

ASTSWMO

Product Stewardship Framework Policy Document

Prepared by the Product Stewardship Task Force
of the ASTSWMO Sustainability Subcommittee

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 is using 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. Internalizing the costs of end-of-life management into the cost of the product 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 life should be cheaper.

Importantly, 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 the products or packaging to reduce management costs or improve recovery options. The 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

There are many criteria that 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 generated or disposed in landfills or waste to energy facilities
- climate change impacts

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 over time 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 fall into two categories, cost internalization and eco-fees. In *cost internalization systems*, producers have primary responsibility for the design, implementation and management of 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. 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 *eco-fee*. An eco-fee 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 eco-fee 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 eco-fee 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 for similar products is the same regardless of brand. An example of this type of funding mechanism is the paint stewardship program that is being implemented in the State of Oregon following enactment of legislation authorizing a two-year demonstration project. The manufacturers of architectural paints will remit a fee to the paint stewardship organization that will then fund leftover paint collection and recycling activities.

Eco-fees should not be confused with government-managed 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 the responsibilities lie with the government agency, these 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 for paint, please see:

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

Stewardship plans are beginning to emerge in the context of the various State stewardship programs in the U.S. including the paint stewardship program enacted in Oregon in 2009. For the State of Washington's waste electronics plan, please see:

<http://www.ecy.wa.gov/programs/swfa/eproductrecycle/docs/StandardPlanBaseDocument2009.pdf>

While the plans are developed by the producers and brandowners of the 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
- Roles 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 if 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 environmentally-sound 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 the 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 need to be amended 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 the specific set of performance goals will vary by product or material in recognition of the differences, among others, 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 the environmental and health impacts of the product over its life cycle. These types of goals could include goals 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 towards 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 over time. These 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
- The savings to local government
- The percent of product placed on the market that is collected, reused, recycled, recovered for energy or disposed in landfills
- The greenhouse gas emissions avoided
- The actions the producer or stewardship organization will take during the next reporting period, if the performance goals were not met
- A description of the public outreach and education activities undertaken during the reporting period
- The actions undertaken to manage and reduce the life cycle impacts of the covered products and packaging including energy reduction, 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 towards meeting the objectives of the program. However, this is meant to complement, but not displace, the role of the government oversight agencies to ensure that the stewardship effort is meeting the 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. A large penalty can serve as a sufficient deterrent that it may never need to be used.

Environmentally-Sound Management

The stewardship framework should articulate a commitment to the environmentally-sound management of products and create a mechanism to ensure that the management of products and materials is done without posing threats to human and environmental health. While this issue is of utmost concern with 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 in use in the provincial stewardship programs.

Incentives for Design for the Environment

Product stewardship seeks to not only increase collection and recycling rates for certain products but to 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 complexity of the product, impact the effectiveness of this strategy. However, it is important to note that such design changes must be implemented in a broader materials context to ensure that alternatives do not pose a similar or greater environmental harm.

Several other tools have been identified as effective in supporting the 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 the Electronic Product Environmental Assessment Tool (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 the various electronics recycling laws. The diversity of the 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 much 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 collaboration among the States. This harmonization will benefit the regulated community and can decrease the resources necessary for State and local governments to implement programs. There are also several components of product stewardship programs that may be best addressed by Congress or U.S. EPA 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 the creation of industry-managed stewardship organizations.

The U.S. EPA can continue its role in facilitating the 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. Facilitation of

product stewardship efforts should be continued and expanded by U.S. EPA through its ongoing emphasis on resource conservation.

The U.S. EPA 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, U.S. EPA can engage the federal purchasing community and other large institutional purchasers to support the development of products with stronger environmental attributes.

Approved by the ASTSWMO Board of Directors, October 28, 2009, Bethesda, MD

Appendix A

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

Minnesota Pollution Control Agency Recommendations Report

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

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/PSFrameworkLegdraftandout080916.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

(the Canada-wide Action Plan for Extended Producer Responsibility adopted in principle on 10/29/09 by the Canadian Council of Ministers of the Environment is available at

http://www.ccme.ca/assets/pdf/epr_cap.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 B- Case Studies of Product Stewardship Programs

Electronics

Minnesota

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

The brandowners of video display devices (VDDs) must annually register and pay a fee to the State as well as 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 as well as 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 covered 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 in order 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 Standard 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 the 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 in 2004 adding cell phones. 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 the 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 the removal of all mercury switches prior to flattening, crushing or bailing. It requires the 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 end-of-life vehicle (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 then in 1997 it was regulated under the *Post-Consumer Residual Stewardship Program Regulation*. Brand-owners of pharmaceutical and consumer health-care products are currently regulated under the *Recycling Regulation* and this program allows consumers to return (at no charge) unused or expired medications to over 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 brand-owners 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. The Waste Diversion 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 collected in curb side recycling programs -- glass, metal, paper, plastic and textiles.

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. The 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 the development of the industry funding organizations to fulfill the 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.