyways as part of new service contract
- Increasing the number of non-residential and multi-family properties complying with the City's Recycling Code
- Continued improvements to IT infrastructure for improved systems performance.
- Review proposals to provide additional trash and recycling services to more Public locations through public/private partnerships
- Continue to expand recycling programs in City facilities and schools with improvements to single stream collections and composting programs.
- Maintain the current Solid Waste User Fee at \$336 per calendar year for curbside residential solid waste services including trash and recycling collection.
- Continue promotion of Household Hazardous Waste / Electronics Recycling Collection Site now located at 3224 Colvin Street.
- Consider the feasibility of providing recycling services to existing, grandfathered commercial customers in response to many customers desire to comply with the 2006 commercial recycling ordinance.