

# The Fourth Annual Report of the Recycling Public Advisory Council

January 2005

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The Recycling Public Advisory Council

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## *Executive Summary*

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### **Introduction**

During 2004 the Recycling Public Advisory Council (RPAC) tried to use the information provided by DSM Environmental Services, Inc., in its cost study of enhanced recycling in New Castle County, to urge specific actions by the state that would increase the residential recycling rate in Delaware. Specifically, RPAC:

- Continued to advise the implementation of a ban on the landfilling of yard waste;
- Assisted in the drafting of legislation intended to establish recycling goals and mandate recycling throughout the state; and
- Continued to advise the development of a Materials Recovery Facility (MRF).

### **Memorandum of Agreement**

On January 5, 2004, the RPAC authorized Chairman Paul Wilkinson to enter into a Memorandum of Agreement (MOA) with DNREC and DSWA to collectively pursue additional information and analyses that would lead to recommendations concerning mandatory curbside recycling on a statewide basis. The work to be done under the MOA included assessments of quantities of recyclables that would be amenable to curbside collection; market trends for sale and utilization of collected materials; reviews of mandatory curbside recycling programs throughout the United States; and estimated costs and revenues of the preferred recycling models considered feasible and effective for use in Delaware.

The tasks agreed to in the MOA were completed during 2004. Based on the findings, the RPAC, DSWA, and DNREC produced a draft summary report that included the groups' joint recommendations for the design and implementation of statewide mandatory curbside recycling and for a ban on the disposal of yard waste in the state's landfills. The groups also produced a PowerPoint presentation highlighting the major points of the draft summary report. Four public meetings – one in each county, plus one in the city of Wilmington – were held during November 2004 to present the proposal and to receive feedback from the public. RPAC Chairman Paul Wilkinson conducted the public meetings. A court reporter at each meeting recorded all of the public comments. RPAC subsequently discussed the comments, made decisions as to whether or not to change any of its recommendations, and prepared a response document to address all of the comments that were made.

The Final Summary Report and public comment response document are posted on DNREC's website. Copies also may be requested by calling DNREC's Division of Air and Waste Management at 302-739-3689.

### **Recycling Assistance Grant Program**

For FY04, as in previous years, the amount of grant funding requested by eligible groups exceeded the amount available. DNREC, in conjunction with RPAC, selected seven projects for funding, at a total funding amount of \$50,000. 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. The RPAC recommends that the grant program continue and that the amount of state funding available be increased to \$100,000 per year.

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## *1.0 INTRODUCTION*

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This is the Fourth 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*

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### ***2.1 Continued Support for a Ban on the Landfilling of Yard Waste***

Recognizing that increased yard waste diversion is essential to reaching our goal, the RPAC voted in 2003 to advise the State to implement a ban on the disposal of yard waste in the state's landfills. Accordingly, Chairman Paul Wilkinson sent a letter to DNREC Secretary John Hughes advising the development of regulations to effect such a ban by April of 2005. Secretary Hughes responded, in a letter dated November 18, 2003, that DNREC would initiate the process for development of a regulation to ban yard waste, with a goal for adoption of the final regulation in December of 2004. Subsequently, the legislature asked Secretary Hughes to delay taking regulatory action, in order to give the legislature an opportunity to address the issue legislatively. The regulation development was put on hold, and remains on hold, and, to RPAC's dismay, the legislature has taken no action on the issue.

### ***2.2 Support for Recycling Legislation Drafted by Sen. McBride***

Senator David McBride attended the RPAC's November 2003 meeting and asked for the RPAC's help in developing legislation that would "take recycling to the next level." The RPAC welcomed this legislative interest, assisted in drafting legislation, and spoke in favor of the legislation when it was being considered by the Senate. The Senate passed the bill on June 16, 2004. However, the House Policy Analysis and Government Accountability Committee did not release the bill for introduction into the House.

### ***2.3 Support for Development of a Materials Recovery Facility***

Believing that the primary obstacle to the implementation of curbside recycling programs is the lack of a MRF capable of processing commingled recyclables, the RPAC voted in December 2003 to send a letter to the DSWA advising the DSWA to develop a MRF in New Castle County capable of processing 30,000 tons per year of commingled recyclables. The letter was sent by Chairman Paul Wilkinson to N. C. Vasuki on January 8, 2004. It specifies that the MRF should be ready to begin operating by the end of 2005. The RPAC believes that, even without mandatory recycling, the presence of a MRF would result in increased recycling. Private haulers would begin to provide curbside recycling; the DSWA could continue its subscription service, but at a lower cost because the materials could be collected commingled; and the drop-off recycling centers could be converted to single-stream collection sites, thereby becoming more convenient for residents and more cost effective for the DSWA.

## ***2.4 Memorandum of Agreement***

On January 5, 2004, RPAC entered into a Memorandum of Agreement (MOA) under which DNREC, DSWA, and RPAC would collectively pursue additional information and analyses that would lead to recommendations concerning mandatory curbside recycling on a statewide basis. The work to be done under the MOA included assessments of quantities of recyclables that would be amenable to curbside collection; market trends for sale and utilization of collected materials; reviews of mandatory curbside recycling programs throughout the United States; and estimated costs and revenues of the preferred recycling models considered feasible and effective for use in Delaware.

The review of the assessments completed under the MOA, and the crafting of program recommendations based on the assessments, occupied most of the RPAC's time during the year. In November 2004, the RPAC, DSWA, and DNREC produced a draft summary report that included the groups' joint recommendations for the design and implementation of statewide mandatory curbside recycling and for a ban on the disposal of yard waste in the state's landfills. The groups also produced a PowerPoint presentation highlighting the major points of the draft summary report. Four public meetings – one in each county, plus one in the city of Wilmington – were held during November 2004 to present the proposal to the public and to receive feedback from the public. RPAC Chairman Paul Wilkinson conducted the public meetings. A court reporter at each meeting recorded all of the public comments. RPAC subsequently discussed the comments, made decisions as to whether or not to change any of its recommendations, and prepared a response document to address all of the comments that were made.

The documents developed as a result of this process – a Final Summary Report, a public comment response document, and draft legislation to implement the program recommendations – are available on DNREC's website, [www.dnrec.state.de.us](http://www.dnrec.state.de.us). Copies may also be requested by calling DNREC's Division of Air and Waste Management at 302-739-3689.



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## 3.0 *Recycling Assistance Grant Program*

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### 3.1 *Grant Program History and Status*

The Recycling Assistance Grant Program was developed in 2001. The grant criteria and selection procedures were developed by the DNREC, 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 match requirement was revised for FY02 and future years, on the recommendation of the DNREC's accounting office, to specify that grantee's match requirement is 25% of the total project cost.

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

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

	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

The period of time covered by this Annual Report encompasses the close-out of the FY03 grants, the awarding and implementation of the FY04 grants, and the announcement of the FY05 grants. The grant activities for all three fiscal years are described in the next three sections.

### 3.2 *Close-Out of FY03 Grants*

All FY03 grants ended on May 1, 2004. 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.

Ten projects were approved for funding in FY03. The amount of state funding approved was \$68,333.80 (funding exceeded \$50,000 because some of the money awarded in FY02 had not been spent and had been added to the amount allocated by the state's Budget Office for FY03).

The amount of funding awarded to each grant recipient, and the amount actually spent, are listed in Table 3-1 below:

**Table 3-1. FY03 Grant Wrap-Up**

<i>Grant Recipient</i>	<i>State Funding Approved</i>	<i>Amount Reimbursed</i>	<i>Brief Description of Project</i>
Christ the Teacher Catholic School	\$3,077.50	\$3,077.50	Education; collection of recyclables; purchase of recycled products
City of Dover	\$1,257.46	\$1,257.46	Outreach to residents
Del. Acad. of Science/Iron Hill	\$3,648.00	\$1,901.00	Outreach program and essay contest
Henderson Heights Civic Assn.	\$6,110.00	\$1,629.19	Recycling education and containers
Loyal Order of the Moose	\$1,200.00	\$ 873.55	Recycling education and containers
City of New Castle	\$2,250.00	\$1,438.10	Mobile recycling stations
Newark Parks and Recreation	\$4,133.30	\$4,133.30	Containers for recycling at public events
Newark Public Works	\$20,250.00	\$20,250.00	Site work to increase composting capacity
City of Rehoboth Beach	\$9,150.00	\$9,025.05	Implement recycling on the Boardwalk
University of Delaware	\$14,066.00	\$13,321.88	Composting education and bin sales

A more complete description of each project, detailing its progress and current status, can be found in Appendix C. Descriptions of projects funded in previous years can be found in RPAC's previous Annual Reports and on DNREC's web page.

### **3.3 FY04 Grant Summary**

In FY04, as in all previous grant years, the amount of funding requested by eligible groups exceeded the amount available. Seven 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.

The project descriptions for the FY04 grants can be found in Appendix C of this report.

### **3.4 FY05 Grant Opening**

DNREC announced the FY05 grants in October 2004 and held four informational workshops between November 30 and December 2, 2004. Completed applications must be submitted to DNREC by January 31, 2005. The amount of funding available for the grants is \$50,000. The Budget Office has informed DNREC that unspent money from the previous grant year may no longer be rolled over into the next grant year.

### ***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.

To divert 30% of RSW, we must substantially increase 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 be funded at a much higher level than the current \$50,000 per year.

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.

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## 4.0 DSWA Activities

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### ***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 FY 2004, approximately 19,141 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 2004**

	ONP	Plastic	Clear Glass	Brown Glass	Green Glass	OCC	Cans	Junk Mail	Batteries	Grocery Bags	Oil
Tons	12,487	1,159	1,186	363	780	2,286	741	928	53	86	1,397

### ***4.2 Other DSWA Recycling and Recovery Programs***

#### Curbside Recycling Program

In May 2003, DSWA started a Curbside Recycling Pilot Program to serve a test area in four Brandywine Hundred zip codes. In September 2004 the program was expanded to serve all of New Castle County. The program is a voluntary subscription service program that collects newspaper, junk mail, plastic bottles, cans, glass, corrugated cardboard and even yard waste. Customers pay a basic fee of \$6/month for the weekly curbside service. Yard waste collection has an additional \$3/month fee. The materials collected to date show an average recycling rate of 33% per customer. As of the end of November, DSWA was serving 2,700 customers.

#### Electronic Goods Recycling Program

The DSWA's electronic goods collection program, begun in July 2001, continues to be extremely successful. In FY 2004 over 1,000 tons of electronic goods were recycled. According to figures reported at a recent U.S. EPA (Region III) conference on electronic goods recycling, this quantity was greater than the combined total for Virginia, West Virginia, Pennsylvania, and Maryland. The materials (computers and computer peripherals, televisions, telephones and telephone peripherals, and electronic games) are taken to the DRC where they are sorted and packaged in preparation for recycling by a contractor working with OIC Industries in Wilmington, Delaware.

#### Junk Mail and UBBM Recycling Program

DSWA has expanded its collection of mixed paper to 60 RECYCLE DELAWARE locations throughout the State. The collection of mixed paper has expanded into a partnership with 12 U.S. Post Offices throughout Delaware. Each Post Office has committed to diverting its Undeliverable Bulk Business Mail (UBBM) from its trash containers to DSWA's roll-offs. DSWA collected 1,041 tons from all participating Post Offices in FY 2004. DSWA diverted a total of 1,969 tons of mixed paper through both the Junk Mail and UBBM collection programs. 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 currently has a contract with NKS Distributors to take all glass beer containers collected through their statewide redemption programs. DSWA is currently processing 4,500 cases of beer bottles a week (approximately 120 tons per month) at its DRC and is working with other distributors to establish similar partnerships.

#### Oil Filter and Waste Oil Recycling Programs

The DSWA's continuing commitment to providing cost-effective programs to divert recyclable materials from Delaware's waste stream is evident through its award-winning oil filter recycling program. DSWA employees collected 496 tons of oil filters and 1,397 tons of motor oil from over 485 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.

#### Other Initiatives and Recycling Programs

In addition to recycling the materials collected at the drop-off centers, the DSWA diverts scrap tires, white goods, construction and demolition (C&D) waste, and yard waste from the working face of its landfills. Tires are sent to a waste-to-energy facility; white goods are picked up by a recycler; C&D waste is taken to facilities in Philadelphia and Baltimore where it is processed into alternate daily cover material and subsequently returned to DSWA for use at the landfills; and yard waste is used at the landfills as ground cover or wet weather pads, or in the production of topsoil.

### ***4.3 Assistance to Communities***

The DSWA continues to provide assistance to recipients of Recycling Assistance Grants in the form of containers, processing and marketing services. DSWA continues to work with Delaware City and its curbside recycling program. The DSWA provided a full RECYCLE DELAWARE center specifically for storage of the materials collected in the program. The DSWA, through their contractor, also transported the materials to the DRC and processed and marketed the materials, all at no cost to Delaware City. The city now transports the recyclables to the DRC in its own trailer (purchased with grant funds), but the DSWA continues to bale and find markets for the materials.

Assistance provided to the Town of Camden was similar to that provided to Delaware City. The DSWA supplied storage containers for the collected recyclables. Camden

continues to use those containers, and DSWA provides the transportation (through their contractor), processing, and marketing of the materials.

The DSWA also serves as the market outlet for the plastic containers collected in Rehoboth Beach's program.

#### ***4.4 Public Education and Outreach***

DSWA believes in educating both children and adults about waste management issues. We all make trash. Learning how to make less and safely manage the rest will help us become responsible citizens. DSWA has developed many educational materials, curriculum packages, and lesson plans to help educate children about solid waste management, recycling and other environmental topics. DSWA continues to make Public Education and Outreach a priority. During FY04, 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. Members can earn prizes by searching for recycling points and participating in environmental activities. They also receive a membership kit that includes an original storybook, trading cards, stickers, and a magazine with games and fun recycling projects.

Although the Clean Up Kids program is designed for children, it also reaches parents with its message of responsible trash handling. Parents are encouraged to assist their children in completing recycling projects, and children help their parents look for materials that can be recycled instead of thrown into the trash. Other outreach programs include classroom presentations, landfill tours, DSWA website, educational materials for Delaware teachers, brochures. In FY 2004, DSWA's Public Information Group had presentations and mailings that reached 180,000 contacts throughout Delaware and other countries.

Through our comprehensive public information and education efforts, DSWA is truly planning for a growing Delaware. The DSWA has continued its commitment to outreach through participating in public events. DSWA held its 4<sup>th</sup> 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 was 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 will once again have its poster/calendar contest for children in grades Kindergarten through 5.

DSWA has strived to develop new ways of educating the residents of Delaware about important environmental messages. The continued development and delivery of DSWA's "Talking Trash" Radio Series has provided DSWA an opportunity to positively impact Delawareans throughout the entire State. Through a constant delivery of brief environmental messages, DSWA is able to reach individuals at work, school, and home. The DSWA continues to work with organizations, municipalities and homeowners on

projects that deal with increased awareness in recycling for Delaware. The DSWA will also be partnered with the Wilmington Blue Rocks by providing 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.

The purpose of environmental stewardship and sound solid waste management is to preserve the quality of life we enjoy today for future generations. Similarly, today's children — and tomorrow's community leaders — must understand the importance of handling solid waste responsibly through recycling, composting, and maintaining modern landfills.

In FY04 the DSWA also provided information and education to more than 19,500 citizens through its toll-free Citizens Response Line, and over 202,000 page demands on their website.

Information on all of DSWA's programs is available on its website ([www.dswa.com](http://www.dswa.com)).

## *5.0 DNREC Activities*

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DNREC's recycling activities fall into three major areas: providing support to the RPAC, conducting public outreach on the Recycling Assistance Grant Program and recycling in general, and providing technical assistance to grantees and potential grant applicants.

### *5.1 Support to the RPAC*

In fulfillment of its responsibilities under Executive Order No. 82, DNREC has worked very closely with the RPAC in administering the Recycling Assistance Grant Program and in providing support to the RPAC. The tasks that DNREC has carried out in this area include, but are not limited to:

- making meeting arrangements;
- preparing and distributing agendas and minutes for all RPAC meetings;
- assisting in the preparation of the Draft Summary Report of the MOA assessments and in the PowerPoint presentation prepared for public meetings, including making copies of presentation materials for distribution to all meeting attendees;
- drafting (for RPAC review) and finalizing a document containing responses to all public comments received on the proposed mandatory curbside recycling program;
- drafting (for RPAC review) and finalizing all grant documents, such as application packages, contracts, and reporting forms;
- publicizing the grant program by means of press releases, announcements, direct mailings, and participation in environmentally themed events;
- conducting workshops for potential grant applicants;
- conducting research (as resources allowed) as requested by the RPAC; and
- preparing the 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 developed new outreach materials, and updated existing ones, for distribution at public events such as Earth Day, State Fair, Newark Community Day, and Coast Day. DNREC



and RPAC also conducted recycling outreach and education for several civic associations at their request. As a result of these activities, thousands of Delaware residents received outreach and education on the issue of recycling.

DNREC also organized and hosted two training workshops intended to help both the public and private sectors begin to gear up for curbside recycling and enhanced management of yard waste. One course was a three-day workshop on waste collection efficiencies; the other was a two-day course on yard waste composting.

DNREC continues to improve and augment the recycling information resources available on its website. All of RPAC's annual reports and meeting minutes, 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](http://www.dnrec.state.de.us).

### ***5.3 Technical Assistance***

DNREC staff continue to assist grant applicants with preparing applications and with carrying out grant activities.

### ***5.4 Research***

At RPAC's request, during 2004 DNREC conducted research into several innovative technologies for recovering materials from the residential waste stream and recycling them into usable products. One such technology, currently in use in Tennessee, has captured the interest of DeLEASI and of several RPAC members as a potential means to recycle a large percentage of Delaware's residential solid waste. DNREC, in conjunction with DeLEASI, is looking into the technology and the company that employs it, WastAway, LLC. Through the use of a propriety system, WastAway processes mixed household garbage into a material called Fluff®. Fluff® can be extruded to make products such as fences, park benches, parking bumpers, or landscape timbers, or it can be processed into a growing medium. DNREC and DeLEASI are investigating such issues as the stability of the Fluff®, the environmental impacts of the process, and the safety and marketability of the products.

## *6.0 Recommendations*

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The RPAC's recommendations for increasing the diversion rate are contained in the State of Delaware Residential Curbside Recycling Report Documents, which have been provided to the Governor and the members of the Delaware General Assembly. The documents may be viewed on DNREC's website and may also be requested by calling DNREC's Division of Air and Waste Management.

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## *Appendix A. Executive Order Number 82*

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### 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 1<sup>st</sup> 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

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Secretary of State

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*Appendix B*

*Recycling Public Advisory Council Members*

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Paul Wilkinson, RPAC Chairman  
Del EASI

Patricia Todd  
League of Women Voters of Delaware

The Honorable Donald H. Mulrine  
Mayor, Town of Newport

Richard C. Cecil  
Executive Director, Delaware Association of Counties

Pasquale S. Canzano  
Delaware Solid Waste Authority

Robert Propes  
Delaware Economic Development Office

Paul R. Bickhart  
Recycling Express of Delaware, Inc.

Steve Masterson  
Waste Management of Delaware

John Blevins  
Department of Natural Resources and Environmental Control  
Division of Air and Waste Management

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## *Appendix C*

### *Summaries of Recycling Assistance Grants for FY03 and FY04*

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#### **FY 2003 Recycling Assistance Grants**

<b>Grant Recipient:</b>	Christ the Teacher Catholic School 2451 Frazer Road Newark DE 19702 302-838-8850 x129 Contact: Gina Scarmozzi	<b>Grant Amount:</b> \$3,077.50 <b>Amount Used:</b> \$3,077.50
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**Project Description:** Develop a flyer promoting the on-site 'RECYCLE DELAWARE' center; distribute the flyer to neighboring communities and students' families. Use the school newsletter, parish bulletins, signage, and school open houses to promote recycling. Purchase shredded tires as playground surface, purchase playground equipment made from recycled materials, and incorporate the use of these materials into lessons on the importance of "completing the cycle." Incorporate recycling lessons into the school's math, science, art, social studies, language arts, and music curricula. Purchase recycling bins to be used in the school for collection of recyclables, which will be taken to the on-site 'RECYCLE DELAWARE' center. Measure and record the quantities of materials recycled. Award prizes to students for outstanding achievement in promoting recycling and in creating artwork with recycled materials.

**Project Accomplishments:** The school's May 2003 newsletter included a discussion of the on-site 'RECYCLE DELAWARE' center and the goals of the recycling project. As of the end of the grant period, a flyer for distribution to several communities was being developed, with the expectation that it would be completed by the end of the school year. Recycling promotional materials were distributed at an open house during Catholic Schools Week. Shredded tire material for the playground was purchased in the summer of 2003. The school found that it had significantly underestimated the cost for the amount of material needed but decided to proceed with the purchase nonetheless, as well as purchasing playground equipment made from recycled plastic bottles. The school also purchased receptacles and placed them in the cafeteria and in the teachers' lounge for collection of cans and plastic bottles. Recycling has been incorporated into curricula in many subjects. Examples include: art projects using recycled materials; creation of graphs and charts to depict quantities of materials recycled; collecting recyclables for purposes of teaching math lessons; and purchasing recycling-themed books for the library. Prizes for outstanding class achievement and student artwork were to be awarded near the close of the school year (after the end of the grant period).

Monthly reports from DSWA show that the quantity of materials collected in the on-site 'RECYCLE DELAWARE' center has increased significantly since the inception of the project. For the period October 2003 through March 2004, the average quantity collected per month was 3,287 pounds, compared to 2,291 pounds for the same period a year previously.

**Grant Recipient:** City of Dover  
P.O. Box 475  
Dover DE 19903-0475  
302-736-7026  
Contact: Scott Koenig

**Grant Amount:** \$1,257.46  
**Amount Used:** \$1,257.46

**Project Description:** Develop a two-sided flyer to promote recycling of electronic goods and use of 'RECYCLE DELAWARE' centers. One side will describe Dover's program for collection old e-goods; the reverse side will contain information about 'RECYCLE DELAWARE' and maps showing all of the drop-off locations within Dover's sanitation service territory. Distribute the flyer by inserting it into residents' utility bills.

**Project Accomplishments:** The flyer was drafted, submitted to DNREC for review and comment, then sent for printing. The flyers were mailed out with the utility bills in May 2004, with approximately 19,000 flyers being mailed.

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**Grant Recipient:** Henderson Heights Civic Association  
2 Henderson Hill Road  
Newark DE 19711  
302-266-0211  
Contact: Lonnie D. Webb

**Grant Amount:** \$6,110.00  
**Amount Used:** \$1,629.19

**Project Description:** Survey residents to establish a baseline of types and quantities of materials currently being recycled and composted. Investigate residents' interest in receiving bins for collection of recyclables and for composting. Purchase recycling and composting bins; prepare decals, promotional materials, and guidance manuals; and distribute the bins and written materials to interested residents. Involve area youth and scouting groups in the recycling initiative (distributing questionnaires; signing up households; distributing bins; collecting recyclables). Involve children in creating posters, signs, and flyers about recycling, for neighborhood display. Determine and implement an appropriate method for collecting recyclables at the curb. Measure and record quantities of materials recycled. Conduct periodic follow-up surveys to determine whether residents' recycling and composting behavior has changed. Award prizes to youth and scouting troops for outstanding contributions to the program.

**Project Accomplishments:** Surveys conducted by the Association generated a list of 22 households expressing an interest in receiving bins for in-house storage of their recyclables. The project team decided not to purchase compost bins for distribution, reasoning that people could easily construct their own if they were interested in composting. They made a presentation to the neighborhood Brownie troop but determined that the members were too young to perform the duties of collecting and transporting recyclables, and they were unsuccessful in finding other youth interested in collecting the recyclables on a regular basis. Plans to involve children in making posters, signs, etc., did not materialize. With the expansion of DSWA's subscription curbside recycling program into the Henderson Heights area, there seemed little need for separate curbside pickup as planned by the project team seemed superfluous. As of August 13, 2004, recycling bins had been distributed to 15 residences. Five sets of bins have yet to be claimed by interested households.

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**Grant Recipient:** City of New Castle  
220 Delaware Street  
New Castle DE 19720  
302-322-9812  
Contact: Robert W. Martin

**Grant Amount:** \$2,250.00  
**Amount Used:** \$1,438.10

**Project Description:** Purchase two trailers; mount in-stock Waste Warrior collection receptacles on the trailers and affix signage to attract the deposition of cans and bottles for recycling. Use these mobile recycling stations to collect recyclables at no fewer than seven public events. Deliver the recyclables to appropriate facilities for recycling; measure and record the quantities recycled. Develop and implement a recycling outreach initiative.



**Project Accomplishments:** Only one trailer was purchased. Waste Warriors were mounted, signs were affixed, and the station was used at these events: May Market, Old Day in New Castle, Separation Day, Concert in Battery Park (7 successive Wednesdays), Art on the Green, New Castle Antique Show, and Old New Castle Run. A total of 63 pounds of cans, 57 pounds of glass, and 65 pounds of plastic were collected. At the end of the grant period, an educational brochure was in development.

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<b>Grant Recipient:</b>	Delaware Academy of Science, Inc. Iron Hill Museum 1355 Old Baltimore Pike Newark DE 19702 302-368-5703 Contact: Laura Lee	<b>Grant Amount:</b> \$3,648.00 <b>Amount Used:</b> \$1,901.00
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**Project Description:** Develop an outreach program appropriate to children in grades 3 through 6 designed to teach the impacts of human activities on non-renewable natural resources. Disseminate information about the program to schools and to the media. Present the program to individual classrooms. Encourage students to collect waste paper at home and bring it to school as “payment” for the presentation (the paper will subsequently be delivered to a ‘RECYCLE DELAWARE’ center). Offer prizes for the collection of cans. Conduct pre- and post-presentation surveys of students and their parents to measure the amount of recycling being done as well as the effectiveness of the program in motivating people to recycle more. Conduct an essay contest, with prizes being awarded to the winning essay writer.

**Project Accomplishments:** The program (“Whose Trash Is It, Anyway?”) was developed and implemented, and served not only grades 3 through 6 but a small number of younger students as well. The program met state education curriculum standards. Despite significant efforts to generate interest via press releases faxed to the media and schools, followed up with phone calls and mailings, requests for the program were slow in coming until word-of-mouth recommendations began to spread from teacher to teacher. Ultimately, the program was presented at 15 schools (reflecting 88 classrooms and 2,287 students), with the educator receiving more requests than she could fulfill toward the end of the grant period. Junk mail collected by the schools totaled about 4,565 pounds. Three schools collected cans for bonus prizes, with Townsend Elementary collecting the greatest amount (more than 800 cans). Students’ families were asked to complete questionnaires both before and after the children viewed the presentation. Responses indicate that of all the materials accepted by ‘RECYCLE DELAWARE,’ the one recycled by the greatest number of people is cans (40% of respondents), followed by newspaper (34%). Fifty-eight (58) percent of post-presentation respondents indicated that, as a result of the presentation, they had learned that junk mail is recyclable in the state’s program. Forty-eight (48) percent said that they knew the location of junk mail receptacles in their area.

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<b>Grant Recipient:</b>	The City of Newark Public Works Department PO Box 390 Newark DE 19715-0390 302-366-7040 Contact: Richard M. Lapointe	<b>Grant Amount:</b> \$20,250.00 <b>Amount Used:</b> \$20,250.00
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**Project Description:** Engage the services of a contractor to construct an access road to the city’s new composting site. Purchase equipment and materials necessary to site preparation and access road construction.

**Project Accomplishments:** Contract No. 03-19, “Site Improvements at Iron Glen Park,” was awarded to R. Julian Enterprises, Inc. The contract included the installation of an access haul road, clearing and grubbing of the compost area, and seeding. All equipment and materials required for the preparation of the site and access road were included in the contract. The work was completed on October 24, 2003.

**Grant Recipient:** The City of Newark  
Parks and Recreation Department  
PO Box 390  
Newark DE 19715-0390  
302-366-7060  
Contact: Joe Spadafino

**Grant Amount:** \$4,133.30  
**Amount Used:** \$4,133.30

**Project Description:** Purchase containers, liners, and decals for collection of recyclables at no fewer than three public events in Newark. Measure and record quantities of recyclables collected at each event, and deliver recyclables to appropriate recycling facilities. Make the containers available to the University of Delaware for use at University events.

**Project Accomplishments:** The City purchased 40 54-gallon recycling containers and 2 cases of liners. Decals indicating that the containers are for recyclable cans and bottles were also purchased and were affixed to the bins. The containers were used at five public events, resulting in the recycling of 157 pounds of materials. The quantity of recyclables collected increased at each successive event. The University was made aware of the availability of the containers but did not use them during the grant period.

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**Grant Recipient:** Loyal Order of the Moose  
Women of the Moose  
1932 Seneca Road  
Wilmington DE 19805  
302-652-7758  
Contact: April Garr

**Grant Amount:** \$1,200.00  
**Amount Used:** \$ 873.55

**Project Description:** Survey the target population (residents of The Woods subdivision and members of the Newark Moose Lodge) to determine their current waste handling practices. Encourage families to sign a pledge card agreeing to recycle. Purchase recycling bins and distribute them to the target population. Develop and distribute a flyer explaining why, where, and what to recycle. Involve the 4H Club in creating a tool for tracking the recycling activity. Measure and record the quantities of materials recycled.

**Project Accomplishments:** Flyers (“Hop on Board for Recycling”) and surveys were developed and distributed to all homes in The Woods development. The 4-H Club helped to stuff the hanging bags and distributed them throughout the neighborhood. Of the 70 recycling bins purchased, 44 were given to residents of The Woods and 26 to members of Newark Moose Lodge #630. Each person receiving bins filled out a survey describing current recycling habits and, in some cases, promising to recycle in the future. At least five families indicated that they had been thinking about recycling and that having the bins might motivate them to get started. Several others seemed surprised to learn of the wide variety of things that can be recycled.

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

**Grant Amount:** \$9,150.00  
**Amount Used:** \$9,025.05

**Project Description:** Purchase 200 barrels for collection of aluminum and plastic containers. Affix labels and place the barrels in pairs at 100 locations along the boardwalk. Purchase a trailer and two dumping hoppers for use in managing the collected cans and bottles. Deliver the recyclables to appropriate facilities for recycling. Conduct a multi-media campaign to promote the recycling program. Measure and record the quantities collected and recycled.

**Project Accomplishments:** The barrels, trailer, and hoppers were purchased and were used during the 2004 beach season. 4,100 pounds of aluminum cans were taken to a recycler. The program was advertised in the city’s newsletter, which was sent to 4,000 property owners. The material collected on the boardwalk was severely contaminated, and a significant amount had to be discarded. With the approval of DNREC,

the city used remaining grant money to hire a consultant to evaluate the program, identify the causes of the contamination, and recommend steps to take to improve the program so as to yield a cleaner product.

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<b>Grant Recipient:</b>	University of Delaware Office of the Vice Provost 210 Hullihen Hall Newark DE 19716 302-831-2997 Contact: Mark Manno	<b>Grant Amount:</b> \$14,066.00 <b>Amount Used:</b> \$13,231.88
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**Project Description:** Expand existing composting education programs by conducting hands-on workshops in elementary schools, camps, and after-school programs, and by offering in-service instruction on composting to teachers. Establish two compost demonstration sites in state parks (one in Kent County and one in Sussex County). Purchase backyard composting bins and sell them to the public at various public events throughout the state; use the money from the sale of the bins to purchase more bins and additional educational materials. Follow up the composting bin sales with questionnaires designed to gain information about the use of the bins and the amount of material being composted.

**Project Accomplishments:** The educator hired by the University to conduct the composting education program made 48 trips to schools as well as several scouting events and teacher in-service training sessions. A total of 4,388 people attended compost education sessions. She also spearheaded the establishment of two compost demonstration sites – one at Killens Pond State Park (Kent County) and the other at Trap Pond State Park (Sussex County). In addition, she sold compost bins on behalf of the Mid-Atlantic Composting Association (MACA), which had purchased bins using grant money in FY02; however, since MACA still has several hundred unsold bins, the University did not purchase additional bins to sell.

## **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

**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.

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**Grant Recipient:** City of New Castle  
220 Delaware Street  
New Castle DE 19720  
302-322-9812  
Contact: James Weldin

**Grant Amount:** \$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 benefits of yard waste recycling; distribute the brochure by mailing it to all residents.

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

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

**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.

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**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

**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 contracted with DSM Environmental Services, Inc., to analyze the potential costs of adding curbside recycling service to all households in the city. DSM conducted its assessment during the fall of 2004 and issued its report, "Estimated Costs of Adding Weekly Curbside Recycling Collection Service in the City of Wilmington," on Dec. 14, 2004. According to that report, if DSWA were to construct a single-stream MRF where the city could deliver recyclables with no tipping fee, Wilmington could implement a curbside recycling program that would result in a total annual system cost (for refuse and recyclables collection) only one percent above the current refuse-only collection cost. Further, if Delaware were to implement a Municipal Assistance Fund to cover the cost of new collection trucks and bins for the city, Wilmington could institute co-collection of refuse and recyclables (in dual collection trucks) at a system cost less than the current refuse-only collection cost.

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**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

**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.

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**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 city purchased and installed the new lids, purchased and affixed new signs, and used the containers on the boardwalk during the 2004 beach season. A final report on the impact of these improvements is pending.

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

**Grant Amount:** \$7,486

**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