

Department of the Environment – Yard Waste, Food Residuals,  
and Other Organic Materials Diversion and Infrastructure Study

**Study Topic 1: Diversion of organic materials from refuse  
disposal facilities in the State, including State laws or  
regulations governing the diversion of organics**

January 2, 2017

## Current Status of Organics Diversion in Maryland

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Pursuant to Chapter 384 of 2017, *Yard Waste, Food Residuals, and Other Organic Materials Diversion and Infrastructure Study*, this document summarizes the current State statutes and regulations that govern the diversion of organic materials from refuse disposal facilities.

Diversion of organic materials can take the following forms:

- Source reduction (preventing waste before it occurs);
- Reuse (including, for food scraps, donation and animal feed); and
- Recycling (composting, mulching, anaerobic digestion, etc.).

The State's primary law governing waste diversion is the Maryland Recycling Act (MRA). That law authorizes the Maryland Department of Environment (the Department) to review and approve county recycling plans, enforce mandatory county recycling rates, and coordinate a State Government recycling program.<sup>1</sup> Counties play a large role in the MRA, creating and implementing their own recycling plans and reporting recycling data to the Department. The Department also regulates the construction and operation of solid waste processing facilities and composting facilities. Other aspects of organics diversion, such as food donation, are not regulated by the Department, but may be subject to other State and federal laws as outlined in this document.

In 2016, 6.8 million tons of MRA waste was generated in Maryland, with 2.8 million tons recycled and 4.0 million tons disposed.<sup>2</sup> Compostable organic materials (excluding paper) account for 26 percent of MRA waste generated, of which 47 percent is food residuals and 42 percent is yard waste.<sup>3</sup> In 2016, Maryland achieved an overall MRA recycling rate of 43 percent. In comparison, the recycling rate for compostable organic materials was somewhat higher at 54 percent, but much of this was due to the high level of yard trimmings recycling. While 85 percent of yard trimmings were recycled, only 15 percent of food scraps were recycled. There are currently 20 permitted composting facilities in Maryland. Fourteen of the facilities compost yard trimmings, three compost both food and yard trimmings, two compost food and manure, and one composts hay, straw, and manure. Additionally, there are 46 facilities permitted to recycle natural wood waste via composting, chipping, mulching, etc. Maryland has two known anaerobic digesters, both used primarily for animal manure.

While the Department tracks overall per capita generation of waste over time, it is unable to collect data on source reduction of particular materials.<sup>4</sup> Instead, the Department uses a source reduction credit system based on source reduction activities rather than tonnage reporting (discussed in detail below). Overall, Maryland generated 0.66 tons of MRA waste per

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<sup>1</sup> Md. Code Ann., Envir. §§ 9-505 and 9-1701 – 9-1730.

<sup>2</sup> MRA waste consists of municipal solid waste and industrial waste from non-private industrial waste landfills. Envir. § 9-1701(q).

<sup>3</sup> Northeast Maryland Waste Disposal Authority, *2016 Maryland Statewide Waste Characterization Study* (2017), <http://mde.maryland.gov/programs/LAND/AnalyticsReports/2016%20Maryland%20Statewide%20WCS%20Study.pdf>

<sup>4</sup> One potential way of collecting material-specific source reduction data would be to conduct periodic waste characterization studies and compare the results over time; however, as the 2016 study was the first of its kind in Maryland, it is not currently possible to track changes in generation of particular materials in Maryland over time.

person in 2016, which is similar to the level of generation in 2015. Over the past 10 years, MRA waste generation per capita has declined somewhat from 0.79 tons per person in 2006.

The Department also does not currently collect information on the quantity of food scraps diverted through food donation or animal feed. Many Maryland businesses and organizations, including supermarkets, universities, and farms, provide surplus food to food banks and other food aid organizations, but given the lack of a reporting mechanism, it is difficult to determine the quantity of food scrap diversion through donation.<sup>5</sup> Still, it is clear that a continued need for these efforts exists. The U.S. Department of Agriculture (USDA), Economic Research Service reports that 10.1 percent of Maryland's 2.3 million families faced food insecurity from 2014 to 2016.<sup>6</sup>

## **Maryland Laws and Policies: Source Reduction and Reuse**

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### ***Source Reduction Credit System***

Source reduction is the most environmentally preferred strategy for diverting materials and is encouraged in the State through the source reduction credit system. In 2000, a Senate Joint Resolution (SJ 6) established a voluntary statewide waste diversion rate goal, defined as the sum of the MRA recycling rate plus a source reduction credit of up to 5 percent. The Department is charged with establishing the criteria for the source reduction credit. To this end, the Department developed a voluntary Source Reduction Checklist to be submitted annually along with the counties' Recycling Tonnage Reporting Surveys. Through the checklist, counties can receive credit for a variety of source reduction activities.<sup>7</sup> Some of these activities specifically target organics, such as "grasscycling" education and home composting education programs. In 2016, 13 Maryland counties were able to earn from 1 point to 5 point source reduction credit. Chapter 692 of 2012 set the voluntary Statewide diversion rate goal at 60 percent by 2020.

### ***Greenhouse Gas Reduction Act (GGRA)***

The Greenhouse Gas Emissions Reduction Act (GGRA) was signed into law in 2009 and reauthorized in 2016. The original GGRA required the State to achieve a minimum 25 percent reduction in Statewide greenhouse gas (GHG) emissions from 2006 levels by 2020, and the 2016 reauthorization sets a goal of 40 percent GHG emissions reductions by 2030.<sup>8</sup> Waste diversion is a component of the Department's overall GHG reduction plan. Source reduction in particular can further climate change goals because preventing waste before it occurs typically achieves even greater GHG emissions reductions than recycling.<sup>9</sup>

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<sup>5</sup> Some evidence of this can be found in the summary of presentations from the Department's 2016 Maryland Food Recovery Summit, available on the Department's food recovery website, <http://www.mde.maryland.gov/foodscraps>.

<sup>6</sup> *The Food Insecurity in Households with Children: Prevalence, Severity, and Household Characteristics, 2010-11 and Household Food Security in the United States in 2016* reports, along with accompanying data tables, can be accessed at <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics/>.

<sup>7</sup> The source reduction credit does not count towards a county's MRA recycling rate.

<sup>8</sup> Chapters 171 and 172 of 2009 and Chapter 11 of 2016.

<sup>9</sup> See U.S. EPA, Waste Reduction Model, <https://www.epa.gov/warm>

### ***Waste Reduction and Resource Recovery Plan Executive Order***

In 2017, Governor Larry Hogan signed Executive Order 01.01.2017.13, *Waste Reduction and Resource Recovery Plan*. The Order established a sustainable materials management (SMM) policy for the State, which seeks to: minimize the environmental impacts of materials management over their entire lifecycle; conserve and extend existing in-State disposal capacity through source reduction, reuse, and recycling; capture and make optimal use of recovered resources; and work toward a system of materials management that is both environmentally and economically sustainable. The SMM policy emphasizes source reduction by broadening the focus from end-of-life to the entire lifecycle of materials. In addition, the Order directs the Department to work with stakeholders to develop an improved method of quantifying and tracking statewide recycling and source reduction efforts, along with new SMM goals. These discussions will continue in 2018.

### ***Liability Protection for Food Donation***

Maryland law provides civil liability protection for a person who donates, prepares, dispenses, or serves food for use or distribution by a nonprofit corporation, organization, or association. Liability protection extends only to provision of food in good faith where there is no willful act of negligence or misconduct.<sup>10</sup> Maryland law provides protection similar to that provided under the federal Bill Emerson Good Samaritan Food Donation Act.<sup>11</sup> Both the State and federal laws have two important limitations: (1) they do not apply to donations made by a person directly to the end user of the food; and (2) they do not apply to donations to any organization that sells the donated food, even at a reduced price. In Maryland, the Departments of Health and Agriculture may inspect donated food for wholesomeness and establish procedures for handling donated food.<sup>12</sup>

### ***Food Recovery in Schools***

Chapter 637 of 2016 permits county boards of education to develop and implement food donation programs for left over or excess food in public schools, as well as to apply for recognition of their food recovery programs under any food recovery certification program. Food banks have pre-existing food recovery networks that a school food recovery program could tap into. For example, the Maryland Food Bank reported in 2016 that the School Pantry program consisted of 227 Maryland public school pantry sites and distributed 4 million meals to food insecure families.<sup>13</sup>

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<sup>10</sup> Md. Code Ann., Cts. & Jud. Proc. §5-634.

<sup>11</sup> 42 U.S.C. §1791.

<sup>12</sup> Md. Code Ann., Health-Gen § 21-322.

<sup>13</sup> To learn more about the Maryland Food Bank School Pantry Program visit <https://mdfoodbank.org/our-programs/school-pantry/>.

### ***Farm Food Donation Tax Credit***

The Farm Food Donation Pilot Program, enacted 2017, establishes a state income tax credit up to \$5,000 for food donations made by qualified farms located in Ann Arundel, Calvert, Charles, Montgomery, Prince Georges, and St. Mary's counties.<sup>14</sup>

### ***Urban Agriculture Tax Credit***

In 2010, the General Assembly authorized governing bodies of Maryland counties and Baltimore City to offer property tax credits on certain property that serves "urban agricultural purposes." Those purposes, which are listed by statute, include food donations. Local governing bodies establish the duration, amount, and any additional criteria for the credit. Baltimore City, Prince George's County, and Montgomery County have implemented the tax credit program.<sup>15</sup>

### ***Date Labeling on Food Products***

The language and use of date labels is largely unregulated at the federal level. While consumers may assume that date labels convey the date through which the food is safe to eat, instead they are often used to indicate peak food quality or stock control information for retailers.<sup>16</sup> This misconception can discourage the consumption or donation of safe and edible food, despite civil liability protections under federal and State laws. "Sell By" date labels are only mandated under State law for Grade A Milk.<sup>17</sup> Under the Code of Maryland Regulations (COMAR) 10.15.06.10, a person generally may not sell Grade A Milk after the Sell By date, which is set at 18 days from the date of processing. Specified food service providers may sell Grade A Milk up to four days after the Sell By date.<sup>18</sup> Local health codes may establish more detailed date labeling requirements, particularly governing the sale of food by food establishments. For example, Baltimore City defines an "expiration date" as "any date designated as an 'expires on' date, 'sell by' date, 'pull by' date, 'use by' date, or 'best if used by' date."<sup>19</sup> The City permits the sale of food past the expiration date only if separated from its non-expired food counterpart and if the label includes the phrase "This Food is Being Sold Past Its Expiration Date." This exception is not extended to perishable items.

### ***Animal Feed from Food Residuals***

Food service providers and manufacturers generate waste, such as vegetable peels, pulps, or trimmings, which are not typically consumed by humans. They may also generate other food scraps that are not feasible to donate for logistical reasons. This has led to increased interest in reusing food residuals as animal feed. Federal law prohibits the feeding of food scraps containing mammalian protein to ruminant animals (cattle, goats, etc.). It allows a person to

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<sup>14</sup> A qualified farmer can claim a credit equal to 50% of the value of a food donation or 75% of the value an organic food donation, not to exceed \$250,000 in a taxable year. The law prohibits issuing initial credits after December 31, 2019. The pilot program is regulated under COMAR 15.01.12. Tax-General Article, §10-741.

<sup>15</sup> Harvard Food Law and Policy Clinic, *A Review of Food System Policies in Maryland*, p.7 (2017), [https://www.chlpi.org/wp-content/uploads/2013/12/MD-Policy-Scan-report-cover\\_September-2017.pdf](https://www.chlpi.org/wp-content/uploads/2013/12/MD-Policy-Scan-report-cover_September-2017.pdf)

<sup>16</sup> Harvard Food Law and Policy Clinic, *Keeping Food Out of the Landfill: Policy Ideas for States and Localities*, pp. 26 (2016), [https://www.chlpi.org/wp-content/uploads/2013/12/Food-Waste-Toolkit\\_Oct-2016\\_smaller.pdf](https://www.chlpi.org/wp-content/uploads/2013/12/Food-Waste-Toolkit_Oct-2016_smaller.pdf)

<sup>17</sup> Md. Code Ann., Health-Gen. § 21-426.

<sup>18</sup> The exempted providers are food service facilities, hospitals, schools, institutions, and facilities where milk is consumed on the premises. COMAR 10.15.06.11.

<sup>19</sup> Baltimore, Md. Health Code, § 6-505.1(a)(3).

feed food residuals containing animal products to swine, if the person obtains a license and the food residuals are boiled prior to feeding.<sup>20</sup> Additional planning and preventive control requirements apply to certain facilities that produce animal feed from food scraps under the Food Safety Modernization Act's Preventive Controls Rules for Animals.<sup>21</sup> Maryland law addresses the feeding of residuals to swine, but generally mirrors the federal law.<sup>22</sup> Maryland law was amended in 2015 to permit an individual to feed household food residuals to swine without boiling the material, as long as the swine are not sold.

## **Maryland Laws and Policies: Organics Recycling**

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### ***Mandatory MRA Recycling Rates***

Chapter 692 of 2012 amended the MRA to increase counties' mandatory recycling rates to 35 percent (for counties with populations greater than 150,000) and 20 percent (for counties with a population less than 150,000). It also increased the mandatory State Government recycling rate to 30 percent. Counties and State agencies may count recycling of municipal organics, such as through composting, mulching, or anaerobic digestion, toward their mandatory rates.

### ***Yard Trimmings Disposal Ban***

Maryland law prohibits an owner or operator of a refuse disposal system (e.g. landfill, incinerator, transfer station, processing facility) from accepting truckloads of separately collected yard waste for final disposal unless the owner or operator provides for the composting or mulching of the yard waste.<sup>23</sup>

### ***Composting Educational Information and Study***

Chapter 363 of 2011 required the Department to post educational information on composting on its website; conduct a study of composting in the State; and make recommendations about how to promote composting in the State, including any necessary programmatic, legislative, or regulatory changes related to composting. The Department's composting website can be found at <http://mde.maryland.gov/composting>. The final report of the study required under Chapter 363 is also available on that website.

### ***Composting and Natural Wood Waste Recycling Facility Requirements***

Composting facilities and natural wood waste (NWW) recycling facilities are regulated by the Department. In 2013, the statute was amended to authorize the Department to develop regulations specific to composting facilities.<sup>24</sup> These regulations, developed through a stakeholder workgroup and adopted in 2015, clarified the permits and requirements applicable to various types of composting and NWW recycling activities. The Department issued detailed

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<sup>20</sup> See Harvard Food Law and Policy Clinic and Food Recovery Project at the University of Arkansas School of Law; *The Leftovers for Livestock: A Legal Guide for Using Excess Food as Animal Feed* pp. 3-8 (2016), <https://www.chlpi.org/wp-content/uploads/2013/12/Leftovers-for-Livestock-A-Legal-Guide-August-2016.pdf>.

<sup>21</sup> Id.; 21 C.F.R. § 507.12;

<sup>22</sup> Md. Code Ann., Agric. § 3-404.

<sup>23</sup> Md. Code Ann., Envir., §9-1724.

<sup>24</sup> Md. Code Ann. Envir. §§ 9-1701, and 9-1725 – 9-1726.



permitting guidance to accompany the new regulations.<sup>25</sup> Below is a brief summary of the permitting requirements applicable to various types of composting and NWW recycling:

- **A facility that recycles only NWW<sup>26</sup>** (e.g. stumps, logs, large branches) is required to obtain a NWW Recycling Facility Permit, which is available as a general or an individual permit. A facility that is operated by a nonprofit or governmental organization or that provides recycling services only for its own employees or materials is not regulated.
- **A facility that composts source-separated materials<sup>27</sup>** such as yard trimmings and food scraps is subject to the new composting facility regulations, and generally requires a composting facility permit, which is available as a general or individual permit. The composting facility regulations contain tiered design and operational requirements based on the size of the facility and types of feedstocks composted. Permit exemptions exist, including for small facilities and certain on-farm composting facilities.
- **A facility that composts sewage sludge<sup>28</sup>** requires a sewage sludge utilization permit and is subject to design and operational requirements related to sewage sludge management.
- **A facility that composts mixed solid waste, diapers, or other materials determined by the Department to have a higher risk of pathogens, contaminants, or hazardous substances,<sup>29</sup>** is considered a solid waste processing facility and must obtain a refuse disposal permit.

In addition to a permit for the composting facility itself, a composting facility may require a water (discharge) permit. Certain types of equipment used on site may require an air permit to operate or permit to construct. At a minimum, most commercial composting operations that distribute compost will be required to obtain coverage under the Department's General Permit for Stormwater Discharges Associated with Industrial Activity.

### ***Regulation of Soil Conditioners and Compost***

The Maryland Department of Agriculture (MDA) regulates soil conditioners and compost sold in the State under COMAR 15.18.03 and 15.18.04. MDA regulations establish product registration, labeling, testing, inspection, and recordkeeping requirements for these products. Compost must meet certain specifications corresponding to the uses for which the compost is sold. Composting facility operators must be certified with MDA.

### ***Compost Use***

State law requires state agencies responsible for maintenance of public land to give consideration and preference to the use of compost in land maintenance activities paid for with public funds, to the maximum extent possible.<sup>30</sup> Use of compost by State and local governments can help promote compost markets in the State. The law also establishes a goal

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<sup>25</sup> Maryland Department of the Environment, *Permitting Guidance for Maryland Composting Facilities* (2015), <http://mde.maryland.gov/programs/LAND/RecyclingandOperationsprogram/Documents/Permitting%20Guidance%20-%20Final%206.12.15.pdf>

<sup>26</sup> COMAR 26.04.09.

<sup>27</sup> COMAR 26.04.11.

<sup>28</sup> COMAR 26.04.06.

<sup>29</sup> COMAR 26.04.07.

<sup>30</sup> Md. Code Ann., State Fin. & Proc. § 14-409.

for the Department of General Services (DGS) to: compost, to the extent practicable, all landscape waste on State property that is under DGS operation for use as fertilizer in landscaping activities; and increase the percentage of landscaped area fertilized by compost each year. Chapter 430 of 2014 established the use of compost in highway construction projects as a best management practice for erosion and sediment control, and post-construction stormwater management. The law also required the State Highway Administration (SHA) to establish specifications for compost-based products, which it did in 2015. SHA maintains a list of compost producers qualified for sourcing for State projects and regularly interacts with recycled materials providers through its Recycled Materials Taskforce. SHA reported to the General Assembly that in 2016 it used 4,702 cubic yards of compost as an additive in topsoil.<sup>31</sup>

### ***Animal Waste Technology Grants***

The Animal Waste Technology Fund, administered by MDA, provides financial assistance to individuals and business enterprises that: (1) conduct research or develop technologies that are intended to reduce the amount of nutrients in animal waste; (2) alter the composition of animal waste; (3) develop alternative animal waste management strategies; or (4) use animal waste in a production process. The program's goal is to "encourage the development and implementation of economically feasible technologies that help protect the public health and the environment by reducing the amount of nutrients from animal waste to enable farmers to meet nutrient management requirements and provide alternative animal waste management strategies to farmers."<sup>32</sup> Up to \$3.5 million in funding will be granted for FY 2018.

## **Maryland Laws and Policies: Anaerobic Digestion and Renewable Energy**

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Anaerobic digestion is a process in which microorganisms break down organic material in the absence of oxygen, producing the renewable energy source of biogas and nutrient-rich digestate. Biogas can be combusted to generate electricity or heat.<sup>33</sup> In addition, the digestate can be returned to the market as a fertilizer, soil amendment, or animal bedding.

### ***Regulation of Anaerobic Digestion Facilities***

A refuse disposal permit is required for a facility whose primary purpose is to process solid waste. The Department has generally determined that a refuse disposal permit is not required for an anaerobic digestion facility if the digestate is returned to the marketplace in the form of a raw material or product and the quantity of non-digestible and non-recyclable solid waste handled at the facility remains at a *de minimis* level. Amendments to the Environment Article relating to recycling facilities were recently enacted as Chapter 376 of 2017. These changes

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<sup>31</sup> Changes to SHA's soil erosion and sediment control practices are described in *A Report to the Maryland General Assembly regarding Compost and Compost-Based Products on State Highway Administration and Construction Projects* [http://dlslibrary.state.md.us/publications/Exec/MDOT/SHA/TR8-609.3\(d\)\\_2016.pdf](http://dlslibrary.state.md.us/publications/Exec/MDOT/SHA/TR8-609.3(d)_2016.pdf).

<sup>32</sup> Md. Code Ann., Argic. § 8-7A-02.

<sup>33</sup> Biogas is largely comprised of methane and carbon dioxide. It can be turned into pure methane (biomethane) through the extraction of water, carbon dioxide, and hydrogen sulfide.



clarified that the definition of solid waste includes materials that are managed at a recycling facility, including an anaerobic digestion facility, which are not recycled within one year of receipt or otherwise managed in accordance with Department regulations. Chapter 376 of 2017 additionally requires the Department to convene a workgroup to develop regulations concerning recycling facilities. This will take place in 2018. Anaerobic digestion facilities must comply with federal, State, and local air and water quality laws, and may require discharge permits and/or air quality permits.<sup>34</sup>

### ***Clean Energy Incentive Tax Credit***

The Clean Energy Incentive Tax Credit offers a state income tax credit of 0.85 cents per kilowatt-hour (kWh) for electricity generated from specified energy resources, including methane from anaerobic digestion of nonhazardous materials. The credit can be claimed over a period of five years. The credit is available to businesses that construct and generate electricity at a qualified facility on or after January 1, 2006, but before January 1, 2016, and initial credits cannot be issued after December 31, 2018.<sup>35</sup> The Maryland Energy Administration (MEA) reports that \$25 million in tax credits have been issued to date and currently no further funding is available.

### ***Animal Waste to Energy Grant Program***

In 2012, MEA launched the Animal Waste to Energy Grant Program to invest in projects that utilize animal manure to generate electricity.<sup>36</sup> The grant is available to businesses, government agencies, and non-profits that operate in Maryland. For FY 2018 MEA has made available \$3.5 million dollars for installation of animal waste to energy projects.

### ***Anaerobic Digestion of Animal Manure on Land Subject to Agricultural Land Preservation Easements***

Chapter 287 of 2014 permits Maryland Agricultural Land Preservation Foundation easement landowners to request approval to construct renewable energy source generation facilities for commercial electricity production. The sources of renewable energy are limited by the statute, but include anaerobic digestion of poultry litter or livestock manure. Applications must be received by the Foundation no later than June 30, 2018, and the Foundation cannot approve proposed facilities after June 30, 2019.<sup>37</sup>

### ***Renewable Portfolio Standard***

In 2004, the State adopted the Renewable Energy Portfolio Standard (RPS).<sup>38</sup> The RPS mandates that a certain percentage of electricity suppliers' retail sales must be derived from renewable energy sources, with the percentage increasing over time to reach 25 percent by 2020. The RPS is implemented through the creation, transfer, and retirement of renewable

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<sup>34</sup> Md. Code Ann. Envir. §9-323 (Discharge Permit statute) Md. Code Ann. Environ §2-401 (Air Quality Permit statute)

<sup>35</sup> Md. Code Ann. Tax-General, § 10-720 (2006)

<sup>36</sup> Md. Code Ann., Agric, § 8-7A-02 (2012).

<sup>37</sup> Md. Code Ann., Agric. § 2-513 (2014).

<sup>38</sup> Md. Code Ann., Public Utilities §§ 7-701 - 7-713.

energy credits (RECs). A REC represents one megawatt-hour (MWh) of electricity generated using eligible renewable energy source. Renewable energy sources are divided into two tiers; tier 2 sources can contribute no more than 2.5 percent toward meeting the standard. Qualifying biomass is a tier 1 renewable energy source.

### ***Biofuels***

Organic materials such as vegetable oils, animal fats, or recycled restaurant greases can be used to make biofuel. MDA regulates the transportation of waste kitchen grease for the conversion into biofuel.<sup>39</sup> Since 2008, Marylanders can claim a tax credit of 3 cents per gallon of heating oil blended with biodiesel that is purchased for space and water heating, not to exceed \$500.<sup>40</sup> The tax credit can be claimed against both corporate and personal income taxes, but is currently set to expire after FY 2018.

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<sup>39</sup> Md. Code Ann., Agric, Title 10, Subtitle 18.

<sup>40</sup> Md. Code Ann., Tax - General, § 10-727.