

The Fifth Annual Report of the Recycling Public Advisory Council

April 2006

Authored by:

The Recycling Public Advisory Council

Edited and Prepared by:

The Division of Air and Waste Management
Department of Natural Resources and Environmental Control

Production of this Document Funded by:

The Department of Natural Resources and Environmental Control

For More Information Contact:

Bill Miller

Division of Air and Waste Management

Department of Natural Resources and Environmental Control

89 Kings Highway

Dover, DE 19901

Phone: (302) 739-9403

Fax: (302) 739-5060

e-mail: bill.miller@state.de.us



Document #40-09-01/06/03/02

Executive Summary

Introduction

During 2005 the Recycling Public Advisory Council (RPAC) focused its efforts on follow-up actions to the public meetings held around the state in November 2004. Specifically, RPAC:

Provided input, and gave final approval, to a Public Response Document prepared by DNREC to address questions and concerns raised at the public meetings;

Provided input, and gave final approval, to draft legislation that would ban yard waste from landfills and require the establishment of curbside recycling programs throughout the state;

Provided comment on, and voted to support, a separate bill prepared by the Governor's Office that would ban yard waste from landfills and provide funding for the establishment of recycling programs; and

Began to lay the groundwork for an outreach campaign designed to educate the public about the importance of recycling and composting and to gain public support for the legislation.

Public Response Document

The public meetings held in November 2004, at which RPAC Chairman Paul Wilkinson presented the joint recommendations of RPAC, DNREC, and DSWA for establishing statewide curbside recycling and banning yard waste from landfill disposal, generated feedback in the form of oral comments, letters, e-mails, and telephone calls. DNREC compiled the comments and, with input from RPAC, prepared a Public Response Document to address all of the issues raised. With RPAC's concurrence, DNREC provided the document to the Governor and subsequently distributed it to the public by direct mail, e-mail, and posting on the DNREC recycling web page.

Draft Legislation

RPAC provided comment on, and gave final approval to, draft legislation intended to implement the joint recommendations of RPAC, DSWA, and DNREC. The legislation would have required trash haulers to make curbside recycling available to their customers, required residents to keep their recyclables separate from their trash, established a fund to assist municipalities with the costs of implementing recycling programs, and banned yard waste from disposal in landfills. The bill failed to gain

support from the legislature, and the Governor's Office then developed a draft bill that would encourage voluntary recycling by providing funding to help with costs of establishing recycling programs. It would also ban yard waste from landfills. RPAC provided comments during development of the bill and ultimately voted to approve the draft. This bill gained the sponsorship of 20 legislators and was introduced as S.B. 225.

Recycling Assistance Grant Program

For FY05 as in previous years, the amount of grant funding requested by eligible groups exceeded the amount available. DNREC, in conjunction with RPAC, selected six projects for funding, at a total funding amount of \$49,899. To make the best use of the available funding, the RPAC found it necessary to ask several applicants to modify their proposals so as to reduce the project costs. The list of grant recipients, including a brief description of each project and the amount of funding awarded, are contained in Appendix C.

Recommendations

The RPAC's recommendations for increasing the diversion rate are as follows:

1. Enact legislation to permanently establish the RPAC.
2. Maintain the conditions in the Cherry Island landfill permit that are consistent with the provisions contained in S.B. 225.

The permit, issued by DNREC on January 6, 2006, contains provisions relating to recycling and yard waste management. The RPAC supports those conditions to the extent that they are consistent with provisions of S.B. 225, to which RPAC gave its support in June 2005. Specifically, RPAC recommends the following:

Yard waste should be banned from disposal in the landfill effective January 1, 2007;

DSWA should assume responsibility for management of the banned yard waste only if the private sector fails to provide the capacity to manage all of the diverted material; and

All state agencies (DNREC, DSWA, DelDOT, the Delaware Department of Agriculture, the Delaware Economic Development Office, the Delaware River and Bay Authority, etc.) should support development and operation of maximum adequate private sector or DSWA capacity to accept and process recyclables collected in single-stream systems.

3. Create a Delaware Recycling Fund to assist in the establishment and enhancement of recycling programs throughout the state.

The source of funding should be an assessment on all solid waste collected and/or disposed of in Delaware except for those materials destined for recycling.

Table of Contents

Executive Summary	i
Table of Contents	iv
1.0 Introduction	1
2.0 Recycling Public Advisory Council Activities	2
3.0 Recycling Assistance Grant Program	3
4.0 DNREC Activities	6
5.0 DSWA Activities	8
6.0 Recommendations	11
Appendices	
Executive Order Number 82	A
Recycling Public Advisory Council Members	B
Summary of Grant Projects for FY04 and FY05	C
Yard Waste Management Committee Consensus Points	D

1.0 INTRODUCTION

This is the Fifth Annual Report of the Recycling Public Advisory Council (RPAC). The purpose of the report is to fulfill a requirement of Executive Order No. 82, which directs the RPAC to prepare an annual report addressing the following:

1. the status of attainment of the goal of diverting 30% of Delaware's residential solid waste;
2. an accounting of the Recycling Assistance Grant Program and recommendations for future funding of the program;
3. an assessment of the activities of both the DNREC and the DSWA in achieving the 30% recycling goal; and
4. such other recommendations as the RPAC shall deem appropriate.

Executive Order No. 82, issued by Governor Thomas Carper in September 2000, is attached to this report as Appendix A. A list of RPAC members can be found in Appendix B.

2.0 Recycling Public Advisory Council Activities

During 2005, the RPAC focused its efforts primarily on following up on the public meetings held in November 2004. At these meetings, RPAC Chairman Paul Wilkinson presented the recommendations of the signatories to the Memorandum of Agreement described in RPAC's Fourth Annual Report.

2.1 Public Response Document

The public meetings generated responses in the form of oral comments, e-mail messages, telephone calls, and letters. DNREC compiled the comments. RPAC, DSWA, and DNREC discussed them and decided how to respond. The resultant public response document was widely disseminated by direct mail and e-mail and was also posted on DNREC's website.

2.2 Support for Recycling Legislation

RPAC provided comment on, and gave final approval to, draft legislation intended to implement the recommendations developed jointly by RPAC, DSWA, and DNREC. This legislation would have included provisions to:

- Require residents to keep recyclables separate from trash;
- Require trash haulers to make curbside recycling available to their customers;
- Establish a fund to assist municipalities with the costs of implementing curbside recycling programs, with the source of the funding being a \$3 per ton assessment on all solid waste collected for disposal;
- Require residents to keep yard waste separate from trash; and
- Require haulers to deliver separately collected yard waste to a facility designed to process the material into mulch or compost rather than to a landfill.

The draft bill failed to gain legislative sponsorship. However, the governor, in her 2005 State of the State address, voiced support for recycling and announced that her staff would draft its own legislation. RPAC, along with DNREC and DSWA, cooperated with the governor's staff as they developed a draft bill, which gained sponsorship in the House and Senate and was introduced on June 29, 2005, as Senate Bill #225.

3.0 Recycling Assistance Grant Program

3.1 Grant Program History and Status

The Recycling Assistance Grant Program was established in 2001. The DNREC developed the grant criteria and selection procedures, with advice from the RPAC. For the FY01 grants, recipients were required to provide matching funds equal to at least 25% of the funds provided by the state. The DNREC revised the match requirement for FY02 and future years, on the recommendation of the DNREC's accounting office; the match requirement is now 25% of the total project cost.

Grant selections are made by the RPAC in conjunction with the DNREC.

The chart below summarizes the grant statistics for FY01, FY02, FY03, FY04, and FY05.

	State Funds Available	State Funds Requested*	# Applications Received	# Projects Funded
FY 2001	\$46,000	\$122,000	9	6
FY 2002	\$75,000	\$130,175	12	10
FY 2003	\$68,334	\$99,852	11	10
FY 2004	\$50,000	\$140,146	11	7
FY 2005	\$50,000	\$85,374	9	6

*Rounded to the nearest dollar

The period covered by this Annual Report encompasses the close-out of the FY04 grants, the awarding and implementation of the FY05 grants, and the announcement of the FY06 grants. The grant activities for all three fiscal years are described in the next three sections.

3.2 Close-Out of FY04 Grants

All FY04 grants ended on May 2, 2005. Each grant contract specified that a final report must be submitted to DNREC by that date and that no expenses incurred after that date would be reimbursed with grant funds.

Seven projects were approved for funding in FY04. The amount of state funding approved was \$50,000. The amount of funding awarded to each grant recipient, and the amount actually spent, are listed in Table 3-1 below:

Table 3-1. FY04 Grant Wrap-Up

<i>Grant Recipient</i>	<i>State Funding Approved</i>	<i>Amount Reimbursed</i>	<i>Brief Description of Project</i>
City of Delaware City	\$4,960.00	\$4,960.00	Expand curbside recycling program
City of New Castle	\$12,671.00	\$12,671.00	Purchase equipment for composting
Town of Newport	\$12,671.00	\$9,701.91	Purchase equipment for composting
City of Wilmington	\$6,975.00	\$6,975.00	Hire consultant to assess cost of implementing curbside recycling
Minorities in Agriculture	\$2,192.00	\$2,192.00	Expand recycling at DSU
City of Rehoboth Beach	\$3,045.00	\$3,045.00	Enhanced boardwalk recycling
University of Delaware	\$7,486.00	\$7,464.16	Composting education

Appendix C contains a more detailed description of each project, including objectives and accomplishments. Descriptions of projects funded in previous years can be found in RPAC's previous Annual Reports and on DNREC's recycling web page.

3.3 FY05 Grant Summary

In FY05, as in all previous grant years, the amount of funding requested by eligible groups exceeded the amount available. Six projects were selected for funding; however, because of the limited amount of money available (\$50,000), some of the grant applicants were asked to modify their proposals (eliminating some of their proposed activities) in order to reduce costs. Only two of the projects were funded to the full amount of their original proposal; the remaining five grant recipients agreed to accept less money than they had originally requested and to modify their projects accordingly.

Appendix C of this report contains the project descriptions for the FY05 grants.

3.4 FY06 Grant Opening

DNREC announced the FY06 grants in November 2005 and held five informational workshops between December 8 and December 20, 2005. Completed applications were due to DNREC by January 31, 2006. The amount of funding available for the grants is \$50,000.

3.5 Recommendations for Future Funding

The grant program has been severely limited by the small amount of funding that the state has provided. The Citizens' Work Group on Recycling recommended grant funding of \$500,000 per year to approach a diversion rate of 25%, stating that more grant money would be needed to achieve a higher rate. The amounts provided thus far are well below the recommended amount.

Achieving 30% diversion of RSW will require a substantial increase in recycling in the large municipalities and the unincorporated areas of the state. If our major tool for increasing the recycling rate is to be a grant program, that program must provide sufficient funding to enable cities, towns, and counties to implement sustainable programs that will capture significant quantities of recyclables.

The amount of grant funding that the RPAC recommends is \$100,000 per year. This still is far less than the amount recommended by the Citizens' Work Group on Recycling, and not enough to provide the larger municipalities with the money needed to implement programs that would substantially increase their RSW diversion. It would, however, be an improvement over the existing grant program.

4.0 DNREC Activities

DNREC's activities conducted in support of attaining the 30% diversion goal fall into four major areas: providing support to the RPAC, administering the Recycling Assistance Grant Program, conducting education and outreach designed to increase diversion, and addressing concerns about the impact that a ban on yard waste disposal would have on Delaware residents and businesses.

5.1 Support to the RPAC

In fulfillment of its responsibilities under Executive Order No. 82, DNREC has worked diligently to provide support to the RPAC. The tasks that DNREC has carried out in this area during 2005 included, but were not limited to:

- making meeting arrangements for all RPAC meetings;
- preparing and distributing agendas and minutes for all RPAC meetings;
- drafting (for RPAC review), finalizing, and distributing a document containing responses to all public comments received on the proposed mandatory curbside recycling program;
- preparing summaries of draft recycling legislation to facilitate understanding of the provisions;
- drafting (for RPAC review) and finalizing all Recycling Assistance Grant documents, such as application packages, contracts, and reporting forms;
- publicizing the grant program by means of press releases, announcements, direct mailings, and dissemination of information at environmentally themed events;
- conducting workshops for potential grant applicants; and
- preparing the RPAC's Annual Report.

5.2 Public Education and Outreach

DNREC conducted or participated in many activities in an effort to increase public awareness of recycling opportunities and to promote the grant program. DNREC staff updated its outreach materials for distribution at public events such as Earth Day, State Fair, and Coast Day. The outreach focuses on the environmental implications of individuals' purchasing decisions, and encourages them to sign a pledge promising to take specific actions to reduce their waste generation. As a result of these activities, thousands of Delaware residents received outreach and education on recycling.

DNREC continues to improve and augment the recycling information resources available on its website. All of RPAC's annual reports and meeting minutes, the Public Response Document, the legislation drafted by the Governor's Office, the complete New Castle County curbside recycling study, information on the Recycling Assistance Grant Program, and general information on recycling and composting can be found on the website, www.dnrec.state.de.us.

5.3 Addressing Yard Waste Concerns

The legislation drafted by the Governor's Office and introduced as Senate Bill 225 on June 29, 2005, contained provisions that would essentially ban yard waste disposal in the state's landfills. Some legislators raised concerns about the impact that such a law would have on residents and businesses in the state. DNREC acted quickly to address these concerns by creating the Yard Waste Management Committee, a group consisting both of stakeholders and of experts in the field of yard waste composting and mulching. This group met four times between August and December of 2005, established subcommittees to address specific areas of concern, and produced a final report in the form of consensus points to which the committee as a whole agreed. These consensus points support the RPAC's assertion that a ban on the landfilling of yard waste would be economically and technically feasible and would create business opportunities in the private sector.

The Yard Waste Management Committee's Consensus Points are included in this report as Appendix D.

In addition to creating and chairing the Yard Waste Management Committee, DNREC created a web page on which it posted information about the committee's activities as well as a variety of resources on yard waste management.

5.0 DSWA Activities

4.1 RECYCLE DELAWARE Drop-off Program

The DSWA continues to operate the RECYCLE DELAWARE program, one of the most successful and cost-effective voluntary drop-off programs in the nation. In FY05, approximately 21,161 tons of recyclables were received at RECYCLE DELAWARE centers. The materials collected at the centers are taken to the Delaware Recycling Center (DRC), an intermediate processing facility in Wilmington, where they are prepared for market.

List of all drop-off materials by Type and Quantity for FY 2005

	ONP	Plastic	Clear Glass	Brown Glass	Green Glass	OCC	Cans	Junk Mail	Batteries	Grocery Bags	Oil
Tons	11,746	988	1,181	370	797	2,366	665	1,476	55	86	1,385

4.2 Other DSWA Recycling and Recovery Programs

Curbside Recycling Program

In September 2005 DSWA expanded its curbside recycling program to serve all of Kent County. As of the end of December, DSWA was serving 5,600 customers (5,000 in New Castle County and 600 in Kent County). DSWA collected 2,628,000 pounds through the curbside program in FY05. This translates to an average of 26 pounds per household per week, for a recycling rate of over 40% per subscribing household.

Through a cooperative curbside recycling initiative called “Partners in Recycling,” many trash haulers are offering discounts to their trash collection customers who sign up for the curbside recycling service. In addition, DSWA is working with municipalities to provide service on a contractual basis. Currently, the City of Dover, Town of Odessa, and the City of New Castle have signed contracts.

Electronic Goods Recycling Program

In FY05 over 1,300 tons of electronic goods were recycled through DSWA’s electronic goods collection program. An average of fifty (50) high profile businesses and schools participate in this program each month.

Household Hazardous Waste (HHW) Program

In addition to the four regularly scheduled drop-off events for HHW, DSWA offered two special collection events in the City of Wilmington in 2005. The total amount of HHW collected at all events was 165,000 pounds.

Junk Mail and UBBM Recycling Program

DSWA has expanded its collection of mixed paper to most RECYCLE DELAWARE locations throughout the State and 13 U.S. Post Offices throughout Delaware. DSWA collected 948 tons from all participating Post Offices in FY 2005. DSWA diverted a total of 2,763 tons of mixed paper through its curbside, RECYCLE DELAWARE, and UBBM collection programs combined. This material is sent to the Marcal Plant in Elmwood, New Jersey, where it is used as feedstock to make various recycled paper products.

Glass Beverage Container Recycling Program

DSWA has a contract with NKS Distributors to take all glass beer containers collected through their statewide redemption programs. DSWA processes 4,500 cases of beer bottles a week (approximately 120 tons per month) at its DRC and is working diligently to establish similar partnerships with other distributors, with a goal of capturing all of the beer bottles returned to retailers under the bottle bill.

Yard Waste

During 2005 DSWA diverted 6,500 tons of yard waste from the working face of its landfills. The material was used at the landfills as ground cover or wet weather pads, or in the production of topsoil. In addition, DSWA began research into composting methods through a pilot plant program developed by Gore. This is being conducted at the DSWA Sussex County landfill located at Jones Crossroads.

Oil Filter and Waste Oil Recycling Programs

DSWA collected 483 tons of oil filters and 1,385 tons of motor oil from over 550 service stations and businesses throughout the state and from over 60 RECYCLE DELAWARE centers. On average, 1.4 million oil filters are sold annually in Delaware; DSWA collects over 1.2 million of those oil filters.

4.3 Assistance to Communities

DSWA continues to provide assistance to recipients of Recycling Assistance Grants in the form of containers, processing, and marketing services. As an example, the Town of Camden uses storage containers provided by DSWA for the recyclables collected in the Town's curbside recycling program. DSWA provides the transportation (through their contractor), processing, and marketing of the materials.

DSWA serves as the market outlet for the plastic containers collected in Rehoboth Beach's program and for the plastic bottles, shrink wrap, glass containers, and cans from Maryland's Midshore Recycling program.

4.4 Public Education and Outreach

DSWA continues to make Public Education and Outreach a priority. During FY05, DSWA continued to enroll more children into one of its most popular educational programs to date – Trash Can Dan and the Clean Up Kids – which is designed to teach youngsters how to recycle and to instill in them a sense of environmental responsibility. Since its startup, more than 8,300 children have enrolled in the Clean Up Kids Club.

Other outreach programs include classroom presentations, landfill tours, DSWA website, educational materials for Delaware teachers, brochures. In FY05, DSWA's Public Information Group had presentations and mailings that reached 192,000 contacts throughout Delaware and other countries. DSWA also provided information to more than 16,000 citizens through its toll-free Citizens Response Line and over 249,000 page demands on its website.

DSWA has continued its commitment to outreach through participating in public events. DSWA held its 5th Annual Earth Day Festival at Killens Pond State Park, near Felton, DE. Over 8,000 people enjoyed a day full of fun activities, games and environmental education. Other public events where DSWA provided information were the Delaware State Fair, Delaware Home and Garden Show, Delaware ENVIROTHON, DuPont RiverFest, Coast Day, America Recycles Day, Safe Summer Day, and several school presentations or events. DSWA also conducted its annual poster/calendar contest for children in grades Kindergarten through 5.

DSWA continues its "Talking Trash" Radio Series and also maintains its partnership with the Wilmington Blue Rocks, under which DSWA provides plastic recycling bins throughout the stadium designed to collect plastic bottles sold during its home baseball games. It is estimated that over 40,000 plastic bottles are sold through a 70 game season.

4.3 Assistance to Communities

In FY05 DSWA spent nearly \$6.8 million on its recycling programs. DSWA marketed the materials collected and received \$1.9 million in total revenues. This netted a total deficit of \$4.9 million, which was covered by revenues generated from DSWA's user fees.

Information on all of DSWA's programs is available on its website (www.dswa.com).

6.0 Recommendations

The RPAC's recommendations for increasing the diversion rate are as follows:

1. Enact legislation to permanently establish the RPAC.
2. Maintain the conditions in the Cherry Island landfill permit that are consistent with the provisions contained in S.B. 225.

On January 6, 2006, DNREC issued a permit to allow the expansion of DSWA's Cherry Island landfill. The permit contained certain provisions relating to recycling and yard waste management. The RPAC supports those conditions to the extent that they are consistent with provisions of S.B. 225, to which RPAC gave its support in June 2005. Specifically, RPAC recommends the following:

Yard waste should be banned from disposal in the landfill effective January 1, 2007;

DSWA should assume responsibility for management of the banned yard waste only if the private sector fails to provide the capacity to manage all of the diverted material; and

All state agencies (DNREC, DSWA, DelDOT, the Delaware Department of Agriculture, the Delaware Economic Development Office, the Delaware River and Bay Authority, etc.) should support development and operation of maximum adequate private sector or DSWA capacity to accept and process recyclables collected in single-stream systems.

3. Create a Delaware Recycling Fund to assist in the establishment and enhancement of recycling programs throughout the state.

The source of funding should be an assessment on all solid waste collected and/or disposed of in Delaware except for those materials destined for recycling.

Appendix A. Executive Order Number 82

EXECUTIVE ORDER NUMBER 82

TO: HEADS OF ALL STATE DEPARTMENTS, AGENCIES, AND AUTHORITIES, AND ALL POLITICAL SUBDIVISIONS AND GOVERNMENTAL UNITS OF THE STATE OF DELAWARE

RE: RECYCLING

WHEREAS, the average Delawarean produces 1,200 pounds of solid waste annually and much of that waste can and should be recycled;

WHEREAS, recycling saves energy and natural resources and conserves valuable landfill space;

WHEREAS, the Department of Natural Resources and Environmental Control (DNREC), the Delaware Solid Waste Authority (DSWA), and the Delaware Economic Development Office (DEDO) all promote varying aspects of municipal solid waste recycling in the State of Delaware;

WHEREAS, increasing Delaware's recycling efforts will benefit the environment and is in the public interest;

WHEREAS, increasing our recycling efforts over the long-term will require a strong commitment on the part of Delaware's youth;

WHEREAS, communities, schools, counties, municipalities and cities are the entities most able to increase recycling within their borders and need assistance to provide the tools necessary to start recycling programs; and

WHEREAS, while the majority of Delawareans think that recycling is important and are interested in doing more recycling, many Delawareans are unaware of current recycling opportunities.

NOW, THEREFORE, I, THOMAS R. CARPER, by virtue of the authority vested in me as Governor of the State of Delaware, do hereby declare and Order as follows:

1. It shall be the goal of this State to achieve a thirty (30) percent diversion rate for recyclables from Delaware's residential solid waste stream.
2. The DNREC, the Division of Air and Waste Management, in concert with the DSWA and the Recycling Public Advisory Council created herein, shall:

- a. Monitor the state's recycling initiatives and measure Delaware's achievements toward attainment of the thirty percent recycling goal;
 - b. Implement a grant program for use by communities, municipalities, counties and cities in reaching the statewide thirty (30) percent recycling goal specified herein;
 - c. Design and implement public educational efforts aimed at increasing public awareness of recycling opportunities.
 - d. Implement a public school recycling initiative whereby our school systems are able to participate in and benefit from increased recycling opportunities;
 - e. Provide technical assistance to local entities to assist them in increasing their recycling rates;
 - f. Provide administrative support to the Recycling Public Advisory Council; and
 - g. Promote any other measures identified by the Council to support the achievement of the thirty (30) percent recycling goal.
3. The DNREC shall make matching grants available to communities and local governments to implement programs to reduce the amount of residential solid waste disposed of in Delaware. Grants may be used for the implementation or expansion of recycling programs, encouraging composting of yard waste, implementing "pay-as-you-throw" programs or any other activity that supports the achievement of thirty (30) percent recycling goal. The DNREC, in conjunction with the Recycling Public Advisory Council, will develop criteria for the grants program by March 31, 2001. The criteria shall include, but shall not be limited to, the terms and conditions for obtaining a grant, grant selection criteria, match requirements, reporting requirements, and applicant eligibility. Match requirements for the grant program shall not be less than 25% local match. The availability of grant money shall be subject to annual appropriations by the General Assembly.
4. There is hereby established a Recycling Public Advisory Council. The Council shall be composed of nine members who shall be appointed by the Governor as follows:
- a. One member each from DNREC, DEDO, and DSWA;
 - b. One member representing County governments with such member being recommended by the Delaware Association of Counties;
 - c. One member representing municipal governments with such member being recommended by the Delaware League of Local Governments;
 - d. One member representing the recycling industry;
 - e. One member representing the waste hauling industry; and
 - f. Two members representing environmental or citizens' groups.
5. Members of the Council shall serve 3-year terms and may be reappointed. Members shall be appointed for staggered terms so that no more than 3 appointments shall expire in any one calendar year. For the initial appointments, 3 members shall be appointed for 1 year, 3 members shall be appointed for 2 years and 3 members shall be appointed for 3 years. Thereafter, all terms are three years. Members may not serve more than 2 consecutive, 3-year terms. Members may be reimbursed for travel to and from meetings. The governor shall appoint a Chairman from among the nine members. Actions of the Council shall be approved by a majority vote of the Council.
6. The Recycling Public Advisory Council shall:
- a. Advise the DNREC and the DSWA on all aspects of recycling;

- b. Advise the DNREC in developing grant criteria, including local match requirements, and selection of applications;
- c. Develop, in conjunction with DNREC and the DSWA, a methodology for measuring recycling rates;
- d. Advise the DNREC and the DSWA on possible outreach activities designed to achieve greater recycling rates;
- e. Report to the Governor and the General Assembly annually by December 1st of each year on the status of recycling activities in Delaware. Said report shall include, but not be limited to the following: (1) status of attainment of the thirty (30) percent recycling goal; (2) an accounting of the matching grants program authorized herein and any recommendations for future funding of the grants program; (3) an assessment of the activities of both the DNREC and the DSWA in achieving the thirty (30) percent recycling goal; and (4) such other recommendations as the Council shall deem appropriate.

Approved this ___ day of _____,2000

Governor

Attest

Secretary of State

Appendix B
Recycling Public Advisory Council Members

Paul Wilkinson, RPAC Chairman
Del EASI

Patricia Todd
League of Women Voters of Delaware

George Wright
Executive Director, League of Local Governments

Richard C. Cecil
Executive Director, Delaware Association of Counties

Pasquale S. Canzano
Delaware Solid Waste Authority

Barbara DeHaven
Delaware Economic Development Office

Paul R. Bickhart
Recycling Express of Delaware, Inc.

Steve Masterson
Waste Management of Delaware

James D. Werner
Department of Natural Resources and Environmental Control
Division of Air and Waste Management

Appendix C

Summaries of Recycling Assistance Grants for FY04 and FY05

FY 2004 Recycling Assistance Grants

Grant Recipient: City of Delaware City
407 Clinton Street
Delaware City DE 19706
302-834-4573
Contact: Paul H. Morrill, Jr.

Grant Amount: \$4,960
Amount Used: \$4,960

Project Description: Purchase 400 tubs and 200 lids for use by new subscribers to the City's curbside recycling program; create and conduct an educational and promotional campaign designed to increase participation in the program; monitor the effectiveness of the outreach program by maintaining a list of new subscribers and measuring the diversion of residential waste by means of DSWA reports on quantities disposed of and quantities recycled; purchase new tires for the recycling trailer.

Project Accomplishments: The city purchased the tubs and lids early in the grant year and distributed them throughout the year as residents signed up for the curbside recycling program. The program was publicized in newsletters mailed to all residents four times during the year, as well as on water bills mailed in July and January. Flyers posted around town supplemented these mailings. The city held no fewer than four promotional events to encourage residents to sign up for the program, with raffles and giveaways as enticements. During the course of the grant year, the number of subscribers grew from 262 households to 324. According to reports provided by DSWA, the quantity of recyclables collected from July 2004 through March 2005 totaled 79,624 pounds, as compared to 70,634 pounds during the same period the previous year. The city also purchased four new tires for the recycling trailer.

Grant Recipient: City of New Castle
220 Delaware Street
New Castle DE 19720
302-322-7489
Contact: David E. Skupien

Grant Amount: \$12,671
Amount Used: \$12,671

Project Description: Purchase a skid loader for use in the city's composting operation; purchase blades for the chipper used in preparing tree material for composting; develop a brochure explaining the yard waste program and the benefits of yard waste recycling; distribute the brochure by mailing it to all residents.

Project Accomplishments: The entire grant amount was applied to the purchase of a skid loader. As of the close of the grant period, the city had purchased the equipment and was awaiting delivery.

Grant Recipient: The Town of Newport
P.O. Box 3053
Newport DE 19804
302-994-6403
Contact: Rita Shade

Grant Amount: \$12,671.00
Amount Used: \$ 9,701.91

Project Description: Purchase a brush chipper and implement a chipping program to produce mulch from tree waste; purchase recycling bins and distribute them to 265 households in the town; implement curbside pickup of recyclables; deliver the materials to DSWA's processing center in Wilmington; create and conduct an educational and promotional campaign designed to encourage participation in the curbside recycling program.

Project Accomplishments: The town purchased a brush chipper but did not implement the other grant activities.

Grant Recipient: The City of Wilmington
Department of Public Works
800 N. French St.
Wilmington DE 19801
302-576-3069
Contact: Kash Srinivasan

Grant Amount: \$6,975
Amount Used: \$6,975

Project Description: Hire a consultant to conduct an assessment of the cost of instituting curbside recycling in the city for all residents that are serviced by the city's curbside trash collection; provide the consultant with accurate data on the city's trash collection costs as well as other relevant information requested by the consultant and necessary for the development of realistic cost estimates.

Project Accomplishments: The city hired DSM Environmental Services, Inc., to conduct the assessment. DSM's final report, issued on January 18, 2005, included the following conclusions:

If DSWA constructed a single-stream MRF in Delaware, and Wilmington (which provides twice-a-week trash collection) switched to once-a-week trash collection and once-a-week recyclables collection, the city's annual cost for handling both trash and recyclables would be about one percent higher than the current trash-only cost.

If grant money were provided to pay for two new trucks and for residential recycling bins, the city's cost for co-collection of trash and recyclables would be less than the current cost for trash alone.

Grant Recipient: Minorities in Agriculture
Delaware State University
1200 N. Dupont Hwy
Dover DE 19901
302-744-5586
Contact: Viniece Jennings

Grant Amount: \$2,192
Amount Used: \$2,192

Project Description: Expand and enhance the existing on-campus paper recycling program by adding new collection locations and improving accessibility to existing locations; conduct an educational campaign to encourage participation in the recycling program and to increase awareness of the importance of waste reduction and recycling; recruit additional volunteers to assist with the recycling project; monitor the participation in the program and track the quantity of paper recycled.

Project Accomplishments: Throughout the fall semester, representatives of Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) explained and promoted the recycling program in classes and at student town hall meetings. They also prepared and distributed an introductory e-mail and a

recycling guidelines bulletin, updated the organization's website to include links for the recycling campaign, and made a presentation about the program at the MANRRS national conference in April 2005. Also in April 2005, volunteers set up an Earth Day booth in the student center and distributed materials on a variety of environmental topics.

The university's facilities management office assumed responsibility for working with the recycler to expand the recycling program by placing receptacles in more locations and also for moving the receptacles to the loading docks for emptying by the recycler. An estimated 41,073 pounds of paper was recycled during the school year.

Grant Recipient: City of Rehoboth Beach
P.O. Box C
Rehoboth Beach DE 19971
302-227-4641
Contact: Gregory Ferrese

Grant Amount: \$3,045
Amount Used: \$3,045

Project Description: Enhance the on-the-boardwalk recycling program by purchasing and installing new lids with wasp flaps, as well as improved signage, on all 200 barrels used for the collection of aluminum and plastic containers; conduct an education and outreach campaign designed to increase participation in the program; track the quantities of materials collected for recycling.

Project Accomplishments: The lids were purchased, installed, and used during the 2004 beach season. New signage was also affixed to the barrels, in an attempt to better convey their purpose. The City Newsletter, containing a notice of the recycling effort, was mailed to more than 3,200 property owners. Despite these efforts, city workers continued to find large quantities of trash in the recycling barrels on the boardwalk. They were able to recycle 600 pounds of aluminum, but the containers designated for plastic bottles contained too much trash to allow for recycling of the plastic.

Grant Recipient: University of Delaware
Office of the Vice Provost
210 Hulliher Hall
Newark DE 19716
302-831-2997
Contact: Mark Manno

Grant Amount: \$7,486.00
Amount Used: \$7,464.16

Project Description: Continue the existing composting education program, which consists of hands-on workshops in elementary schools, camps, and after-school programs, and by offering in-service instruction on composting to teachers

Project Accomplishments: The composting education program reached a total of 5,693 people. In addition to presentations in venues such as schools and camps, activities included demonstrations at the Delaware State Fair and exhibits at environmental events such as the Earth Day celebration at Killens Pond State Park.

FY 2005 Recycling Assistance Grants

Grant Recipient: Village of Ardentown
2401 East Mall
Ardentown DE 19810
302-475-3708
Contact: Mary Ann Nelson

Grant Amount: \$6,320.00

Project Description: Build and operate a public composting site for Village residents, for the management of leaves and wood chips. Construct a Compost Demonstration Site consisting of several types of backyard composting units, signage, and a mailbox with educational brochures. Educate residents about managing yard waste on site (grass cycling and backyard composting).

Grant Recipient: City of Delaware City
407 Clinton Street
Delaware City DE 19706
302-834-4573
Contact: Paul H. Morrill, Jr.

Grant Amount: \$2,225.24

Project Description: Expand the city's residential curbside recycling program by providing recycling containers and by raising awareness of recycling issues through in-town marketing and advertising, with a goal of increasing the number of participating households to 450 (60% of total households) within the next two years.

Grant Recipient: City of New Castle
220 Delaware Street
New Castle DE 19720
302-322-7489
Contact: David E. Skupien

Grant Amount: \$10,000.00

Project Description: Purchase a vibratory portable screener for use in the city's yard waste composting operation to improve the quality, and thus the marketability, of the finished product. Improved compost marketability will enhance the sustainability of the program.

Grant Recipient: Delaware Center for Horticulture
1810 N. Dupont St.
Wilmington DE 19806-3308
302-658-6262 ext 24
Contact: Pamela Sapko

Grant Amount: \$5,124.00

Project Description: Develop, and propose to the City of Wilmington, a plan for diverting up to 300 tons of leaves collected by the City from residences. Design a pilot project for managing some of the leaves currently being taken by the City to a landfill.

Grant Recipient: Peoples Settlement Association/UHELP **Grant Amount:** \$13,588.00
408 E. 8th St.
Wilmington DE 19801
302-658-4133 ext 310
Contact: Keith Lake

Project Description: Plan and implement an educational/outreach initiative in the schools and the community to reduce illegal dumping and littering and to encourage waste reduction, reuse, and recycling in all sectors of the population.

Grant Recipient: University of Delaware **Grant Amount:** \$12,612.00
Office of the Vice Provost
210 Hullahen Hall
Newark DE 19716
302-831-2997
Contact: Mark Manno

Project Description: Continue the existing composting education program, which consists of hands-on workshops in elementary schools, camps, and after-school programs, and in-service instruction for teachers on composting. Print and distribute 5,000 brochures containing information on backyard composting.

Appendix D

Yard “Waste” Management Committee Report

Yard “Waste”¹ Management Committee Consensus Points

Introduction

Under the leadership of Governor Ruth Ann Minner the Department of Natural Resources and Environmental Control established the Yard “Waste” Management Committee (“Committee”) to advise the State on the effects of banning yard “waste” from disposal, as proposed in Senate Bill 225. These issues include educating various segments of the population on sustainable behavior and how to best manage their yard “waste,” the capability of the private sector to manage the material that would be diverted from the landfills, and the marketability of the products made from the diverted material. The Committee met four times between August and December of 2005 and established subcommittees to evaluate yard “waste” collection, processing, marketing, and education. In addition, the Committee reviewed guidance drafted by DNREC for the design and operation of composting facilities², considered the effect of a ban on homeowners and businesses, identified zoning and land use issues, made recommendations regarding enforcement, and considered the yard “waste” elements of Senate Bill 225.

To help respond to questions from legislators and their constituents concerning the impact that a proposed ban on yard “waste” disposal would have on Delaware residents and businesses, the Committee endorses the concept of such a ban and agrees to the following points:

1. Yard “Trimnings” are a Valuable Resource and Should be Diverted From Disposal

The Committee arrived at several broad but important conclusions regarding yard “waste” management in the State of Delaware based on experiences both in Delaware and in other states. These conclusions are listed below and are incorporated into the body of this report:

Yard “waste” is not a “waste” but a valuable resource and should not be disposed of or allowed to take up costly landfill space. To eliminate the negative connotation of “waste” this material shall be referred to as “yard trimmings.”

Private sector and local government solutions of managing yard trimmings have proven effective and should be encouraged.

DSWA may not be needed to manage this material and should serve only as the choice of last resort. Most states handle this at the county or municipal level or in the private sector.

Yard trimmings diversion promotes sustainability and a conservation ethic.

¹ Draft legislation SB 225 defines the term “organic yard waste” as “plant material resulting from lawn maintenance and other horticultural gardening and landscaping activities and includes grass, leaves, prunings, brush, shrubs, garden material, Christmas trees and tree limbs up to 4 inches in diameter.” The Committee recommends changing the term to “yard trimmings” and adding the provision that organic material not suitable for composting may continue to be delivered to landfills.

² The Committee recognizes the value of such guidance and agrees with DNREC’s intention to subject it to public review.

The issue of yard trimmings management in Delaware has been well studied. Further studies or questions can be handled as required.

The definition of “Organic Yard Waste” as proposed in SB 225 should be adopted as the definition of “Yard Trimmings” which is – plant material resulting from lawn maintenance and other horticultural gardening and landscaping activities and includes grass, leaves, prunings, brush, shrubs, garden material, Christmas trees and tree limbs up to 4 inches in diameter.

2. A Ban on the Landfilling of Yard Trimmings Would Require Only Modest Changes by Homeowners and Businesses

Homeowners and businesses would keep yard trimmings separate from trash and choose to manage it by:

- Keeping the material on site by composting, mulching, and grasscycling (using a mulching mower);
- Dropping off the material at a yard trimmings processing facility; or
- Arranging to have the material picked up (e.g., by a private hauler or landscaping company).³

3. No Significant Changes to Collection Systems are Expected to be Required

The private waste hauling industry is prepared and equipped to collect separated yard trimmings and transport it to processing facilities if the State implements a ban on landfilling this material. The collection capacity exists to handle all of the material that would be diverted from the landfills.

Each individual hauler would decide how to work this additional collection service into its business plan.

The hauling community believes that the establishment of several processing facilities throughout the state (at least one in New Castle and Kent County and two in Sussex County) would ensure a smooth transition for transport of the material.

The availability of scales at processing facilities is recommended to help the public make comparisons about tipping fees. The use of scales, however, will be at the discretion of the site owner/operator.

A ban implementation date 12 months after enactment or administrative establishment of the ban would allow enough time for haulers to gear up for the changes.

A review committee composed of an assortment of stakeholders is recommended to ensure that the yard trimmings management process remains on track and addresses issues as they arise.

Private haulers should not be held responsible for enforcing the requirement that residents and businesses separate their yard trimmings from their trash; this must be the responsibility of governmental entities that have enforcement authority.

³ The cost/price of yard trimmings pick up is uncertain and will depend on a variety of market factors, including fuel prices and disposition costs. Nevertheless, a recent study (“Analysis of the Impact of a Yard Waste Ban on Landfill Quantities and Household Costs,” Sept. 15, 2004, by DSM Environmental Services, Inc.) estimated that the monthly cost would be \$4 to \$5 in most areas and \$2 to \$3 in incorporated areas with organized trash pickup (see p. 50 of the report). The haulers subsequently reported to RPAC that they would expect the cost to range from \$3 to \$7 per month. However, innovative strategies such as co-collection and/or franchising of trash districts can reduce or possibly even eliminate these added costs. Homeowners’ flexibility in negotiating yard trimmings collection to suit their needs may also reduce these costs even further.

Municipalities will have to make provisions for the collection of yard trimmings. Several already have the framework in place.

4. Yard Trimmings Can be Converted into Useful Products

A variety of technologies for processing yard trimmings are well developed and can be applied in Delaware. Both “minimal” and “low” technology processing⁴ are currently being used in Delaware.

Yard trimmings can be processed without creating threats to human health or the environment. Processing facilities should adhere to “Best Management Practices” (BMPs). Draft guidance incorporating BMPs for processing facilities is attached to this report. DNREC should work with the potentially regulated community and public to develop a final guidance document for implementation and use.

The quality and marketability of the finished product depend to a large extent on the level of technology used in processing. Intermediate- to high-level technology⁵ should be encouraged so that high-quality products will be produced. At the same time, the Committee recognizes that some operations, especially those run by municipalities or communities, are interested not in producing a saleable product but rather in providing a service (and perhaps a free soil amendment) to their residents. These operations should be encouraged but may need some assistance in implementing measures to minimize potential threats to human health or the environment.

There is substantial private sector interest in managing yard trimmings in Delaware, and the private sector should be given every opportunity to manage the material. However, there is no guarantee that the private sector will step forward to process all of the diverted material. Therefore, the DSWA should be prepared to serve as the backup processor if necessary.⁶

5. More than Sufficient Markets Exist for High-quality Compost

Any Delaware business that wants to purchase a yard trimmings compost for its own use or for resale must import this material from an out-of-state manufacturer because it is not produced in Delaware. Yet Delaware continues to landfill its yard trimmings.

Much of the large woody material (stumps, limbs, etc.) in Delaware is already being processed. A yard trimmings ban will not adversely impact this market because the demand for finished mulch products is growing. There might be some price adjustments due to the sudden increase in feedstock, but tip-fee income should mitigate the impact. Carbon based bulking agents will also be in demand for composting leaves and grass.

⁴ As described by DSM in its previously cited report, “minimal” technology composting involves placing the material in large windrows and turning it infrequently (perhaps only once a year) with a front-end loader. Production of stabilized compost requires three years. “Low” technology compost involves smaller windrows and more frequent turning (determined by monitoring of temperature and moisture content) and produces stabilized compost in 12 to 18 months.

⁵ As described by DSM, “intermediate” technology composting involves the use of specialized windrow-turning equipment, frequent turning (about once a week), and production of stabilized compost in 4 to 8 months. “High” technology composting involves sophisticated methods such as static piles or in-vessel systems which are not appropriate for yard trimmings alone but may be appropriate for co-composting of bio-solids or food waste with yard trimmings.

⁶ SB 225 specifies that DSWA will provide this service if the private sector does not provide facilities capable of managing all of the yard trimmings requiring processing.

The demand for commercial grade compost is growing throughout the state. The addition of yard trimmings sourced materials may cause some disruption in the marketplace, depending on the amount of material and what entities are producing the product (for example, a municipality that produces a yard trimmings product will likely undersell a commercial operation). Nonetheless, in our neighboring states, the supply of yard trimmings compost almost never meets the demand and there's no reason to expect Delaware's production will be any different.

Government agencies that use large quantities of mulch and soil amendments (especially DelDOT but also DAS and possibly others) should be encouraged to use products made from diverted waste if they meet their specifications.

Because of the complexity involved in producing a high-quality composted product, the length of time the process requires, and capital costs involved (land and equipment acquisition), some form of subsidy or financial assistance may be required to help facilities get established, particularly for local government operations.

6. An Effective Public Education Campaign Should be Implemented

The public outreach effort should be designed to reach and gain the cooperation of all groups affected by the ban. These groups include households and businesses; political representatives; cities, towns, and counties; waste haulers; and processors. The focus of the outreach and the appropriate outreach tools will likely be different for each group. The educational effort should use proven methods of outreach that foster sustainable behavior.⁷

The educational campaign will require financial resources. Approximately \$1 per person per year should be allocated for initial promotion of the ban and education of the affected groups. This represents about 20% of the funding that will be available if Senate Bill 225 is enacted. After start-up, the annual amount budgeted for education and outreach should be reduced to about 50¢ per person per year (10% of the available funds).

Recommended components of an educational campaign are contained in the report of the Education Subcommittee.

7. Enforcement Should be a Tool of Last Resort; Emphasis Must be on Education

Some governmental oversight of processing facilities is necessary to prevent potential environmental problems such as odors and/or runoff.

The emphasis must be on education rather than enforcement. Only after education and compliance assistance by DSWA have proven ineffective should DNREC exercise its formal enforcement authority when addressing problems with yard trimmings management.

Any legislation, regulation, or guidance addressing the management of yard trimmings must contain a provision for the proper disposal of yard trimmings that are not suitable to be managed at a yard trimmings processing facility.

⁷ Recent research shows written materials to be effective tools for educating the public. Newspapers, bill stuffers, and direct mail are among effective vehicles for households. Flow charts and fact sheets that convey a lot of information in a concise format are effective for political representatives. More recommendations for conducting outreach to various impacted groups are outlined in the report of the Education Subcommittee (Sept. 28, 2005).

8. Zoning and Land Use Requirements Allow Opportunity for Mulching and Composting Operations to Become Established

In Kent and Sussex Counties composting facilities must be addressed by the county via the “conditional use” process. In New Castle County requirements would be determined by facility classification.

County government can encourage the establishment of these facilities by revising their zoning ordinances to include composting where appropriate and eliminating the need to go through the conditional use process.

Composting operations would be allowed in a variety of locations and those locations where they are specifically prohibited is limited.

9. The Committee Supports a Yard Trimmings Ban as has been Enacted and Implemented in 23 Other States

A ban on landfilling yard trimmings will give small businesses the confidence needed to invest in yard trimmings management facilities and equipment, resulting in multiple business opportunities for Delawareans.

Conclusion

The Committee supports the enactment of a yard trimmings ban in the State of Delaware. Such a ban, properly implemented and supported, will benefit the citizens of the state by increasing the life of our landfills, providing new or expanded business opportunities, returning valuable resources to the soil, making high-quality home-grown compost available to homeowners, and in general improving the sustainability of our lifestyle.