

THE STATE OF ELECTRONIC RECYCLING IN MICHIGAN



Electronic waste collected at Valley City Environmental Services, Inc., Grand Rapids



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EXECUTIVE SUMMARY

Electronic products contain hazardous materials but also, valuable resources. The proper and safe management of these products at the end of their lifecycle is an ongoing concern and opportunity. Michigan's Electronic Waste Takeback Program was established in 2008 through Part 173 of the Natural Resources And Environmental Protection Act, Act 451 of 1994, as amended. The law is generally consistent with the trend to encourage or require the manufacturers, retailers, and consumers of products to bear responsibility for the full lifecycle costs of those products. While the law has helped give rise to the increased recovery of electronic waste in the state, the voluntary goal established by law has not been met, and the program has underperformed, especially when compared to other Great Lakes states.

The purpose of this document is to examine the state of electronic recycling in Michigan and to make recommendations to improve Michigan's Electronic Waste Takeback Program.

THE MICHIGAN RECYCLING COALITION MAKES THE FOLLOWING RECOMMENDATIONS:

- The current voluntary goal for video display devices should be replaced with a mandatory goal that applies to all covered electronic devices.
- The list of covered electronic devices should be expanded.
- A system of transferrable credits should be established.
- A variable fee structure should be established and enforced, including penalties for non-compliance and late registration or reporting, while rewarding programs for early registration and reporting.
- Out-of-state recyclers should also be required to register with the State.
- A phased-in disposal ban, consistent with Michigan's Solid Waste Policy, should be considered.
- A statewide education and outreach program should be developed.
- Robust data collection should take place and be integrated with a statewide materials recovery and recycling data collection program.

INTRODUCTION

Consumer electronics are a growing part of daily living. Electronic products, especially older models, contain lead, mercury, cadmium, and polybrominated flame-retardants that are used to make them more energy-efficient and safe for the user, but create a potential public health and environmental concern when disposed. In addition, electronic equipment contains resources that have marketable value. Commodities such as copper, steel, aluminum, plastic, precious metals, and rare earth elements are found in electronic products.

The proper and safe management of these products at the end of their life is an ongoing concern. The purpose of this document is to examine the state of electronic recycling in Michigan and to make recommendations to improve Michigan's Electronic Waste Takeback Program. Improvements to the law will increase material recovery, make the law more consistent with surrounding states, and enhance the business climate for all stakeholders involved in both the manufacture and recycling of electronic products. Improvements will also help ensure that the costs associated with recycling those products is not borne solely by local government but by the manufacturers and, ultimately, the consumers and users of those products.

It is recognized that some of the recommendations contained herein have a greater likelihood of adoption in the short term and some of the recommendations will require a longer time frame for development and implementation.



Electronic Waste Collection in Meridian Township

CURRENT ELECTRONIC WASTE TAKEBACK IN MICHIGAN

Michigan's Electronic Waste Takeback Program was established in 2008 through Part 173 of the Natural Resources And Environmental Protection Act, Act 451 of 1994, as amended.

As of April 1, 2010, the State of Michigan required all manufacturers of televisions and computers being sold to residents and small businesses to develop free, convenient takeback programs for their products. In 2011, printers were added to this requirement by including them in the definition of computers.

According to the law, manufacturers who are selling new TVs and computers in Michigan must:

- Register with the Department of Environmental Quality
- Have an electronic recycling (takeback) program that is free and convenient for households and small businesses (less than ten employees)
- Maintain a website and otherwise inform consumers how to recycle TVs and computers
- Submit annual information about their takeback program (number of units collected, names of collection or recycling agencies involved)

Retailers must:

- Sell only new computers and TVs produced by registered manufacturers

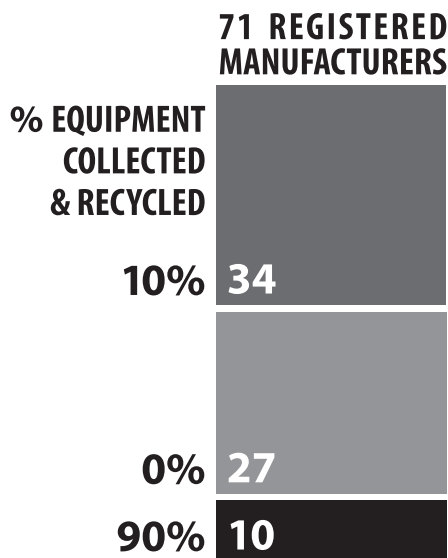
Recyclers of TVs and computers must:

- Register with the Department of Environmental Quality
- Comply with federal and state recycling laws
- Annually report the amount of recycled material and the names and locations of recycling facilities under their direct control in Michigan who processed the recycled equipment

Section 17313 of the law established the Electronic Waste Advisory Council (EWAC) and stipulates that by April 1, 2012, the EWAC shall submit a report to the governor, the Department of Environmental Quality, and the relevant standing committees of the legislature, evaluating the program under this part and making recommendations to improve the recycling of covered electronic devices.

IMPACT OF MICHIGAN'S LAW

As Michigan enters its third program year for the Part 173, Electronics, registration program, 63 TV, computer, and printer manufacturers are registered for FY 2012. Sixteen (16) electronic waste recyclers are registered for FY 2012 (20 in 2011). In 2011, 71 manufacturers registered and 20 recyclers registered. Total revenue received by the Part 173 program from 2009 through 2011 was \$478,000 and reported expenses were \$338,000.



In 2010, approximately seven million pounds of televisions and computers, were recycled by registered manufacturers in the six months that covered equipment was required to be collected. In 2011, sixteen and a half million pounds of televisions, computers, and printers were recycled.

All manufacturers of televisions, computers, and printers are required to have free and convenient takeback programs. Twenty-seven of the seventy-one registered manufacturers did not collect any equipment through their takeback program. Ten manufacturers collected 90% of the total amount of equipment recycled.

Television manufacturers have a nonbinding target of recycling 60% of their sales by weight. Eleven of the thirty-six television manufacturers met or exceeded the non-binding target. Seven reported that they did not recycle any equipment. Approximately thirty-two million pounds of televisions were reported sold in Michigan and approximately ten million pounds of televisions were reported recycled resulting in an overall recycling rate of 31%. However, Part 173 does not require computer manufacturers to report sales and, as a consequence, Michigan does not have data on the percentage of computer or printer sales that were recycled.

COMPARISON TO OTHER STATES

Michigan is one of twenty-five states in the U.S that have electronic recycling laws. Those laws cover approximately 66% of the U.S. population and generally fall into one of four categories:

- Advance Recycling Fee (ARF) model, which requires consumers to pay a fee at purchase to cover the cost of end-of-life recycling. California is the only state using this model.
- Individual Producer Responsibility (IPR) model, which makes producers responsible for providing free recycling of their products to consumers. Michigan is among ten states that have enacted some form of this approach.
- Return Share model, which includes government-mandated payments by producers to collectors and recyclers. Seven states have adopted a version of this model.
- Laws with Collection Targets based on Market Share or Sales, similar to the IPR model but which establish recycling goals for manufacturers. Seven states have enacted a version of this model, including the Great Lakes states of Illinois, Indiana, Wisconsin, and Minnesota.

MICHIGAN'S LAW COVERS FIVE MATERIALS —

Computers, monitors, laptops, printers, and televisions. The e-waste laws of the other Great Lakes states cover additional materials including the materials covered by the Michigan law: Indiana, 8; Illinois, 17; Wisconsin, 10; and Minnesota, 8.

Fifteen states have landfill bans on one or more electronic devices and another four have approved bans that are not yet in effect. States with active or approved bans include Indiana, Illinois, Wisconsin, and Minnesota. Michigan does not have a disposal ban on electronic waste.

According to the National Center for Electronics Recycling, the effectiveness of these laws is varied. Pounds per capita collected ranges from 0.6 to 6.7, with Michigan's annualized 2010 per capita rate at 1.4 pounds and a 2011 per capita rate of 1.6 pounds. The other Great Lakes states have collection rates of 2.5, Indiana; 2.4, Illinois; 4.2, Wisconsin; and 6.7, Minnesota.

POUNDS PER CAPITA COLLECTED RANGES FROM **0.6 TO 6.7**, WITH MICHIGAN'S ANNUALIZED 2010 PER CAPITA RATE AT **1.4** POUNDS AND A 2011 PER CAPITA RATE OF **1.6** POUNDS, THE LOWEST RATE AMONG GREAT LAKES STATES.

MRC STAKEHOLDER PROCESS

In 2010, the Michigan Recycling Coalition Board of Directors adopted the Principles of Product Stewardship. Those principals were developed to foster and promote product stewardship and encourage manufacturers, retailers, and consumers to take increasing responsibility to reduce the life-cycle impacts of products. The intent of Michigan's e-waste law is generally consistent with product stewardship and those principles.

Consistent with the overall mission of the MRC and the Principles of Product Stewardship, the MRC Policy Committee, with the support of a Department of Environmental Quality P2 Grant, initiated a project to evaluate Michigan's Electronic Waste Takeback Law and identify opportunities for improvement. The goal of the project was to help ensure that Michigan residents have access to a cost-effective electronic waste recycling system and that Michigan's environment and economy enjoy the benefits offered by the deployment of a best-in-class system.

The Policy Committee's evaluation involved soliciting information from relevant stakeholders and MRC members and included, but was not limited to, the following activities:

- Reviewing Michigan's law and related information available from the Michigan Department of Environmental Quality.
- Reviewing the laws and evaluation reports from other states.
- Participating in a networking call held by the Product Stewardship Institute and the National Center for Electronic Recycling entitled "Electronic Stewardship Legislation: Lessons Learned from High Performing Programs."
- Participating in the MRC "Fall into Recycling: Enhancing Electronic & Pharmaceutical Collections."
- Conducting a survey of the MRC membership.
- Soliciting input from stakeholders and interested parties through a conference call held by the Product Stewardship Institute.
- Meeting directly with stakeholders, including manufacturers, recyclers, and collectors.

RECOMMENDATIONS FOR IMPROVEMENT

TO FOSTER AN ELECTRONIC WASTE TAKEBACK PROGRAM THAT IS CONSISTENT WITH THE BEST PRACTICES EMERGING ACROSS THE COUNTRY, THE FOLLOWING RECOMMENDATIONS HAVE BEEN DEVELOPED BY THE MICHIGAN RECYCLING COALITION.

The current law establishes, as a nonbinding target, that each manufacturer is required to conduct a video display device takeback program that annually recycles 60% of the total weight of covered video display devices sold by the manufacturer in this state during the prior state fiscal year. The voluntary goal only applies to televisions.

According to the State, in aggregate, manufacturers of video display devices only recovered 31% of such equipment sold in Michigan. Since the goal is voluntary, there is no mechanism to penalize or otherwise require manufacturers to achieve the goal. Moreover, the State is prohibited from identifying the performance of specific manufacturers because the sales data they report is exempt from the Freedom of Information Act.

The Michigan Recycling Coalition recommends that the voluntary goal be replaced with a mandatory goal that applies to all covered electronic devices for the following reasons:

- Mandatory goals are consistent with the best practices found in other states;
- The current law punishes companies who are doing the right thing and trying to comply with the law. Establishing mandatory goals levels the playing field for all manufacturers, requiring all manufacturers to meet specific requirements;

- Placing goals on all covered electronic devices allows for the broadest range of material to be collected, making collection more convenient and cost-effective for consumers, collectors, and recyclers.

There are a variety of methods by which a mandatory goal could be established. Among the most viable approaches are mandatory targets based on either a percentage of retail sales or a pounds per capita approach wherein an overall pounds per capita requirement is established and each manufacturer is assigned a percentage of the overall goal based on market share. The MRC recommends such a “market share” approach as opposed to the more costly “return share” approach.

“THE MRC WOULD LIKE TO INCREASE THE BENEFICIAL RECOVERY OF ELECTRONICS WHILE EXPANDING OPPORTUNITIES FOR BOTH COLLECTORS AND PROCESSORS AND LEVELING THE PLAYING FIELD AMONG MANUFACTURERS AND PROCESSORS.”

Mike Csapo, MRC Policy Committee Chair

The current law applies to consumers, which it defines as a person that used a covered electronic device for personal or small business purposes in Michigan. Should the State establish a mandatory goal program, it should more clearly define “market share” by excluding sales to entities other than consumers and small businesses, unless the program is intently expanded to cover entities such as schools, units of government, and large businesses, etc.

The MRC also recommends allowing “transferrable credits” wherein manufacturers that exceed their required goals or targets can sell or transfer those credits to other manufacturers. Such an approach encourages manufacturers that are successful in meeting their required goals to continue

working to recover material. It also allows underperforming manufacturers to take advantage of the successful programs.

The MRC also supports a credit approach that incentivizes establishing collection programs in underserved areas, particularly blighted, remote or rural areas. Allowing manufacturers to earn “extra credit” in underserved areas promotes programs that serve residents in areas that may otherwise not have access to convenient programs due to low population densities or their long distance from recycling facilities.

Mandatory goals should be adjusted on an established schedule every three years. The routine adjustment of goals allows for continuous improvement and changing market conditions.

Penalties for non-compliance should be established. Enforceable fees and penalties encourage a level playing field and ensure compliance.

■ COVERED ELECTRONIC DEVICES

The current law applies only to computers, monitors, televisions, laptops, and printers. As indicated earlier, the best performing programs in other states cover a broader range of electronic peripherals. Expanding the list of covered electronic devices allows for increased convenience for consumers, collectors, and recyclers and provides for greater overall recovery. Allowing the expanded list to be applied to manufacturers’ required goals allows for a more level playing field and increases the likelihood of success.

■ PROGRAM REGISTRATION AND FEES

Increased funding is necessary for State administration, education, and enforcement. In addition to penalties for non-compliance, a variable fee structure should be established to reward programs that register and report in a timely fashion and penalize programs that fail to register and report by established deadlines.

The MRC also recommends that out-of-state recyclers be required to register. This can be accomplished by requiring manufacturers to only use registered recyclers.

■ DISPOSAL BAN

As indicated above, nineteen states have adopted disposal bans on one or more electronic products. The MRC recognizes that such bans encourage high recovery rates. The MRC generally supports a phased-in disposal ban consistent with the State of Michigan Solid Waste Policy,

which calls for the State to consider a ban for large volume easily recyclable material that has high resource potential, provided there is a well-developed market and collection infrastructure.

The MRC does not support a ban in advance of the establishment of a well-developed market nor does it support a ban that would undermine the relationship between collectors, processors, and manufacturers. Without a properly funded infrastructure in place, a disposal ban serves as an unfunded mandate on local governments.

■■ EDUCATION

An education and outreach program is essential to increase consumer awareness, increase convenience and participation, and increase recovery rates. All stakeholders – manufacturers, retailers, collectors, and recyclers – should share responsibility for delivering both statewide and local education programs. In particular, the MRC recommends that non-compliance penalties and late fees be dedicated to establishing a uniform, statewide education effort.

Additionally, the MRC recognizes that the point-of-purchase at retailers represents the first and best opportunity to inform consumers of Michigan's Electronic Waste Takeback Program. As such, an outreach program involving retailers in Michigan should be developed.

■■ DATA COLLECTION

The collection of data, including material weights and types, collection points, and information about marketable commodities, is essential to a successful system. Measurement of progress toward established goals is critical to both compliance and continuous improvement. Data collection and management is also useful to facilitate the economic development opportunities associated with materials recovery and recycling. As such, data associated with Michigan's Electronic Waste Takeback Program should be collected in a robust and transparent fashion and integrated with a statewide data collection program focused on materials recovery and recycling.

While Michigan's electronic waste takeback program has helped increase the recovery of electronic waste in the state, the program is not consistent with the best practices throughout the Great Lakes region and the nation. As a result, Michigan's program has underperformed when compared to those best practices. The improvements identified by the MRC will increase material recovery, make the law more consistent with surrounding states, and enhance the business climate for all stakeholders involved in both the manufacture and recycling of electronic products.



A sea of computers collected in Berrien County