

**Recycle.
More.Often.**



Final Report

**Anne Arundel County
Residential Recycling Advisory
Committee (RAC)**

December 2010

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Executive Summary

Appointed in August 2009, the Residential Recycling Advisory Committee (RAC) has been meeting monthly to discuss, research, and review best practices for increasing the residential recycling rate for Anne Arundel County. The Committee, comprised of 20 citizens, was appointed by County Executive Leopold for a one year term, set to end in December 2010. This Final Report is the documentation of the RAC's year-long work.

The Final Report includes many recommendations, but prioritizes the Service Change Proposal (**Appendix A**) as being the most critical to positively impact the residential recycling rate in the short-term. The proposal involves moving from two times a week trash pick-up and once a week recycling pick-up, to a one-and-one trash and recycling pickup. Through conversations with DPWT staff, professionals in the solid waste management field, other governmental entities, and research into best practices, the RAC determined that this change in service would help move Anne Arundel County quickly towards reaching its 50/50 recycling goal. The details of the service change proposal are found in the body of this report. Other major recommendations from the RAC include:

- Encourage increased recycling in schools
- Encourages increased business recycling
- Encourage recycling in high density residential areas
- Expand recycling for communal and seasonal-use areas
- Provide outreach to new county residents
- Increase citizen-to-citizen outreach
- Create recycling awards/rewards/incentives
- Increase media outreach

While the RAC was originally appointed for a one year term, members feel strongly that there are opportunities for the Committee to continue into the future. The RAC would be administered differently, with less formal whole-committee meetings, and more subcommittee work in the areas recommended in this report. The DPWT staff have expressed their interest in the RAC continuing to help support and expand outreach efforts to residents, schools, and businesses in the county. A specific example of the RAC's continued work could be to work closely with schools in educating the staff on recycling and its benefits.

This Final Report sums up the feelings of the Recycling Advisory Committee, and conveys their interest in continuing to assist county staff in future endeavors. Anne Arundel County's aggressive and well-designed recycling initiative has laid the framework for increasing recycling and changing behaviors, while allowing for more citizen input and assistance. The RAC hopes to continue its work alongside the county staff until the 50/50 recycling goal has been met.

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I. Introduction

This is the final report detailing the work and history of the Residential Recycling Advisory Committee (RAC), along with the final proposals presented by the RAC for raising the recycling rate in Anne Arundel County, Maryland. The RAC met from September 2009 to November 2010. This report is intended to reflect, to the fullest extent possible, the activities and conversations undertaken by the RAC as it worked towards developing its final proposals for helping the County to meet and to surpass the its goal of an average County-wide residential recycling rate of 50% trash and 50% recycling, by weight (the 50/50 goal), and to extend the life of the County's landfill.

II. History of the RAC

The RAC was formed at the direction of County Executive Leopold in August of 2009, and held its inaugural meeting in September of that year. Membership for the RAC was solicited through an announcement in The Capital newspaper. The goals of the RAC were stated broadly as reviewing policy and helping the County to reach the 50/50 recycling goal. Interested citizens were asked to apply by submitting a letter indicating their background and reasons for wanting to participate. James Pittman, Deputy Director, Waste Management Services and Richard Bowen, Solid Waste Recycling Manager, reviewed the applications and recommended the committee of 20 members from throughout the County, as well as the Chair and Vice-Chair. The County Executive made all Committee appointments. The Vice-Chair, Jerry Pesterfield, resigned due to family concerns in February of 2009. Subsequently Kate Fritz was appointed to the position of Vice-Chair of the RAC.

The RAC spent the first several months of its existence engaged in learning as much as possible about the County's recycling program and the services provided by the Waste Management Division. The staff gave several extensive presentations to the RAC, outlining the history of the recycling program, including information regarding current initiatives and programs, and in December 2009 a number of RAC members were able to attend a tour of the Millersville Landfill, where they also observed a trash sort, followed by a tour of the Elkridge facility that sorts the County's recycling.

Beginning in January 2010, the RAC turned its attention to reviewing specific policies, and drafting policy proposals for reaching and surpassing the 50/50 goal. Since January, the RAC has met regularly every month, with one break scheduled for August. Staff is no longer present routinely at all RAC meetings, only those at which their expertise and input are required regarding particular issues under discussion by the RAC.

The following is a summary of the activities undertaken by the RAC to date:

- **Formed three ad hoc subcommittees** focusing on Schools, Media, and Business. Each subcommittee was tasked with the goal of developing proposals to increase recycling rates and educational opportunities in these different areas. (May 2010 – November 2010)
- **Assisted Recycling staff at public outreach events.** Several members of the RAC assisted at various community events throughout the year, handing out bins and information, and speaking individually with members of the public who stopped by the booths with questions. Committee members also initiated participation in a number of events, including HOA meetings, community “green” events, Earth Day celebrations, Church markets, and others, effectively extending the reach of the recycling staff for a greater presence at multiple community events. (March 2010 – current)

- **Initiated visioning for the future of the RAC.** At the July 2010 meeting of the RAC, a portion of the agenda was devoted to a visioning session concerning the goals and future of the RAC. Following that visioning session, an online survey was sent to the members of the committee to solicit their views on the RAC’s mission and goals, going forward, as well as structural changes that might help the committee better achieve its goals. (July 2010 – September 2010)
- **Wrote and published an article on recycling in the Capital newspaper.** The article, “Recycling Makes Cents for Everyone,” was written by several members of the Media subcommittee, and published in the “Our Bay” section of the Capital. (August 2010)
- **Drafted and voted upon a Service Change Proposal,** recommending a change from twice-weekly trash collection to once-weekly trash collection, preferably to occur on the same day as recycling collection. (January 2010 – July 2010)
- **Several members attended a business recycling seminar,** sponsored by the Main Street Maryland program. The meeting took place in Frederick County and was also broadcasted on the internet. Frederick, Howard, and Montgomery Counties presented commercial recycling options that Anne Arundel County may consider in the future. (April 2010)
- **Served as a focus group** for choosing the story line for a new recycling commercial, and for mailing and handout materials.
- **Two members were interviewed** by the County Executive as a part of his local TV broadcast show about the efforts of the RAC.

III. Proposals for Increasing the County-Wide Recycling Rate

Overview of RAC’s Proposals

When the RAC was formed in August of 2009, the County’s Waste Management Division had already undertaken an extensive marketing and public outreach campaign that had begun in March of 2008. This was the “Recycle More Often” campaign which had already raised the County’s average recycling rate from approximately 31% to 35%. Thus the RAC was formed in an institutional environment that was already very pro-actively promoting recycling. As the RAC met throughout its appointed term, discussions focused on two central areas: proposals that would affect the immediate management of the waste stream, and behavioral changes which could affect the waste stream over the long-term.

A central theme emerging from the conversations of the RAC was that in order to raise the recycling rate significantly throughout the County, moving beyond the focus on single-family homes as the central locus of recycling will be required. This may necessitate something of a paradigm shift as it requires thinking about recycling services in a different way than has previously been done. It is the RAC’s contention, however, that if we are to be successful in encouraging individuals to adopt recycling as a central and fundamental way of disposing of waste, efforts to encourage recycling need to encompass not only single family homes, but all the areas where the residents of Anne Arundel County live, learn, work and play.

In light of the committee's title as the Residential Recycling Advisory Committee, this assertion may seem to stray beyond the parameters that were set forth initially for the RAC's activities. As the RAC began to delve more deeply into ways to increase recycling, however, it became apparent that raising the County's recycling rate would necessitate moving beyond the single-family residential realm.

This assertion also raises additional questions about the numbers that have been used to date to report the County's recycling rate. Specifically the average recycling rate, which is the basis for the 50/50 goal, is a measure of residential recycling only. As such it does not reflect recycling that individual residents take to the County's convenience centers (a practice more common in the rural areas of the County), nor does it reflect business and high-density residential recycling that is handled by private haulers. Thus the RAC suggests that the way recycling is reported, and the way the county's average recycling number is calculated, should be revised to more realistically reflect residents' recycling activity. Due to the ever-increasing amount of materials accepted for recycling, it is proposed to revisit the 50% residential recycling goal in order to continue to increase residential recycling efforts.

Another of the most significant among the issues discussed was a strong sense, voiced by members of the RAC representing North County, that the needs of the more urban parts of the County were somewhat different from much of the rest of the County. The requirements of this part of the County will need to be addressed more specifically to raise the recycling rate in those areas significantly. In addition to further outreach and education directed towards those parts of the County, members felt materials, including multiple sizes of containers, lids, and possibly even metal containers, should be available.

With regard to proposals having to do with encouraging better recycling behaviors over the long-term, the Committee focused primarily on addressing ways to increase recycling in areas not presently covered by the County's curbside recycling pickup services. The RAC also explored numerous specific options and ideas for encouraging recycling in these additional areas. Thus, noted below each of the major proposals are strategies for implementing programs and initiatives the RAC recommends for each particular area.

Finally, the RAC recognizes that many of its proposals may carry additional implications. In keeping with its original charter, however, the Committee has determined that the proposals made here offer the best and most effective ways to raise the recycling rate across the County.

Proposals

- 1) **Change service to once-a-week trash pickup, with pickup scheduled on same day as recycling pickup, as soon as possible.**

Justification: This will discourage the use of the second trash pickup day as a way to dispose of extra recyclables, and will generally encourage a higher recycling rate. This change could also provide some cost savings, as well as less wear and tear on the roads, along with fewer added emissions from extra trucks running.

Strategies:

- a. See **Appendix A** for the specific details regarding the Service Change Proposal.
- b. Alongside staff, revisit the 50/50 residential recycling goal. There is potential to increase this goal since the county is approaching a 50% recycling rate.
- c. See **Appendix F** for research on service in other jurisdictions.

2) **Encourage Increased Recycling in Schools**

Justification: Emphasis on recycling at the earliest stages possible is the most likely way to encourage strong recycling behaviors in later years, and in other settings.

Strategies:

- a. Provide recycling bins for every classroom, along with bins in common areas such as cafeterias and sports fields.
- b. Develop incentive programs to encourage schools to use only recyclable and recycled products in the cafeterias.
- c. Develop a recycling in-service training unit for teachers, students and custodial staff.
- d. Encourage inclusion of recycling in curriculum whenever possible and appropriate, including programs at Arlington Echo Outdoor Education Center.
- e. Appoint a staff member as “Recycling Coordinator” for each school in the County.
- f. Continue, and increase where possible, outreach and education efforts on recycling in schools, including presentations, and sponsoring art and essay competitions.
- g. Develop a Recycling Month calendar, similar to the Maryland Math Month calendar (see **Appendix G**).
- h. Develop recognition programs for students and teachers who exhibit leadership in recycling efforts in their schools, such as a student “Recycling Captain” for each school and a County “Recycling Teacher of the Year.”
- i. Work with groups, such as Girl Scouts and Boy Scouts, to develop recognition programs for recycling, such as a recycling patch.
- j. Develop a recycling “mascot” to aid with presentations, and appear at recycling events (see **Appendix E**).
- k. Improve the coordination between Anne Arundel County Public Schools and Anne Arundel County Recreation and Parks Department to maximize recycling efforts at public venues, especially high-use sites such as County high schools.
- l. Coordinate with Anne Arundel County Public Schools to create a tracking and monitoring system for recycling.

3) **Encourage Increased Business Recycling**

Justification: Recycling in the business setting will encourage consistency of behavior, and therefore likely increase the overall recycling rate. Encouraging citizens to recycle at home, and increasing recycling opportunities at businesses sends a clear and consistent message for Anne Arundel County citizens on the importance of recycling everywhere.

Strategies:

- a. Increase the Small Business Recycling program capacity and availability through extensive outreach and education.
- b. Develop incentive programs, such as a “Green Business” designation, for County businesses that undertake, or significantly increase, recycling. This program could mimic the [City of Annapolis’ Environmental Stewardship Program](#).
- c. Encourage businesses to apply for the [Maryland Green Registry](#), which promotes active recycling at business locations.
- d. Develop a handout about recycling opportunities for businesses in the County. This brochure can be used for outreach by Waste Management Division staff along with RAC members.

- e. Develop a recycling tracking and monitoring system geared specifically toward business recycling efforts. Create a business recycling goal similar to the 50/50 Challenge for residential.

4) **Encourage Recycling in High Density Residential Areas**

Justification: This will enable a significantly larger portion of the residents of the County to participate regularly in recycling at their homes, which helps give a more consistent message.

Strategies:

- a. Offer multiple sizes of recycling containers, including smaller sizes and containers with lids, in order to best accommodate different lifestyles and living situations.
- b. Develop and support outreach and education presentations on recycling for residents, owners, and landlords of high density residential areas.
- c. Develop specific educational presentations aimed at the concerns of the more urban areas of the County to address the specific concerns of these residents.
- d. Develop incentive programs, such as a “Green Complex” designation, in recognition of complexes that undertake recycling and strive to increase their recycling rates.

5) **Expand Recycling for Communal and Seasonal-Use Areas**

Justification: Extending County recycling pickup services to communal areas, such as community beaches and sports fields owned by home owners’ associations and community associations, will encourage consistent recycling in communities even in areas not directly tied to single-family home, curbside pickup.

Strategies:

- a. Develop a designation, such as “special event area” to allow for County pickup at community beaches and sports fields.
- b. Continue to work with the Department of Recreation and Parks to increase single-stream recycling opportunities at all of their facility locations.

6) **Provide Outreach to New County Residents**

Justification: Providing as much information about the County’s recycling program as possible when new residents first move to the County will encourage them to become active recyclers early.

Strategies:

- a. Develop an informational program geared directly to realtors so they can give the information out to all their prospective buyers.
- b. Develop an information program geared specifically to property management companies in order to include literature in all new-tenant lease or own agreements.
- c. Include all recycling information with utility information, such as water bills, for new and existing residents.

7) **Increase Citizen-to-Citizen Outreach**

Justification: Recycling seems to be most successful when it comes as a bottom-up message, rather than a top-down message. Residents better understand the extent to which they must take ownership of the need for recycling in their community when the message comes from a fellow neighbor. Because of this, when the information is communicated one-on-one, citizen-to-citizen, it often carries significant weight.

Strategies:

- a. Develop a citizen group of “Recycling Ambassadors” who could attend public events, community and homeowners’ association meetings, and other such activities to give presentations and speak about the County’s recycling efforts. This group could be trained and supported by the County and the RAC in a way similar to the County’s Master Watershed Stewards Academy program.
- b. Increase outreach to underperforming service areas.
- c. Increase outreach to non English speaking communities.

8) **Create Recycling Awards/Rewards/Incentives**

Justification: Positive designations that reward service areas and communities for increased recycling rates can encourage greater recycling as well as community pride.

Strategies:

- a. Initiate additional recognition for service areas that have reached the 50/50 goal with a designation such as the “Golden Recycling Award.” Create a designation such as a “Green Ribbon Community” for communities that have reached the goal.
- b. Develop rewards such as decals for mailboxes in “Green Ribbon Communities”
- c. Post street signs indicating “Green Ribbon Community” designations, similar to signs presently used indicating “neighborhood watch” communities.
- d. Disseminate information on winners of “Green Ribbon Community” and “Golden Recycling Award” to realtors for distribution to prospective buyers.

9) **Increase Media Outreach**

Justification: Cultivating and maintaining consistent media outlets, such as local newspapers and websites, will keep recycling in the forefront, and offer easy access to updated information. These media outlets offer avenues for relaying updated information on recycling policies and rates, as well as providing information on particular strategies for increasing recycling and highlighting communities and delivery areas that have achieved high recycling rates.

Strategies:

- a. Create a weekly or monthly “Trash Talk” article to appear in local news outlets.
- b. Continue staff supported Facebook and Twitter pages.
- c. Increase e-mail distribution lists and provide for more regular e-mail blasts to citizens.
- d. A “Google Group” created and promoted by the RAC to encourage recycling..
- e. Increase outreach to non-English publications and media outlets.

IV. Future of the RAC

The initial appointment of RAC members was to end in December 2010. The activities initiated by the RAC in its first year, however, suggest that it is desirable that Anne Arundel County continue to have a standing Recycling Advisory Committee. Should the County Executive wish to extend the life of the RAC, we propose several structural changes to the Committee. Our goals in proposing these changes are to ensure appropriate continuity in RAC membership, as well as greater diversity, and to maximize the RAC’s efficiency and efficacy. The RAC proposes to work more specifically in subcommittees, meeting as a whole committee on a much less frequent basis, and possibly at different locations around the County

as a way of highlighting various recycling initiatives and issues in different communities. Members will be expected to work on the subcommittees of their interest, and occasionally within the context of the larger group, as needed. We propose changes in the following areas:

- **Change the name of the Committee to Citizens' Recycling Advisory Committee** in order to more accurately reflect the full nature and extent of the RAC's activities.
- **Committee Membership Solicitation and Composition.** In addition to the appeal placed in The Capital newspaper, we propose more targeted appeals to particular populations that are not presently in evidence in committee membership. We advocate for representation from each service area, with specific need for stronger representation from the areas of the County where the recycling rates are low. Outreach through community groups and HOA's in those areas might offer one possible avenue for recruitment. We also need greater participation from populations where we have traditionally encountered cultural and linguistic barriers to getting the recycling message out. Again, working through community organizations that represent some of these populations could be a way of increasing membership on the RAC from these groups. Age diversity is also important, and we propose that one position on the RAC should be reserved specifically for a high school student from the county. We also propose that the RAC should seek to have at least one member who is a local business owner, a member of the Board of Education, and a member from one of the area's non-profit organizations.
- **Standing Subcommittees.** At present, the RAC fulfills two central functions: policy review and outreach and education. We propose that there should be two standing subcommittees, one for each of these areas. The entire RAC would meet and vote on policy changes, but it would be the work of the policy review subcommittee to determine which policies came before the committee as a whole. Members of the outreach and education subcommittee, on the other hand, would be responsible for supporting staff at public events, initiating involvement at new events, and promoting educational opportunities in general. The standing subcommittees would be in addition to any ad hoc subcommittees or task forces formed to address specific time-sensitive issues.
- **Expectations for RAC Members.** Membership would include attendance at regular RAC meetings as well as any relevant subcommittee meetings, with a commitment of approximately 4 hours of time per month. Each Committee member would be expected to join one of these subcommittees. This would allow for individual preference, as members are generally inclined to prefer one or the other of these areas.
- **Terms.** Each member would be expected to commit to a two-year term, and the terms would be staggered, to ensure continuity. The RAC would suggest members for appointment to the County Executive. The County Executive would then appoint RAC members with the possibility of extension.
- **Officers.** In addition to the Chair and Vice-Chair, we propose that there also be a Secretary. As a Citizens Advisory Committee, it is particularly important that the minutes of the RAC's meetings be as thorough and accurate as possible. Subcommittee Chairs would also be appointed for each of the standing subcommittees and ad hoc groups, in order to ensure reporting and recording of the subcommittee's work.
- **Post Minutes Online.** As recycling is a topic that is focused heavily on citizen involvement, it is important that the work of the RAC should be as visible and transparent as possible. To that end,

we propose that, after minutes have been circulated for comment to both the RAC members and the staff, the minutes of each RAC meeting be posted on the County's recycling website.

APPENDIX A
Service Change Proposal

RAC Service Change Proposal

The Recycling Advisory Committee of Anne Arundel County, Maryland recommends that the second day of trash collection should be discontinued. The RAC strongly recommends that this change should be made before 2014, when the next contracts are up for renewal, and preferably as soon as possible. The RAC also strongly recommends that trash and recycling collection should occur on the same day.

The committee has concluded that this service change will have the following results:

- increase recycling rates throughout the county
- extend the life of the Millersville landfill
- present a possible cost savings
- reduce the environmental impact of trash collection by reducing fuel use, emissions, and wear and tear on the roads

In order to facilitate this service change, the RAC also recommends the following:

1. Additional materials:
 - a. Lids for recycling containers for those residents who request them.
 - b. Metal containers for those areas that have a significant problem with vermin.
 - c. Multiple sizes of containers to include a smaller size as well as the larger current size. The county should also make large size bins with wheels and covers available to residents at an additional cost (similar to the bins used presently in Howard County).
 - d. Phasing in containers in all sizes that can be used with automatic “tippers” on collection trucks.

2. Education/Outreach:
 - a. Send informational mailings to all residents in those areas of the county about to undergo collection contract renewal alerting them to the coming service change several months before the change occurs.
 - b. Hold informational meetings with community groups and HOAs in areas about to undergo collection contract renewal.
 - c. Focus on developing increased opportunities for distributing materials and recycling bins in areas about to undergo contract renewal for several months prior to service change, such as informational tables at shopping centers, handing out bins and information at community events, etc.

APPENDIX B
The Capital Article

Recycling makes cents for everyone

Ahh, summertime, time to relax and enjoy those backyard cookouts. You've eaten your fill of burgers, deviled eggs, corn on the cob, and now it's time to throw away your trash.

But wait!

You're standing over that big yellow recycling bin, right next to the gray trash can. Sure, you know that your aluminum can go in the recycling bin, but what else? Not sure, you toss your plastic fork, red Solo cup and Chinet plate in the trash can, along with the corn cob and dirty napkin. Yikes!

You happen to be at my house, so as I walk by, I reach in the trash can and retrieve your plate, fork and cup. "Yes, it all goes in the recycling bin, except for food waste," I gently inform you. The corn cob is compost, while your dirty napkin is trash. Just remember, "When in doubt, don't throw it out!"

As one of 20 members of the Anne Arundel County Recycling Advisory Committee, formed in 2009 by County Executive John R. Leopold "to increase participation in the county's recycling program," it's my goal to improve your recycling habits.

Most recycling residents are diligent about having a bin in the kitchen or nearby in the garage. Sure, it's easy to recycle newspapers, cereal boxes and cans, but what about elsewhere in the home? Do you have a recycling basket in your bathroom? Does that toothpaste box or empty toilet paper tube

go in the trash? How about that empty shampoo or prescription bottle?

In the laundry room, those detergent boxes or plastic jugs are all recyclable. What about a bin in the office or bedroom? Junk mail, telephone books, catalogs, file folders, the tissue paper in your new shirt, the tags on your new dress and your dry cleaning plastic are all recyclable. Even your old plastic trash cans, flower pots, toys and buckets are now recyclable.

To find a complete list, visit www.recyclemoreoften.com. You can also sign up to take the "50/50 Challenge" by recycling as much as you throw away. Take the pledge and find out how you and your neighbors are doing.

The current report card shows that only Area 8 in Severna Park has reached the goal, recycling 51 percent. Starting at just 31 percent countywide, we are improving, but need to do better.

Anne Arundel County has made it easy to recycle more by becoming the first county in the state to offer curbside, single-stream recycling. That means all our recycling can go in one container, whether it be the big yellow bins that the county has provided for us, or any other container, box or clear plastic



THIS WEEK'S TAKE

By Anne-Marie Dammeyer

bag, as long as its marked with a large X. It doesn't even have to be yellow!

Use as many recycling containers as needed, for there is no limit. However, each should weigh no more than 40 pounds.

No need to rinse anything or remove labels. Plastic bags and wraps are also accepted, but should be placed in one bag together in your recycling bin. Waxed cartons such as juice boxes and milk or juice cartons are now recyclable, too. Some skeptics question the mixing of items, saying that the recycling becomes "contaminated," but all items are taken to the Waste Management sorting facility in Elkridge. So throw in that cat food can with your pickle jar and pizza box.

But why recycle?

First of all, recycling saves energy. Providing recycled materials to industry for reuse uses much less energy than supplying virgin material. For example, 75 percent of energy consumed in the manufacture of plastic is saved by recycling old plastic, and a whopping 95 percent of the energy needed for the production of aluminum cans from scratch is saved by recycling.

Secondly, recycling saves resources. With our supply of natural resources disappearing as a result of disposable products and packaging production, recycling tremendously reduces this consumption.

Also, recycling saves the environment by decreasing

pollutants of new raw material production, thus lowering greenhouse gas emissions.

Next, recycling is good business. In the process of turning "waste" into valuable products for reuse, recycling creates jobs, contributes to manufacturing efficiency and adds value to the economy. In 2009, Anne Arundel County netted about \$855,000 from recycled paper, plastic, metal and glass, using this profit to defray the costs of curbside collection and waste disposal.

Recycling reduces long-term waste disposal costs by prolonging the life of our landfill and delaying the costly process of developing new landfill space.

Lastly, recycling makes us environmental stewards for the generations to come. We as consumers should be aware of our choices. Teaching our children to be environmentally reactive is our duty, as we show them how that plastic milk jug becomes our soft fleece jacket.

So, recycle ... more ... often. It's easy. And the next time you're at my house for a cookout, we'll be using reusable plates, utensils and pint glasses. But that's another story.

Anne-Marie Dammeyer is an outdoor education teacher specialist for the county school system and a member of Anne Arundel County's Recycling Advisory Committee. For more information about recycling in the county, visit www.aacounty.org/DPW/WasteManagement.

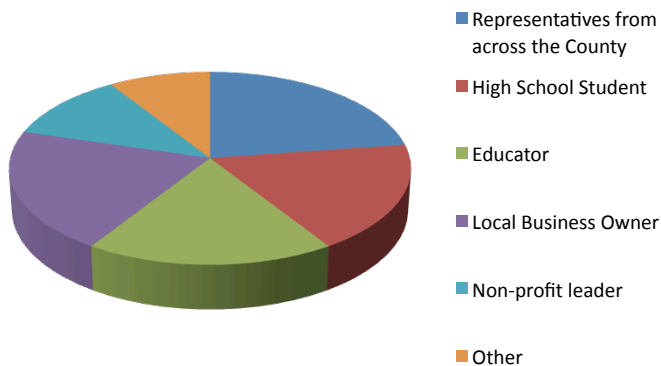
APPENDIX C
Committee Survey Results and Summary

Recycling Advisory Committee (RAC) Visioning Survey Summary

An electronic survey soliciting input on the future of the RAC was sent out to the 20 members for approximately two weeks from the end of July to the beginning of August, 2010. This survey was meant to give RAC members another opportunity to comment on the future direction of the Committee. Of the 20 people it was sent to, there were 11 responses.

Role of the RAC in Anne Arundel County: Most members saw the Committee as having a role in: County policy review, advocacy, education and outreach, and recommending new legislation or changes to existing laws. Responses were in agreement to continue to help the County reach their 50/50 recycling challenge. The majority of responses felt that the RAC should continue to help the County at outreach events, while creating new venues for education and outreach to the community. Responses included a desire for a clear mission statement of the RAC. Members agreed that the Committee should not take the role of telling County staff what to do, but to remain advisory. There was non-agreement if the RAC should work on increasing business-related recycling.

Membership:



(Other includes: member of Board of Education, senior citizens, residents of apartments/condos, minority residents, other county professionals)

Most members answered that future members should be targeted specifically, in order to enlist non-represented members. These memberships would be reviewed by the RAC as a whole. Committee members did not think that the County Executive or County staff should make appointments to the RAC. Most responses were for duration of membership ranging from one year to two years, with possibility of reappointment.

APPENDIX D
Maryland Gazette Article

Junk Removal MD, DC & VA
301-831-1101 Guaranteed Low Price!
Family Owned, Same Day Service
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Recycling Containers
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North county recycling rates among lowest in the county

Awareness key to raising rates, advocates say

By ALLISON BOURS, Staff Writer
Published 10/25/10

Walk down the streets of Millersville's Brittingham neighborhood on a Thursday, and you'll see two and three yellow recycling bins for every trash can.

That's because the community is part of a cluster of neighborhoods at the center of the county where residents recycle at least half of what they throw away every week.

And some of them, like Ann Chaffee, recycle far more than that.

"I'd say it's at least 80 percent. At least," Chaffee said, sorting through two recycling bins packed full of junk mail, ticket stubs, tissue paper, newspapers and other odds and ends. "I just got to the point where pretty much everything goes in here."

She'll even take disposable containers home from fast food restaurants to recycle them, in case the eatery isn't so diligent about recycling.

"It just becomes a lifestyle," said Chaffee, a member of the county's Recycling Advisory Committee. "My parents grew up in the Depression, so we were taught to always reuse everything and never waste anything. I inherited those values."

In March 2008, County Executive John R. Leopold kicked off the RecycleMoreOften campaign to increase curbside recycling in the county from 30 to 50 percent.

Service Area 8, which runs along the Ritchie Highway corridor in Severna Park, Millersville and Pasadena and includes Brittingham, became the first waste collection service area to reach that goal this year.

But residents there were already recycling about 45 percent of their disposables, more than most of the county. And in most of north county, recycling hovers between 30 and 40 percent.

Area 1 - which includes parts of Brooklyn Park and Glen Burnie - was the worst in the county with a 28 percent recycling rate. In Area 4, which includes Riviera Beach, Rockview Beach, Venice on the Bay, Chestnut Hill Cove and Compass Pointe, residents recycle about 32 percent of their trash.

"It's embarrassingly low," said Lauren Symmes, a Riviera Beach resident and member of the advisory committee.

Her family of five puts out about two tall kitchen bags a week for collection, and three to four bins of recyclables.

"If it weren't for the diapers, it would be more (recycling)," she said.

Symmes suspects residents just don't know that they can recycle more than just plastic bottles and tin cans. At a recent family party, she had to remind guests that plastic utensils and paper plates can be recycled.

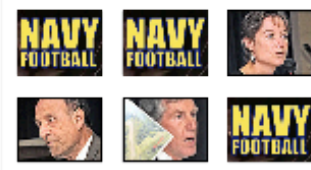
There has been some improvement, Chaffee said. When members of the advisory committee distributed 2900 recycling bins throughout Glen Burnie, recycling there increased by 17 percent in one week.

Sign up for email alerts

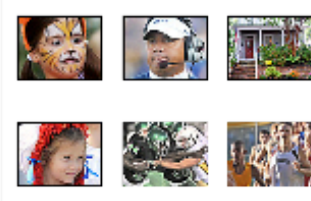
EVENTS CALENDAR more>>

- Nov 04 - New dog obedience classes at the SPCA
- Nov 04 - Baltic Porter Beer Release Party @ Rains Head Tavern Annapolis
- Nov 05 - Nov 06 - Annapolis Symphony Performs Side by Seaside
- Nov 05 - Arundel Lodge Benefit Auction
- Nov 06 - Talking Story: Students Experiences with Bullies

VIDEOS more>>



SLIDESHOWS more>>



See what our waste and recycling services can do for you.

LEARN MORE

1 Month FREE service!
welcome group for one-year commitment

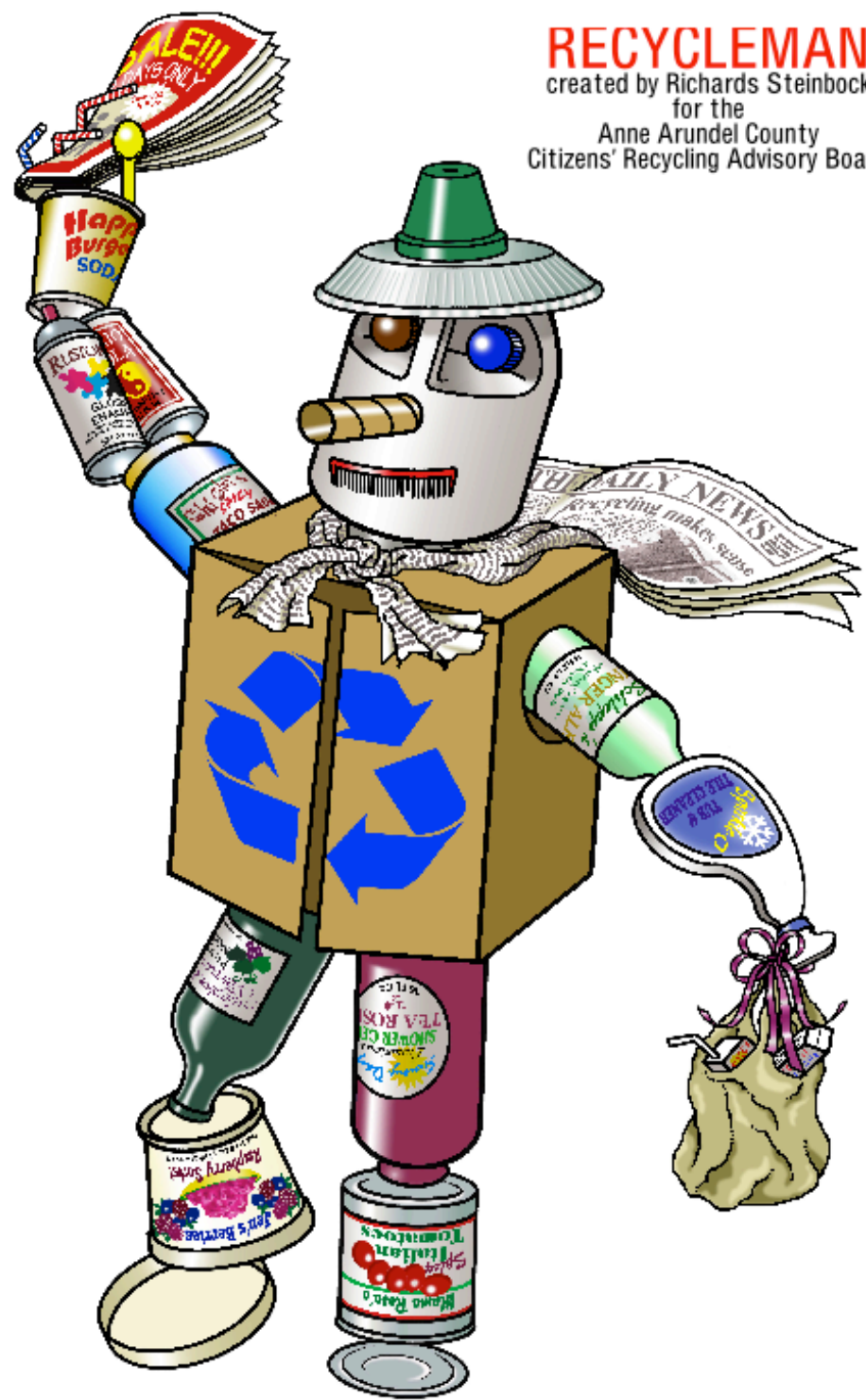
WM
WASTE MANAGEMENT

It all starts at the curb.



APPENDIX E
“Recycled Person” Sketch for Mascot

RECYCLEMAN
created by Richards Steinbock
for the
Anne Arundel County
Citizens' Recycling Advisory Board



APPENDIX F
Summary of Research on Other Jurisdictions

In July 2010 a request for assistance was sent to the recycling coordinators in several counties in Maryland. The request read:

"I am a member of the voluntary citizens Recycling Advisory Committee for Anne Arundel County, MD. We are exploring ways to increase our county's curbside recycling rates. I was given your name by Richard Bowen, who is the Solid Waste Recycling Manager for the department of Waste Management Services in Anne Arundel county. Richard is advising our committee and assisting us with our efforts.

Currently, our county curbside residential program has two trash, one recycle, and one yard waste pick ups every week. We are proposing to move to **one** day a week for trash, recycle and yard waste. We understand that this may help increase our recycling rates while at the same time reduce costs.

Our committee is gathering data to support this proposal. We are looking for data that would show an increase in recycling rates that other counties or municipalities experienced after moving to one day a week for trash curbside pickup. If you have any studies, statistics, reports or presentations that you could share with us it would be greatly appreciated."

Below is a list of jurisdictions and companies we contacted, along with their responses:

- **Baltimore County** - began curbside recycling in 1995, at that time moved to a one plus one format (one day a week each for trash and recycling), therefore unable to assist
- **Baltimore City** - detailed response as discussed below
- **Frederick County** - recycling coordinator does not handle trash collection, was not able to assist
- **Howard County** - switched to one plus one format in 1993, unable to locate relevant data
- **Montgomery County** - no response
- **Kessler Consulting of Florida** - no response
- **Maryland Department of the Environment** - no response

Ms. Tonya Simmons of Baltimore City was very responsive. Baltimore City switched to single stream recycling in early 2008. In July 2009 they switched to one plus one from two day a week trash and one day a week recycling pick up. This is the scenario that that the RAC is proposing in our Service Change Proposal (see Appendix A).

For the six months prior to July 2009, Baltimore City averaged 1,399 tons per month of single stream curbside recycling. Following the change to one plus one, their six month average increased to 2,162 tons per month. That is an increase of 54.5% in recycling tonnage on a monthly basis by switching to a one plus one format.

Ms. Simmons was also able to provide bi-weekly data from 2007 through August 2010. The data showed a clear increase in recycling in July 2009. Almost all of the two week periods in 2010 appear to be above 1,000 tons, which is approximately 2,100 tons a month. This would indicate that the one plus one format is continuing to work as there does not appear to be a drop off in the rate during 2010.

APPENDIX G
Maryland Math Month Calendar



Maryland Math Month
April 2010 - High School



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p>www.marylandmath.org</p>	<p>Maryland Math Month calendar is sponsored by a partnership between the Maryland State Department of Education and the Maryland Council of Teachers of Mathematics</p>			<p>1 Use your graphing calculator to find as many ways as you can to write an expression for 100 that uses the same digit repeated and any operations. Example: $99 + (99 + 99)$</p>	<p>2 The diagonal of one square is four times the length of the diagonal of a second square. How many times larger is the area of the larger square?</p>	<p>3 Pi Day Celebrations: http://www.piacrosamerica.org/index.html</p>
<p>4 Find different cell phone plans and determine which would be the cheapest for your family, based on each family member's minutes of use.</p>	<p>5 $16^n + 16^{n+1} + \dots + 16^{2n}$ (16 terms) = $16^2 256$. Find n.</p>	<p>6 What is nth term in the following set of number: 3, 9, 19, 33, 51</p>	<p>7 The Maryland population in 1990 was 4,781,468 and in 2000 was 5,296,486 (according to the U.S. Census). Determine a linear and an exponential model for Maryland's population [Note: use 1900 as $x = 0$].</p>	<p>8 Explore the connection between mean and median at onlinestatbook.com/stat_sim/descriptive/index.html [link needs to be added]</p>	<p>9 For the population question, using the Maryland population in 2006 as 5,615,727 (again from the U.S. Census), which model from April 7th is the better fit?</p>	<p>10 Calculus help: http://www.calculushelp.com/index.html</p>
<p>11 Plan a trip for you and your family - including travel (car or plane), lodging (hotel or with friends), ticket/ admission prices, food, and extras for gifts.</p>	<p>12 Abby buys eight doughnuts, some plain at \$0.45 each and some frosted at \$0.75 each. She spent a total of \$5.10. How many plain doughnuts did she buy?</p>	<p>13 Visit http://www.kidstrom.com/games/tangram/tangram.html to solve some Tangram puzzles.</p>	<p>14 Solve: $1/x = 0/x$</p>	<p>15 $A + B + C + D = 100$ and A, B, C, D are all nonnegative. What are the largest and smallest possible values of ABCD ?</p>	<p>16 I am a number between 10 and 100. When you divide me by 9, you get an even number. The sum of my digits is 3. What number am I?</p>	<p>17 Explore logistic growth models at http://cauchy.math.celestat.s.edu/Applets/LogisticGrowth/LogisticGrowth.htm</p>
<p>18 Family fun! Find the height of each member of your family. Find the mean, median, mode, and range of this data.</p>	<p>19 Using all of the digits 1, 3, 4, 6, and 7, create the largest five-digit even number that is divisible by 3.</p>	<p>20 Compare experimental and theoretical probability, as well as explore the Law of Large Numbers, at www.shodor.org/interactive/activities/BasicSpinner</p>	<p>21 MaryAnn needs to build a fence around a garden that is 25 feet by 45 feet. The posts are to be set 5 feet apart. How many posts will she need?</p>	<p>22 Solve equations by using a balance at nhv.usu.edu/en/nav/frame_s_seid_201_a_4_t_2.html [link needs to be added]</p>	<p>23 The length of a rectangle is 4 times the width. The perimeter is 70 cm. Find the dimensions of the rectangle.</p>	<p>24 Visit http://www.learnenglish.org.uk/games/magic-gopher-central.swf. Are you a math magician?</p>
<p>25 Plan a proposal for a vacation for your family. Have a budget for everything you will need. Now convince your family to go!</p>	<p>26 How many integers between 100 and 1000 are divisible by 7? How did you figure it out?</p>	<p>27 Each letter in the word WEDNESDAY is put on a card and placed in a hat. The "A" card is drawn and not replaced. Two more cards are drawn. What is the probability of drawing a "D" and a "Y"?</p>	<p>28 Larry the Late is always late for work. He unwisely decides to exceed the speed limit. If, on a 14-mile stretch of Interstate 95, he usually goes 70 mph and now he decides to go 80 mph, how many minutes does he save?</p>	<p>29 Frank the Flighty leaves home and drives for awhile at 20 mph. He realizes that he forgot his wallet so he turns back and drives home at 60 mph. He has spent one hour traveling. How far from home did he travel before turning back?</p>	<p>30 The expression $\sqrt{1+2+3+4+x}$ has the value 4 when $x = 6$. What are all four integers $x \leq 6$ for which this expression has an integral value?</p>	

Maryland Council of Teachers of Mathematics, 2010