APPENDIX D FLOW CONTROL

Thirty-five states (including New York) as well as the District of Columbia and the Virgin Islands directly authorize flow control, while four additional states authorize flow control indirectly through mechanisms such as local solid waste management plans or home rule authority. In New York State, a municipality is usually specifically authorized by the State Legislature to adopt flow-control legislation. Unlike several other states, New York explicitly states that flow control may cover source-separated recyclable materials. Currently, there are 37 New York municipalities (i.e., districts, towns counties, authorities) authorized by the State Legislature to enact flow-control legislation covering approximately 80 percent of the state's population.

New York State has been a primary stage for the legal battles on flow control. In 1994, in *C&A Carbone v Town of Clarkstown*, the Supreme Court's decision struck down the flow-control ordinance adopted by the Town of Clarkstown as unconstitutional because it violated the Commerce Clause of the U.S. Constitution. In this case, the town hired a private contractor to build a waste transfer station and enacted a flow-control ordinance requiring all solid waste generated within the town be directed to that transfer station. The basis of the decision was that solid waste is a commodity in commerce and that the Commerce Clause supersedes laws that discriminate against such commerce on the basis of its origin or destination.

At the time, this decision was widely viewed as invalidating most flow-control models, thus the impact on solid waste management in New York was significant. The results of a 1995 survey of planning units, conducted by DEC, indicated that 16 planning units had significant solid waste debt financing, and most respondents to the survey indicated that they anticipated modifications to several elements of their in-place or planned recycling programs because of the decision regarding flow control. Two-thirds of the respondents reported that a decrease in waste receipts of 10 percent or more would occur, with more than half the respondents reporting a loss of greater than 25 percent of waste flow.

It was reported at that time that few legal challenges to flow control laws had been pursued, but in response to the *Carbone* decision and fear of similar action, many municipalities simply chose not to enforce their flow-control laws. Several planning units reported that they would no longer be able to compete with the private sector due to lower tipping fees offered by private facilities. Planning units called on the state to re-evaluate its solid waste management legislation, regulations and enforcement to ensure a level playing field with the private sector. Many planning units claimed that in the absence of flow control, they would be unable to continue implementing their local solid waste management plans (LSWMPs).

Subsequent to the *Carbone* decision, private waste collectors challenged both the Town of Smithtown's and Town of Babylon's flow-control ordinances. In these cases, after lengthy legal proceedings, both of the towns' ordinances were ultimately upheld as constitutional. In the Town of Smithtown's case, the town enacted a local flow-control ordinance that required any authorized hauler that collected acceptable waste within Smithtown to dispose of such waste at a designated solid waste management facility. Smithtown established municipal garbage collection and disposal for all town residents by contracts with two waste-hauling companies to collect residential garbage and deliver it to the designated facility. In 1996, it was

ruled that the contracts were constitutional as the contractual agreement fell within the "market participant" exception to the Commerce Clause. This was because Smithtown was acting as a market participant in the solid waste management market by operating the town's solid waste facilities and was merely contracting out private haulers for waste transportation services rather than providing those services themselves. Smithtown was not regulating commerce and, thus, could dictate by contract which waste disposal services must be used.

In the Town of Babylon's case, the town established commercial garbage improvement districts within which a private hauling company, under contractual agreement with Babylon, agreed to collect the commercial garbage and deliver recyclables to the town's recycling facility and dispose of the remainder at the town's municipal waste combustor. Babylon paid the private hauler a monthly fee for the collection and disposal of such wastes. To finance the collection and disposal services, the town imposed an annual assessment against each commercial property within the district. In 1996, it was ruled that Babylon participates in the garbage collection market by purchasing garbage collection services from a private hauler. Thus, the court distinguished and upheld the town's waste management districts as a valid plan of a local government providing garbage collection services to its residents. Accordingly, this fell within the "market participant" exception to the Commerce Clause. Both the Smithtown and Babylon decisions cleared the way for contractual flow control.

After years of protracted legal battles, in 2007, in the case of *United Haulers Association v Oneida-Herkimer Solid Waste Management Authority,* the US Supreme Court ruled that local governments are permitted to engage in flow control to government-owned and operated facilities in specific circumstances. In this case, both Oneida and Herkimer counties' ordinances required that all solid waste generated within county boundaries be directed to processing facilities controlled by the Authority. It is important to note that in the majority opinion, it was reasoned that the counties had adopted an expensive waste disposal system that accepted recyclables and household hazardous waste for free to promote separation of these materials, and that the system they had devised enhanced their ability to enforce recycling laws. These provided public benefits that the justices viewed as overriding any burden that had been placed on interstate commerce.

The court found that the challenged ordinances in this case, unlike the ordinance in the Carbone case, conferred a benefit on a public facility rather than a private one, and that the ordinances treated all private companies the same. A significant note in the majority opinion was that local government plays a vital role in the collection and disposal of solid waste, that the State of New York had adopted a policy of displacing competition with regulation or monopoly control, and that nothing in the Commerce Clause vests the responsibility for that policy judgment with the federal judiciary. Consequently, the court held that flow-control ordinances, which treat in-state private business interests exactly the same as out-of-state ones, do not discriminate against commerce for purposes of the Commerce Clause.

The United Haulers decision is expected to modify the development and implementation of the programs for several, local, solid waste management programs. Although some municipalities have begun to again enforce their flow-control ordinances, a significant impact has not yet been seen.

APPENDIX E

HISTORY OF ESD FINANCIAL ASSISTANCE AND PROGRAMS

In 1987, the Petroleum Overcharge Restitution Act allocated $1 million to Empire State Development (ESD) to establish "a secondary materials utilization program." The legislation recognized that the amount of solid waste generated in the state was outstripping existing reuse, recycling and disposal capacity, and that industry reliance on virgin rather than secondary materials wasted energy that could be conserved with the adoption of secondary materials technologies by NYS firms. To implement the program, ESD created the Office of Recycling Market Development (ORMD).

In 1988, Article 14 of Economic Development Law extended the powers and responsibilities of ESD to provide financial and technical assistance to build market-driven capacity to recycle solid waste materials. In 1998, Article 14 (sections 260-264) was expanded to add pollution prevention to ongoing recycling market development responsibilities and directed ESD to assist businesses with the development of new technologies and capital investments to expand commercial recycling capacity, reduce waste and prevent pollution at the point of generation. ESD was authorized to provide feasibility studies, technical assistance, public education and recycling market information to further the development and efficiency of market-driven recycling and pollution prevention in New York.

Despite the broad market-development mandate, early funding was scant. From 1987 through 1993, ORMD implemented two key programs to facilitate recycling market development:

- Feasibility Study Grants of up to $100,000 (later raised to $200,000) were offered on a competitive basis to NYS firms to evaluate recycling technologies, processes, systems or products manufactured from recycled materials.
- Recycling Technology Financing (direct loans or interest subsidies) was offered competitively for the construction of recycling facilities or the acquisition of related machinery and equipment.

Through 1993, ORMD awarded nearly $2 million in feasibility study grants, committed $1.4 million in loans and interest subsidies, and directed an additional $36 million in loans, interest subsidies and loan guarantees from the Urban Development Corporation and the NYS Job Development Authority for recycling market development projects.

During this period, ORMD initiated several programs to address specific barriers to recycling adoption. Through the Business Waste Prevention Program in 1992, ESD contracted with trade associations and business service organizations to help businesses achieve waste reduction and recycling outcomes. ORMD supported the creation of three recycling market cooperatives, through which groups of municipalities marketed their recyclables as a single entity to obtain better prices to support their operating costs. ORMD established the NY Newspaper Recycling Task Force in the

early 1990s to persuade newspaper publishers to voluntarily convert to recycled newsprint, thereby creating a major new market outlet for recycled paper.

ENVIRONMENTAL INVESTMENT PROGRAM

Funding to support the ORMD mandate improved significantly with passage of the New York State Environmental Protection Act in 1993, creating the Environmental Protection Fund (EPF) as a dedicated fund to support recycling and other environmental initiatives. Beginning in 1994, ESD received annual allocations from the EPF. With a reliable source of funds to support the legislative mandate, ESD created the Recycling Investment Program (RIP).

In 1998, with the legislative expansion of ESD's investment authority to include pollution prevention, the Recycling Investment Program became the Environmental Investment Program (EIP), and ORMD became the Environmental Services Unit. The current mission of EIP is to assist New York State business investment in sustainable production through market-based recycling, pollution prevention and the development of new green products and process technologies. EIP assists projects that result in substantive improvements to environmental quality and associated economic benefits.

Environmental improvements may be achieved through:

- Expanded recycling capacity (which includes reuse, remanufacturing and composting) and diversion of solid waste from disposal to higher-value uses
- Pollution prevention and waste reduction below regulated thresholds
- Sustainable product and technology development and implementation (which must deliver measurable improvements to environmental quality when compared to existing products and technologies in the marketplace)

Associated economic benefits may include:

- Cost reductions from improved productivity and reduced regulatory, operating or purchasing costs
- Increased revenues from expanded production output or new product development
- Job creation and retention

EIP assists three types of projects:

- Capital projects assist in the acquisition of machinery and equipment and improvements to building, property, and infrastructure directly associated with the environmental outcomes achieved by NYS businesses. Non-profit organizations or municipalities apply on behalf of NYS businesses.
- Research, development and demonstration projects answer final questions standing between product/process prototypes and their commercialization or implementation and are available to New York State businesses or non-profit organizations.

- Technical assistance projects assist non-profit organizations or municipalities that help groups of NYS businesses to achieve measurable recycling, pollution prevention or sustainability outcomes.

EIP operates as an outcome-based funding program, and applications are reviewed competitively on multiple criteria, including: how well they compare to EIP investment benchmarks for recycling, pollution prevention and sustainability outcomes; associated economic benefits; return on investment; ability of the applicant to successfully complete the project, and the amount of private investment leveraged by the EIP award. Applicants must achieve environmentally significant and measurable results to receive funds.

EIP establishes investment priorities annually based on areas of greatest need and inefficiency in the marketplace and identifies specific strategies within each priority that receive highest consideration during competitive review. In Fiscal Year 2008/09, EIP investment priorities included paper, plastic, glass, tires, construction and demolition debris/building materials reuse, food processing waste and industrial pollution prevention.

EIP investment benchmarks grow more diversified and competitive as investment experience accumulates. For example, applications that seek to install plastic processing capacity are compared to all prior plastic processing projects on a per-ton basis to assess the amount of public investment needed to induce new processing capacity and the degree of value added to the material by the process. Industrial process changes that reduce the generation of SOx and NOx are compared on a dollars-per-ton basis with prior air emission reduction projects. Applications are also compared to similar historic projects for the degree of economic benefit they will achieve.

Since 1994, EIP has received $84.3 million in appropriations from EPF. In recent years (prior to the fiscal crisis), annual appropriations from the EPF were sustained at $8.75 million, which was consistent with the level of commercial interest and need for investment in recycling market development and sustainable production. However, actual authorization to spend these funds has lagged behind the appropriations. As of 2009, ESD spending authorization stands at $62.08 million, of which ESD has committed $59.74 million and earmarked the remaining $2.34 million to projects that successfully completed the competitive review process. EIP staff continue to work with a significant and growing backlog of additional projects awaiting competitive review once new spending authorization is granted for the balance of unspent appropriations.

From 1994 through 2008, EIP committed $59.74 million to 399 projects that leveraged $221.05 million in private sector support. Appendix 6.2.1 provides aggregated economic and environmental benefits achieved by all ESD environmental investments from 1987 through 2008, grouped by investment priority areas. In total these projects have:

- Established new capacity to recycle 3.329 million tons/year of secondary materials
- Developed the capacity to recycle 421 million gallons/year of water for beneficial uses
- Helped to create or retain nearly 4,800 jobs
- Created a recurring economic benefit estimated at $279.63 million per year

6.2.3 Pollution Prevention Partnerships

After the enabling statute expanded its investment authority to include pollution prevention, ESD sought project development partners that could work directly with manufacturing facilities to identify pollution prevention projects. Firms receiving assistance must comply with all DEC regulations, and the projects must reduce pollution below regulated thresholds through changes to the manufacturing process or product formulation. Pollution prevention (P2) projects must also be costeffective, ultimately saving the manufacturer more money than they invest through reduced regulatory, disposal, energy and input costs, coupled with new revenue through expanded production and improved product quality.

ESD found a ready partnership in the ten Regional Technology Development Corporations (RTDCs), whose mission is to work directly with small and mid-sized manufacturers to adopt enhanced production methods that yield greater productivity and competitiveness. Adding the competitiveness benefits of pollution prevention to the RTDC tool kit was a natural next step. Through EIP, ESD has contracted with multiple RTDCs to deliver on-site P2 project development assistance to manufacturers in their regions. Through these RTDC contracts, EIP has assisted more than 252 small and mid-sized manufacturers to adopt sustainable production practices that enhance their competitiveness and improve NYS environmental quality.

ESD recognized that the RTDCs could deliver greater P2 outcomes if they had more sophisticated evaluation tools and technical support to research potential solutions. In 2006, ESD contracted with the Rochester Institute of Technology (RIT), Center for Integrated Manufacturing Studies (CIMS) to create a prototype Pollution Prevention Institute. ESD directed RIT-CIMS to develop P2 diagnostic tools for the RTDCs to use in manufacturing site evaluations. ESD asked RIT to provide training and technical support to RTDC field staff to enhance the environmental impact and competitiveness of the P2 projects they developed. This project married the research and development capacity at RIT with the technology delivery capacity of the RTDCs to create a comprehensive network for advanced technology diffusion. As manufacturers remain essential to economic vitality, helping them to adopt the most sustainable and competitive practices enhances both environmental quality and economic growth.

Recognizing the value of the approach embodied in the RIT/RTDC partnership, in 2007 the state created a dedicated line within the EPF to channel more significant resources to create a state Pollution Prevention Institute(P2I). Subsequent to a DEC-led competitive bid process, the P2I contract was awarded to a consortium led by RIT and included the University of Buffalo, Clarkson University, Rensselaer Polytechnic Institute, and the RTDCs. ESD continues to work with the P2I on projects that enhance sustainable production methods that support the competitiveness of manufacturing in New York to ESD for funding.

6.2.4 Market Information Resources

ESD manages the Recycling Markets Database, which provides information about intermediate and end-use markets for recyclable materials. The database is searchable online and available to the public at: (http://www.empire.state.ny.us/recycle). It helps generators locate outlets for materials that can be reused, recycled or composted and helps end users access the raw materials they need to make new products. The database enables searches by material type and geographic regions for brokers, processors, manufacturers, compost facilities, reuse organizations and other recycling-related services in the Northeast and Canada.

ESU project managers maintain special expertise within various recycling, pollution prevention and sustainability sectors that reflect EIP investment priorities. Their expertise incorporates an understanding of market forces and technology driving viable business options, as well as networks of operators, regulators and stakeholders that contribute to business development in their various areas.

6.2.5 Pollution Prevention and Compliance Assistance

Since 1994, the Small Business Environmental Ombudsman (SBEO), an integral program of the ESU, has helped small firms understand their regulatory and reporting responsibilities under the Clean Air Act amendments and advocates on their behalf when regulation and enforcement become an undue impediment to business operation. In 2005, the Small Business Pollution Prevention and Environmental Compliance Assistance Program extended ESD responsibilities to encourage enhanced environmental management practices through all of ESD regional incentive projects. ESD assists business through the full spectrum of environmental responsibility, from compliance with regulation to voluntary actions that achieve recycling, pollution prevention and sustainable production methods.

ESD participates in the work of the Pollution Prevention/Compliance Assistance Council, chaired by DEC, which helps coordinate various environmental programs offered by DEC, EFC, ESD, NYSERDA and NYSTAR and strengthens the comprehensive offering of compliance through sustainability services to business.

Investments in Recycling, Pollution Prevention and Sustainable Products/Processes

Environmental Services Unit, Empire State Development

1987 - 2008

Priority Investment Area	ESD Investment	Private Sector Investment	TOTAL	Annual Economic Benefit Results or Committed	Annual Environmental Improvement Results or Committed
Air Emissions - projects that lead to a reduction of HAPS, NOx, SOx, VOCs, etc.	$2,535,836	$20,148,917	$22,684,753	$11,988,008	83 TPY NOx Prevented 161 TPY SOx Prevented 223 TPY VOCs/HAPs Prevented 216 TPY Other Air Emissions Prevented 490 TPY SW Prevented 106 TPY Hazardous Materials Prevented 495 TPY Hazardous Waste Prevented 315 Jobs Created/Retained
Business Waste Prevention - projects with trade and non-profit organizations to assist businesses with waste reduction and recycling	$671,612	$530,161	$1,201,773	$1,363,702	19,212 TPY SW Recycled/Reused 24 New Jobs 1,097 Companies Assisted
Construction and Demolition Debris Recycling/Building Material Reuse - Projects related to the reduction, reuse or recycling of brick, block, concrete, carpet, gypsum wallboard, insulation, metals, mixed C&D, paint, asphalt roofing shingles, wood	$2,679,032	$4,367,831	$7,046,863	$13,470,570	226,570 TPY Recycling Capacity Installed/Retained 485,445 TPY SW Recycled/Reused 54 Jobs Created/Retained

Electronics - recycling projects, including TVs, VCRs, DVDs, game boxes, computers and peripherals, phones, small appliances, toner cartridges, batteries	$2,120,270	$3,249,249	$5,369,519	$2,612,600	27,840 TPY Recycling Capacity Installed/Retained 36 Jobs Created/Retained
Glass - projects related to glass used as aggregate, container glass, glass dust and fines, plate glass and windshields	$3,738,288	$9,613,068	$13,351,356	$12,355,678	395,498 TPY Recycling Capacity Installed/Retained 227,249 TPY Recycled/Prevented 1.65 MGPY Water Reduced/Recycled 250 Jobs Created/Retained
Industrial Waste - projects include all industrial waste not otherwise listed–acids, aggregates, ash, clay, foundry sand, hazardous waste, medical waste, metal finishing, mine tailings, multi-media materials, solvents, swarf, toxic materials and waste oil	$12,811,900	$23,224,960	$36,036,860	$44,480,406	122,101 TPY Recycling Capacity Installed 161,337 TPY SW Recycled/Prevented 2,226 TPY Hazardous Materials Prevented 1,041 TPY Hazardous Waste Prevented 19.13 MGPY Water Reduced/Recycled 569 TPY NOx Reduced 723 TPY Other Air Emissions Reduced 1,184 Jobs Created/Retained
Metals - aluminum, auto salvage, ferrous and non-ferrous metals, lead, mercury, white goods	$1,694,532	$6,858,686	$8,553,218	$85,609,151	376,000 TPY Recycling Capacity Installed 295,743 TPY SW Recycled/Prevented 84 Jobs Created/Retained

Multi-Material Solid Waste Recycling - consultant studies and services, MRFs, used beverage containers, municipal recycling cooperatives	$2,409,623	$7,727,861	$10,137,484	$3,169,619	89,700 TPY Recycling Capacity Installed 49,539 TPY SW Recycled/Prevented 50 Jobs Created
Organics - compost, dairy processing waste/whey, food and food processing waste, grease and oil, manure/biosolids, wood, leaf and yard waste	$11,559,163	$33,241,351	$44,800,514	$36,402,338	864,738 TPY Composting Capacity Installed/Retained 556,667 TPY Composted 3,415 TPY SW Prevented 19 MGPY Water Reduced/Recycled 886 Jobs Created/Retained
Paper - boxboard, cardboard (OCC), confidential destruction, magazines, mill residuals, mixed paper, newsprint (ONP), office paper (OWP), poly-coated containers	$8,579,327	$39,682,244	$48,261,571	$20,146,650	875,746 TPY Recycling Capacity Installed/Retained 422,092 TPY Recycled/Prevented 367 MGPY Water Reduced/Recycled 1,324 Jobs Created/Retained
Plastics - composites, film, HDPE, PET, PS, PVC and other	$6,041,722	$9,399,670	$15,441,392	$15,193,727	97,154 TPY Recycling Capacity Installed/Retained 45,588 TPY SW Recycled/Prevented 124 MGPY Water Reduced/Recycled 291 Jobs Created/Retained
Reuse and Material Exchanges - industrial materials, office equipment, home furnishings, books, medical supplies and equipment, remanufacturing	$1,810,372	$3,228,334	$5,038,706	$6,393,691	1,968 TPY New Reuse Capacity 22,443 TPY Reused 1,270 Companies Assisted 11 Jobs Created/Retained

EXPLANATION OF TABLE AND TERMS USED

This table summarizes the investments in recycling, pollution prevention and sustainable product and process projects made by Empire State Development's Environmental Services Unit via various programs (including the Environmental Investment Program, the Recycling Investment Program, the Waste Tire Management Fund and the Secondary Materials Utilization Program) since 1987. ESU makes investments at or on behalf of private sector businesses in New York State. The majority of the investments have been made via the Recycling Investment Program and the subsequent Environmental Investment Program enabled by the NYS Environmental Protection Act in 1993. Prior to 1998, ESU was called the Office of Recycling Market Development.

TPY = Tons Per Year
SW = Solid Waste
MGPY = Millions of Gallons Per Year

Priority Investment Area - Each year, ESU establishes a set of investment priority areas. These are areas determined to be in greatest need of improvement and support. The set of investment priority areas changes somewhat so that not every priority investment area in this column is part of the current set. Some, however, like paper, plastics and glass, have always been on the list. ESU also identifies specific strategies within each priority area that receive highest consideration during competitive review. This also changes so that not every strategy or item described within each priority investment area is part of the current focus. All ESU investments made or committed since 1987 fall into one of these investment priority areas.

ESD Investment - This represents the total amount committed to or expended for projects supported by ESU (and ORMD) programs. There are three main types of investments: those that assist the private sector with the acquisition of machinery and equipment for pollution prevention, reuse, recycling and/or sustainable products and processes; research and development to help NYS businesses answer questions that will lead directly to pollution prevention, increased recycling or reuse, or the manufacture of sustainable products or adoption of sustainable processes, and those that support the provision of technical assistance to businesses to help with the adoption of pollution prevention, reuse or recycling practices.

Private Sector Investment - This represents the total amount of private sector support for projects leveraged by ESU Investments. ESU commitments require substantial matching funds.

TOTAL - ESU Investment plus Private Sector Investment

Annual Economic Benefit Results or Committed - ESU projects are performance based. Contractors (except research and development contractors) must set and achieve measurable environmental improvements and economic benefits to receive support. Economic benefits are expressed in annual rates (dollars per year) and are defined as the additional revenue (usually from the sale of a recycled product or feedstock) and/or savings accruing to one or more New York State companies as a result of the project. Savings generally comprise avoided disposal costs, avoided purchasing costs and/or other operational savings related to resource conservation or efficiency improvements. Contractors must verify that a specific annual rate of new economic benefit has been attained by the end of a

project. Figures in this column are the sum of the annual rates of economic benefit attained by completed projects and those estimated by projects currently under contract or in the contracting process.

Rates attained when projects were completed are assumed to be recurring. Because of staffing and resource shortages, ESU has never implemented a process to verify that the economic benefits attained at project completion have continued, been exceeded or have lapsed years later.

ESU's research and development projects are performance based but are implemented differently than others described here. Because they focus on resolving barriers and answering questions, R&D projects do not yield measurable economic benefits that can be counted in this section (benefits come later when investments are made to apply lessons learned from the research). Therefore, while ESU investment, private sector investment and total investment in R&D projects are captured in the columns to the left, because they cannot be easily quantified, benefits from ESU's R&D investments are underrepresented in this column.

Environmental Improvement Results or Committed - Environmental improvements that result from ESU projects may take many forms. In cases where ESU assists with the installation of new recycling machinery or equipment, environmental improvement is expressed as the rated recycling capacity (in tons per year or TPY) of that machinery or equipment. Also captured for *all* ESU projects (those that assist with acquisition of new recycling capacity, those that prompt new recycling, reuse or prevention practices via business outreach as well as research projects) are the tons of material recycled, reused or prevented as a result of the project. Contractors must verify that a specific environmental improvement, expressed as an annual rate, usually TPY, has been attained by the end of a project. For example, a project to install a new plastics recycling system must verify the installed capacity of the new system and must also verify by the close of the project that the system is up, running and successfully recycling X tons per year. Likewise, a local business assistance organization that helps 20 firms integrate new waste prevention practices must verify that X tons per year or gallons per year of material (solid waste, hazardous waste, air emissions or water) has been reduced or recycled as a result of the project.

Materials measured in tons per year (TPY) are solid waste, hazardous waste (prevented or reused within the same production process), hazardous materials (manufacturing feedstocks that are prevented as a result of the project) and air emissions, including BOD, COD, TSS, NOx, SOx, CO_2, VOCs, HAPs and others. Process water that is prevented, reused or recycled is expressed in millions of gallons per year (MGPY).

This column also captures the number of jobs created or retained in New York State as a result of the projects in this priority investment area. Also captured is the number of companies assisted from multi-firm projects.

Environmental improvements achieved when projects were completed are assumed to be recurring. Because of staffing and resource shortages, ESU has never implemented a process to verify that the environmental improvements attained or achieved at the time a project was completed have continued, lapsed or been exceeded years later.

APPENDIX F

PRODUCT STEWARDSHIP

See attached report on next page.

Framework Principles for Product Stewardship Policy

The following principles are intended to guide development of product stewardship policies and legislation that governs multiple products. It is primarily aimed at state legislation but is also intended as a guide for local and federal policy.

1. Producer Responsibility

1.1 All producers selling a covered product into the State are responsible for designing managing, and financing a stewardship program that addresses the lifecycle impacts of their products including end-of-life management.

1.2 Producers have flexibility to meet these responsibilities by offering their own plan or participating in a plan with others.

1.3 In addressing end-of-life management, all stewardship programs must finance the collection, transportation, and responsible reuse, recycling or disposition of covered products. Stewardship programs must:

- Cover the costs of new, historic and orphan covered products.
- Provide convenient collection for consumers throughout the State.

1.4 Costs for product waste management are shifted from taxpayers and ratepayers to producers and users.

1.5 Programs are operated by producers with minimum government involvement.

2. Shared Responsibilities

2.1 Retailers only sell covered products from producers who are in compliance with stewardship requirements.

2.2 State and local governments work with producers and retailers on educating the public about the stewardship programs.

2.3 Consumers are responsible for using return systems set up by producers or their agents.

3. Governance

3.1 Government sets goals and performance standards following consultation with stakeholders. All programs within a product category are accountable to the same goals and performance standards.

3.2 Government allows producers the flexibility to determine the most cost-effective means of achieving the goals and performance standards.

3.3 Government is responsible for ensuring a level playing field by enforcing requirements that all producers in a product category participate in a stewardship program as a condition for selling their product in the jurisdiction.

3.4 Product categories required to have stewardship programs are selected using the process and priorities set out in framework legislation.

3.5 Government is responsible for ensuring transparency and accountability of stewardship programs. Producers are accountable to both government and consumers for disclosing environmental outcomes.

4. Financing

4.1 Producers finance their stewardship programs as a general cost of doing business, through cost internalization or by recovering costs through arrangements with their distributors and retailers. End of life fees are not allowed.

5. Environmental Protection

5.1 Framework legislation should address environmental product design, including source reduction, recyclability and reducing toxicity of covered products.

5.2 Framework legislation requires that stewardship programs ensure that all products covered by the stewardship program are managed in an environmentally sound manner.

5.3 Stewardship programs must be consistent with other State sustainability legislation, including those that address greenhouse gas reduction and the waste management hierarchy.

5.4 Stewardship programs include reporting on the final disposition, (i.e., reuse, recycling, disposal) of products handled by the stewardship program, including any products or materials exported for processing.

Northwest Product Stewardship Council www.productstewardship.net Adopted May19, 2008
California Product Stewardship Council www.calpsc.org Adopted June 4, 2008
Vermont Product Stewardship Council www.vtpsc.org Adopted November 6, 2008
British Columbia Product Stewardship Council www.bcproductstewardship.org Adopted Dec. 9, 2008
Texas Product Stewardship Council www.txpsc.org Adopted January 30, 2009
NYS Assoc. for Solid Waste Management www.nysaswm.org Adopted March 11, 2009
New York Product Stewardship Council www.nypsc.org

ASTSWMO
PRODUCT STEWARDSHIP FRAMEWORK POLICY DOCUMENT PROJECT
TO BE ADOPTED BY THE ASTSWMO BOARD OF DIRECTORS
SEPTEMBER 2009

Prepared by the ASTSWMO Product Stewardship Task Force

INTRODUCTION

The following product stewardship policy document outlines many of the components and issues that states are grappling with as they consider how to effectively implement product stewardship for a wide variety of products and materials. The document is meant to serve as guidance in the development of state policy that addresses the environmental impact of products, particularly as states transition from a focus on individual products to a more comprehensive and consistent framework approach.

During the past decade, individual states have stepped forward to address specific products such as electronic waste or mercury-containing products. While these efforts have laid the foundation for broadening the understanding of product stewardship and illustrating how stewardship programs can function, individual product efforts are often very resource intensive for all stakeholders and may inhibit consistency between individual states. Given this experience to date, several states have stepped forward to propose a comprehensive product stewardship framework.

By implementing a framework approach, states can define the product stewardship program structure, set criteria for selecting products and then add products to the stewardship program either by regulation or legislative authorization. A framework approach can streamline the policymaking process to enable states to more efficiently expand their stewardship programs to include products that meet key criteria.

While seeking to address the more defined impacts of products in the solid waste system, states are encouraged to examine product stewardship as a strategy that may assist with other policy objectives, such as reducing greenhouse gas emissions and stimulating the growth of green jobs.

In 2009, several states, including California, Oregon, Washington and Minnesota, saw legislative proposals introduced to enact product stewardship framework programs, and a framework study and recommendations report was proposed in Rhode Island. It is expected that the framework approach will gather momentum in the coming years.

DEFINITION OF PRODUCT STEWARDSHIP

This document uses the following definition of product stewardship:

Product stewardship, also referred to as extended producer responsibility (EPR), is the extension of the responsibility of producers (often referred to as brandowners) and all entities involved in the product chain to reduce the cradle-to-cradle impacts of a product and its packaging; the primary responsibility lies with the producer or brand owner, who makes design and marketing decisions. (California Integrated Waste Management Board, 2007)

ARGUMENT FOR PRODUCT STEWARDSHIP

Product stewardship programs extend the role and responsibility of the producer of a product or package to include the entire life cycle, including ultimate disposition of that product or package at the end of its useful life. In these programs, producers must take either physical or fiscal responsibility for the recycling or proper disposal of products.

Instead of requiring local governments to fund collection and recovery programs for discarded products, stewardship programs incorporate the cost of disposal or recovery into the cost of the product, so those costs are borne ***jointly*** by the producer and the consumer, not by local government and taxpayers. This not only reduces the financial burden on communities, but it also ensures that consumers get proper price signals—materials that are easier to recycle or dispose of at the end of a product's life should be cheaper.

Stewardship programs reduce the financial burden on local communities. Local governments are required to manage and pay for whatever winds up on the curb, with little or no ability to influence the design of products or packaging to reduce management costs or improve recovery options. Costs are borne locally for production decisions made remotely, usually without consideration of waste management implications.

Product stewardship can be a powerful driver for the reduction of waste volume and toxicity. By placing responsibility for end-of-life management costs on the producer, these programs ensure that producers consider the end-of-life impacts of their product during the earliest stages of design. As such, stewardship programs create incentives for producers to redesign products and packaging to be less toxic, less bulky, and lighter, as well as more recyclable. Reducing material use and toxicity and increasing recycling results in significant environmental, economic, energy and greenhouse gas reduction benefits. Indeed, stewardship programs have led to products and packages that are less toxic, less wasteful, easier to recycle and otherwise less costly to manage.

Additionally, product stewardship relies on a performance-driven approach where state government's role is primarily one of oversight, and the programs are developed and implemented by manufacturers and the privately run stewardship organizations they employ to assure that performance goals are met. This is a "minimal government" approach which can be efficiently accomplished with relatively few public resources.

CRITERIA FOR IDENTIFYING AND SELECTING PRODUCTS

Many criteria could be used to determine which products or groups of products are selected for product stewardship programs. The list is neither exhaustive nor prescriptive and is not presented in either a particular order or priority. Grouping the criteria by policy questions should assist policy-makers in evaluating the relative importance of the criteria. When possible and appropriate, these criteria should be evaluated from the perspective of the total lifecycle of the product (extraction,

production, use and end-of-life management). It represents a combination of the criteria either in use or suggested for use in California, Ontario, Oregon and Washington.

Does the product present adverse environmental and public health impacts, including:

- Presence of toxic and hazardous constituents
- Opportunities for reducing waste and toxicity
- Total volume being disposed in landfills or waste-to-energy facilities
- Climate change impact

Does the product have potential for enhanced resource conservation, including:

- Potential for energy conservation
- Potential resource recovery and material conservation
- Opportunities for increasing reuse or recycling, recycled content, and design for reuse or recycling

Does the product significantly burden government solid waste programs and/or offer business opportunities, including:

- Management costs to governments, taxpayers, and solid waste ratepayers
- Difficult to manage in traditional recycling collection and other standard solid waste management systems
- Potential to act as a contaminant in solid waste management programs
- Existing or potential problems with illegal dumping
- Opportunities for existing and new businesses and infrastructure to manage products or product categories
- Level of collection/recycling infrastructure currently in place
- Opportunities to increase markets for materials
- Willingness of potential partners
- Success of other stewardship programs in other jurisdictions

DESIGNATING PRODUCTS

One of the primary purposes of a product stewardship framework is to establish a consistent and reliable process for identifying and selecting products to be managed under a product stewardship approach. To ensure consistency and that priority products are addressed, the framework should articulate a transparent, inclusive and objective process for designating products.

Key elements of this process can include:

- Public availability of product evaluation information
- Advisory process that includes impacted stakeholders
- Public process with defined decision points and timelines
- Opportunity for "appeal" of recommendations
- Identified public body as decision-maker

The selection process in the framework can be set up to occur ideally through administrative action, such as rule adoption, if statutory authority is provided, or by legislative action. Legislative action may be more appropriate for a particular state but is more resource intensive, less certain and can take more time to achieve.

The selection process, to the extent possible and practical, should include input and consultation with other states so that product inclusion in a stewardship program can be more efficiently coordinated.

FINANCING MECHANISMS

Although there are many variations, the financing for extended producer responsibility systems generally falls into two categories, cost internalization and ecofees. In *cost internalization systems*, producers have primary responsibility for designing implemented pay for a collection and recycling system. The costs of collecting and recycling the product are incorporated into the cost of the product just as all other costs associated with producing and selling the product are. There is no visible fee to the consumer or retailer. This allows companies to make their own pricing decisions internally and to distribute the costs according to their own business model and interests. It also gives producers the option of working independently or partnering with other producers. Some examples of this system are the electronics recycling laws in Minnesota, Oregon and Washington, the Rechargeable Battery Recycling Corporation (RBRC) and the Thermostat Recycling Corporation (TRC). (For more information on examples of stewardship programs, please see Appendix B.)

The other financing mechanism is an *ecofee*. An ecofee is a set amount paid on each item to a third party, often referred to as a stewardship organization. The stewardship organization then uses the funds to establish a collection and recycling program on behalf of the producers. The ecofee may or may not be visible to the consumer. It may be paid by the producer or by the retailer to the

stewardship organization. A set ecofee ensures that a producer will be able to pass on the cost of managing the product and ensures that the per-item cost to consumers is the same regardless of brand.

Ecofees should not be confused with governmentmanaged consumer fees often referred to as *advanced recycling fees (ARF) or advanced disposal fees*. In these systems, the government agency is responsible for collecting and managing the fees as well as implementing and managing the collection and recycling program. Because these responsibilities lie with the government agency, the fees are not a form of extended producer responsibility or product stewardship but, rather, a means to fund a government managed program. One example of this type of system is the tire management fees in place in many states.

STEWARDSHIP PLANS

Industry-developed stewardship plans are a key element of a state stewardship program and serve as the vehicle for implementing a program and replacing the programmatic details required by statutes addressing an individual product or material. Stewardship plans submitted by industry-managed and funded organizations or individual producers are featured in the Canadian stewardship programs in Ontario and British Columbia. For British Columbia's stewardship plan, please see:

http://www.env.gov.bc.ca/epd/recycling/paint/plan.htm.

While plans are developed by producers and brandowners of designated products, it is expected that other entities along the product chain, such as retailers, local government and recyclers will provide input on the plan and, if appropriate, make specific commitments to their role in the collection and recycling system.

To ensure that the proposed stewardship program is consistent with the overall framework policy objectives, state agency review of plans and approval may be warranted.

Stewardship plans may include:

- List of participating organizations
- Definition and scope of products to be addressed, including orphan and historic products
- Role and responsibilities for key players along the product chain
- Collection system information, including how a minimum collection service standard may be met—a state can consider whether it wants minimum collection services available and pre-set a minimum standard to assure available service statewide
- Processing/recycling information, including what steps will be taken to ensure environmentallysound management
- Anticipated resources and a financing mechanism to implement the plan
- Proposed performance goals

- Strategies to promote design for the environment (toxicity reduction, recycled content, recyclability, product longevity) for the product as well as any attendant packaging
- Public outreach and communications plan
- Public and stakeholder consultation activities in preparation of the plan
- Reporting and evaluation procedures

STEWARDSHIP ORGANIZATIONS

Stewardship organizations (also referred to as "third-party organizations") are often non-profit organizations formed to implement producers' responsibilities for designated products in a stewardship program. Stewardship organizations often carry out various functions extending beyond the collection and recycling to education and outreach efforts and reporting.

While stewardship organizations play an important role in establishing and managing collection and recycling efforts and offer a defined compliance option for producers, state policy should also ensure that producers have the option to implement individual programs that reflect their business model.

State policy should encourage the formation of stewardship organizations, for example, through the development of stewardship plans but also recognize that other state laws and regulations, such as those prohibiting anti-competitive conduct, may require amendment to support joint activity.

PERFORMANCE GOALS

Performance goals are essential for good program management, oversight and accountability. Producers and other stakeholders use performance goals to plan activities, track program implementation and verify accomplishments. Performance goals provide feedback to stakeholders so adjustments can be made to improve programs. It is important to note, however, that specific performance goals will vary by product or material in recognition of the differences in composition, distribution channels and end-of-life management options.

While an oversight entity such as state government typically establishes performance goals, it is important that the input from stakeholders, especially producers, stewardship organizations and other groups, be considered in that process.

Important performance goals to consider include:

- **Product goals** which are qualitative and quantitative goals to reduce environmental and health impacts of the product over its life cycle. These types of goals could include covering topics such as product changes from design to end-of-life management, distribution, reduced use of toxics and hazardous substances, reduced carbon footprint for the product, increased product longevity, and design for recyclability.

- **Collection rates** which quantify the amount of the product collected or captured through the system for reuse or recycling by an established date
- **Reuse/recycling rates** which quantify the amount of the product that is reused and recycled. This goal may include but is not limited to such things as reuse, recycling rates and other measures.

States may use different approaches for establishing performance goals. For instance, performance goals may be established as part of the product selection and designation process using the best information available to determine reasonable goals.

Another approach is to allow producers to establish their own performance goals (based on metrics established by state government in regulation) for a program's initial years, subject to review as part of the stewardship plan. For example, during the first four years, producers report on progress, but the goals are not enforceable. After a baseline is established, producers establish enforceable strategic goals for year five and beyond.

REPORTING

Reporting on progress toward meeting performance goals is fundamental to program oversight and evaluation and provides an opportunity for states to harmonize their programs through the use of similar reporting metrics. From this information, stakeholders can learn about what works best and encourage improved performance with time. Reporting and goals will need to be defined once a product has been designated, as measurement metrics must be customized to some degree.

In addition to the performance goals identified above, other measures to be addressed during reporting include:

- Weight of products recovered *per capita*
- Savings to local government
- Percent of product placed on the market that is collected, reused, recycled, recovered for energy or disposed in landfills
- Greenhouse gas emissions avoided
- Actions the producer or stewardship organization will take during the next reporting period if the performance goals were not met
- Description of outreach and education activities undertaken during the reporting period
- Actions undertaken to manage and reduce the life-cycle impacts of covered products and packaging, from product design to end-of-life management

As part of the reporting mechanism, it is anticipated that the stewardship organization will engage in ongoing evaluation to assess progress toward meeting the objectives of the program. However, this is meant to complement, not displace, the role of government oversight agencies to ensure that the stewardship effort is meeting public policy objectives.

COMPLIANCE/ENFORCEMENT

To ensure fairness and a level playing field, states need a way to verify information provided in producer reports and apply some type of penalty for producers who chose not to participate in a product stewardship program when required by law. For this reason, the state or its designee needs the right to audit the financial and operational performance of product stewardship programs and to verify information presented in reports. A common penalty is to restrict a product's market access; i.e., a producer loses the right to sell its product in a state if it is in violation of the stewardship program. Another penalty is to issue a financial civil penalty. The threat of a large penalty may be sufficient to ensure compliance.

Environmentally Sound Management

The stewardship framework should articulate a commitment to the environmentally sound management of products and create a mechanism to ensure that it is done without posing threats to human and environmental health. While this issue is of utmost concern for products containing toxic and hazardous constituents, it applies to any product or material that is being processed. Stewardship organizations can ensure that collectors and processors are adhering to best management practices by instituting requirements such as the Required Vendor Qualification Program developed by Electronics Product Stewardship Canada (EPSC) and used in provincial stewardship programs.

Incentives for Designing for the Environment

Product stewardship seeks to increase collection and recycling rates for certain products and promote the design and manufacture of more sustainable products. By internalizing the environmental costs of products into the sales chain, producers will have a defined economic incentive to reduce toxic and hazardous constituents as well as take steps to promote disassembly and recyclability. For example, automobile product stewardship programs in Europe and Asia have led to the standardization of materials, allowing for greater levels of recovery and much less auto shredder "fluff" requiring disposal. While there are several examples that illustrate the connection between internalization of costs and design change, many factors such as product lifespan and product complexity impact the effectiveness of this strategy.

Several other tools have been identified as effective in supporting development of environmentally preferable products. Materials restrictions, such as the Restriction on Hazardous Substances (RoHS) adopted by the European Union, as well as those referenced in several state electronics stewardship programs, present a potential policy avenue for reducing the use of certain materials of concern.

Another strategy gaining acceptance is to integrate product standards, certifications and eco-label programs into product stewardship efforts. Product standards such as Energy Star and EPEAT have been very effective at reducing certain aspects of a product's environmental footprint. States examining stewardship policy may want to include provisions to support these and similar product standards that are multi-attribute approaches.

Consistency/Harmonization between States

As with any new concept or process, it is essential that terms and their usage are universally understood by stakeholders. For example, stakeholders may know the general term "product stewardship" but may have a different perspective regarding its practical application. Governments may consider product stewardship in a waste management compliance sense, such as when producer responsibility laws require that the producer take back its products at their end of life. However, a producer may consider product stewardship in an engineering sense, such as when a producer strives to make their products less toxic. Both stakeholders are correct, though the focus of their efforts may not be the same.

As states adopt product stewardship, it is critical that the regulated community, which could include producers, retailers, recyclers and others, understands the terms used. It has become evident—with the variations in state laws that have been passed related to electronics recycling—that the regulated community is frequently confused by the scopes and provisions of various electronics recycling laws. The diversity of state laws complicates the regulated community's ability to comprehend and act in accordance with many different requirements and can impair states' abilities to compel compliance, particularly by stakeholders that do not have the means to hire consultants to keep abreast of emerging legislation.

Efforts must be made to ensure that product stewardship terms are consistently applied and universally understood. States and the federal government must make efforts to share their concepts and reach consensus as often as possible on product stewardship. In addition, it is essential that governments communicate with the regulated community to address their concerns and target their outreach and education efforts to producers, retailers, recyclers and others to ensure compliance with product stewardship regulations and statutes. Consideration could be given to developing model standard language for product stewardship laws and policies.

RECOMMENDED ROLE FOR THE FEDERAL GOVERNMENT

While regulated stewardship programs have been the province of state government to date, the federal government is poised to play an important role in facilitating state activity and promoting harmonization and collaborating among the states. This harmonization will benefit the regulated community and can decrease the resources necessary for state and local governments to implement programs. Several components of product stewardship programs may be best addressed by Congress or USEPA regulatory activity, such as restrictions on the export of certain products, addressing regulatory barriers to the reuse and recycling of certain products or materials and facilitating creation of industry-managed stewardship organizations.

USEPA can continue its role in facilitating coordination and collaboration among states, local governments, industry and non-governmental organizations to develop voluntary and regulatory approaches for reducing the environmental footprint of products.

USEPA can also support product stewardship through funding research that will:

- Lead to product design that will extend the life cycle of products and decrease "built-in obsolescence"
- Provide better data on the flow of materials—from extraction to disposal—to identify environmental impacts and opportunities for improved management
- Determine economic and social drivers that will influence greater public participation in recycling and product stewardship efforts
- Develop improved technology to increase the efficiency of waste recycling and to safely remove and dispose of hazardous materials
- Develop more uses for materials captured from recycling and product stewardship programs
- Lead to product design that will enhance recovery of useful components at the product's end of life

Finally, USEPA can engage the federal purchasing community and other large institutional purchasers to support development of products with stronger environmental attributes.

APPENDIX 1

Please see the following web resources which provided background information for development of this document.

Minnesota Pollution Control Agency Recommendations Report

http://www.pca.state.mn.us/oea/stewardship/study

California Integrated Waste Management Board EPR Framework Overview

http://www.ciwmb.ca.gov/EPR/Framework/Framework.pdf

Oregon Department of Environmental Quality Draft Framework Legislation

http://www.deq.state.or.us/lq/pubs/docs/sw/PSFrameworkLegdrafthandout080916.pdf

Washington Climate Action Team - Beyond Waste Implementation Working Group Draft Framework Legislation

http://www.ecy.wa.gov/climatechange/2008CATdocs/IWG/bw/10072008_7_product_stewardship_bill_draft.pdf

Discussion document: Towards a Proposed Canada-wide Action Plan for Extended Producer Responsibility

http://www.ccme.ca/assets/pdf/epr_cap_consult_e.pdf

Product Stewardship Institute's Principles of Product Stewardship

http://www.productstewardship.us/displaycommon.cfm?an=1&subarticlenbr=231

Product Policy Institute's Joint Framework Principles for Product Stewardship Policy

http://www.productpolicy.org/content/framework-principles

APPENDIX 2 - CASE STUDIES OF PRODUCT STEWARDSHIP PROGRAMS

ELECTRONICS

Minnesota

On May 8, 2007, Governor Pawlenty signed the Minnesota Electronics Recycling Act to facilitate collection and recycling of video display devices (televisions, computer monitors, and laptop computers) from households in Minnesota.

Brandowners of video display devices (VDDs) must annually register and pay a fee to the state and collect and recycle VDDs from households/consumers in Minnesota. The recycling obligation is determined by the weight of video display devices sold in Minnesota. At the end of each program year, brandowners file a report detailing the results of their collections for the year.

There are also specified roles for retailers under the act. Retailers are required to provide manufacturers with sales data for their respective brands and provide consumers with information regarding collection opportunities in Minnesota.

During the first program year (July 1, 2007 - June 30, 2008), 217 collection locations were registered with the Minnesota Pollution Control Agency, a substantial increase in the number of collection opportunities for Minnesota residents. Registered recyclers and collectors reported managing approximately 34 million pounds of eligible electronic devices from households in Minnesota. This translates into approximately 6.5 pounds *per capita* and represents a substantial increase in the volume of electronics collected from households prior to 2007.

Washington

Washington State's Electronic Product Recycling Law (Chapter 70.95N RCW) requires producers to provide recycling services at no cost to households, small businesses, charities, school districts and small governments in Washington as of January 1, 2009. Producers of TVs, computers (desktops and laptops) and monitors must finance the collection, transportation and recycling of these products. There must be a collection site in every county and one in every city with a population of 10,000 or more.

The law requires producers to register with the Washington State Department of Ecology and participate in an approved recycling plan to sell their products in or into the state by any means including internet sales. The law also created the Washington Materials Management & Financing Authority to administer and operate the standard plan for electronics recycling. By default, all producers must participate in the d plan unless they meet the requirements to operate their own independent recycling plan.

RECHARGEABLE BATTERIES

Rechargeable Battery Recycling Corporation

Following statutory producer responsibility requirements enacted in New Jersey and Minnesota in the early 1990s, producers of nickel-cadmium rechargeable batteries and battery-containing products founded the Rechargeable Battery Recycling Corporation (RBRC) in 1994.

The federal Mercury Containing and Rechargeable Battery Management Act of 1996 allowed for implementation of the national program to collect rechargeable batteries. Since its inception, RBRC has continued to evolve its program, expanding to include additional rechargeable battery chemistries in 2001 and adding cell phones in 2004. RBRC currently collects discarded rechargeable batteries at retail locations and other collection locations, including household hazardous waste facilities.

MERCURY-CONTAINING AUTOMOBILE SWITCHES

Maine

In 2002, the Maine Legislature enacted a producer-responsibility program to increase recovery of mercury-containing switches from automobiles.

The statute prohibits the sale of new motor vehicles with mercury switches and replacement mercury switches while requiring removal of all mercury switches prior to flattening, crushing or bailing. It requires auto manufacturers to “establish and maintain consolidation facilities” where the person who removed the switches (the end-of-life vehicle handler) can turn them in for recycling. The ELV handler has to maintain a log on switches collected. The manufacturers pay a $4 bounty for each switch turned in with the VIN recorded on the log.

PHARMACEUTICALS

British Columbia

A program to divert expired and/or unused medications from landfills and sewers, as well as to ensure safe and effective collection, has been in place since 1996. The public can return expired or unused medications at participating community pharmacies across British Columbia. The pharmaceutical industry voluntarily established the Medications Return Program (formally called British Columbia EnviRx) in November 1996. In 1997 it was regulated under the *Post-Consumer Residual Stewardship Program Regulation*. Brandowners of pharmaceutical and consumer health-care products are currently regulated under the *Recycling Regulation Program,* which allows consumers to return (at no charge) unused or expired medications to more than 95 per cent of participating pharmacies in the province.

The Medications Return Program is administered by the Post-Consumers Pharmaceutical Stewardship Association and funded by brandowners selling medications in British Columbia. This

program provides the pharmaceutical and self-care health products industries with a collective means of adhering to the requirements of the British Columbia *Recycling Regulation*.

PACKAGING

Ontario

The Waste Diversion Act was passed by the Parliament in Ontario in 2002. This act empowers the Minister to designate a material for which a waste diversion program is to be established. The first product category designated under the Waste Diversion Act was “blue box” packaging materials—glass, metal, paper, plastic and textiles—collected in curb side recycling programs.

The Waste Diversion Act creates a shared responsibility model for managing “blue box” materials with a 50-50 cost-sharing arrangement between industry and the municipalities. The Minister established a 60 percent recycling target for the Blue Box Program Plan. Its recycling rate for 2007 was 63 percent.

The act created a non-profit organization, Waste Diversion Ontario, that serves as the implementation entity for the act and oversees development of industry funding organizations to fulfill stewardship obligations.

For traditional recyclables generated from households, Stewardship Ontario was established in 2003 as the industry organization to fulfill responsibility for “designated blue box waste.” Stewardship Ontario is responsible for collecting fees from the approximately 2,000 stewards and then remitting funds to municipalities for their recycling programs.