



MDE Maryland Department of the Environment

Maryland's New Composting Facility Regulations: What Farmers Need to Know

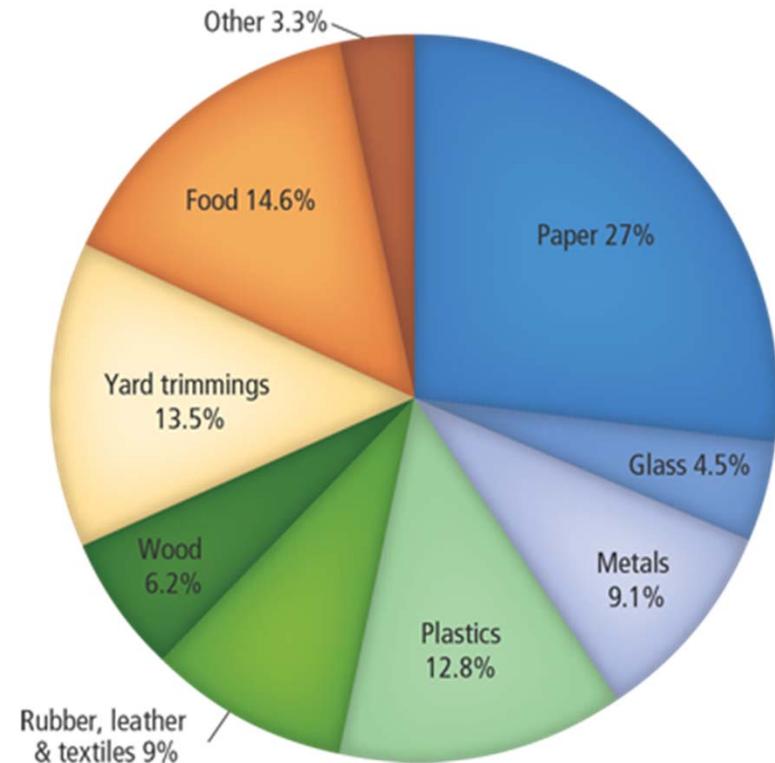
December 3, 2015





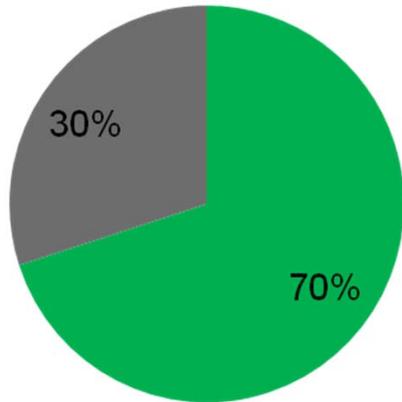
Background & Purpose

According to EPA, almost 30% of all municipal solid waste generated in the U.S. is food and yard waste.



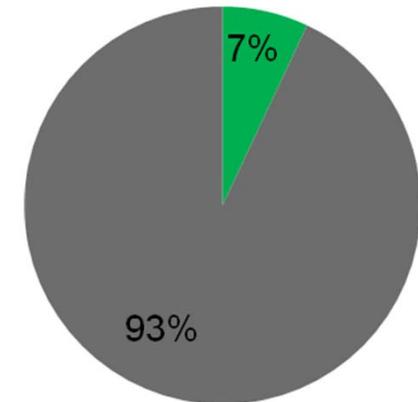


Background & Purpose



In Maryland, **70%** of **yard waste** was recycled in 2013...

... and **7%** of **food waste** was recycled.





Background & Purpose

- Benefits of composting:
 - Divert material from disposal
 - Reduce greenhouse gas emissions
 - Create a valuable product



Background & Purpose

- Environmental risks of improperly managed composting:
 - Surface and groundwater pollution
 - Odors and other nuisance issues
 - Propagation of disease vectors

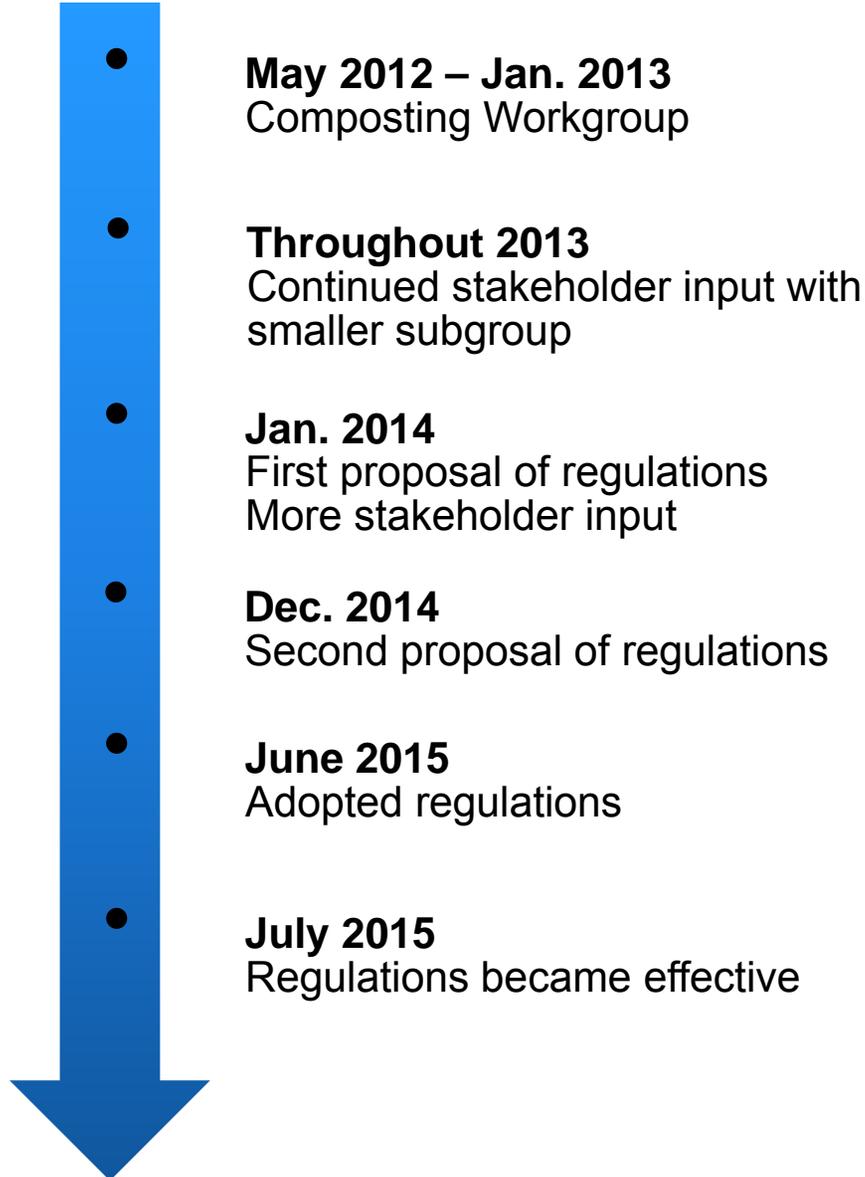


Background & Purpose

- Purpose of the new regulations:
 - Provide regulatory certainty for composters
 - Address environmental issues seen in the past so facilities can be successful
 - Carry out recommendations of the 2012 Composting Workgroup



Stakeholder Process





Overview of Regulations

- Permit requirements
 - Composting Facility (CF) Permit 
 - Exemptions from the permit requirement
- General restrictions
 - Basic performance standards that apply to all facilities
- Design and operational requirements
 - Apply to facilities that are required to obtain the CF permit
 - Facilities are divided into “tiers” based on feedstocks
 - Different regulatory requirements apply to different tiers



Feedstock Types

NWW

- Natural Wood Waste (e.g. stumps, logs)

Type 1

- Yard waste (e.g. leaves, grass)

Type 2

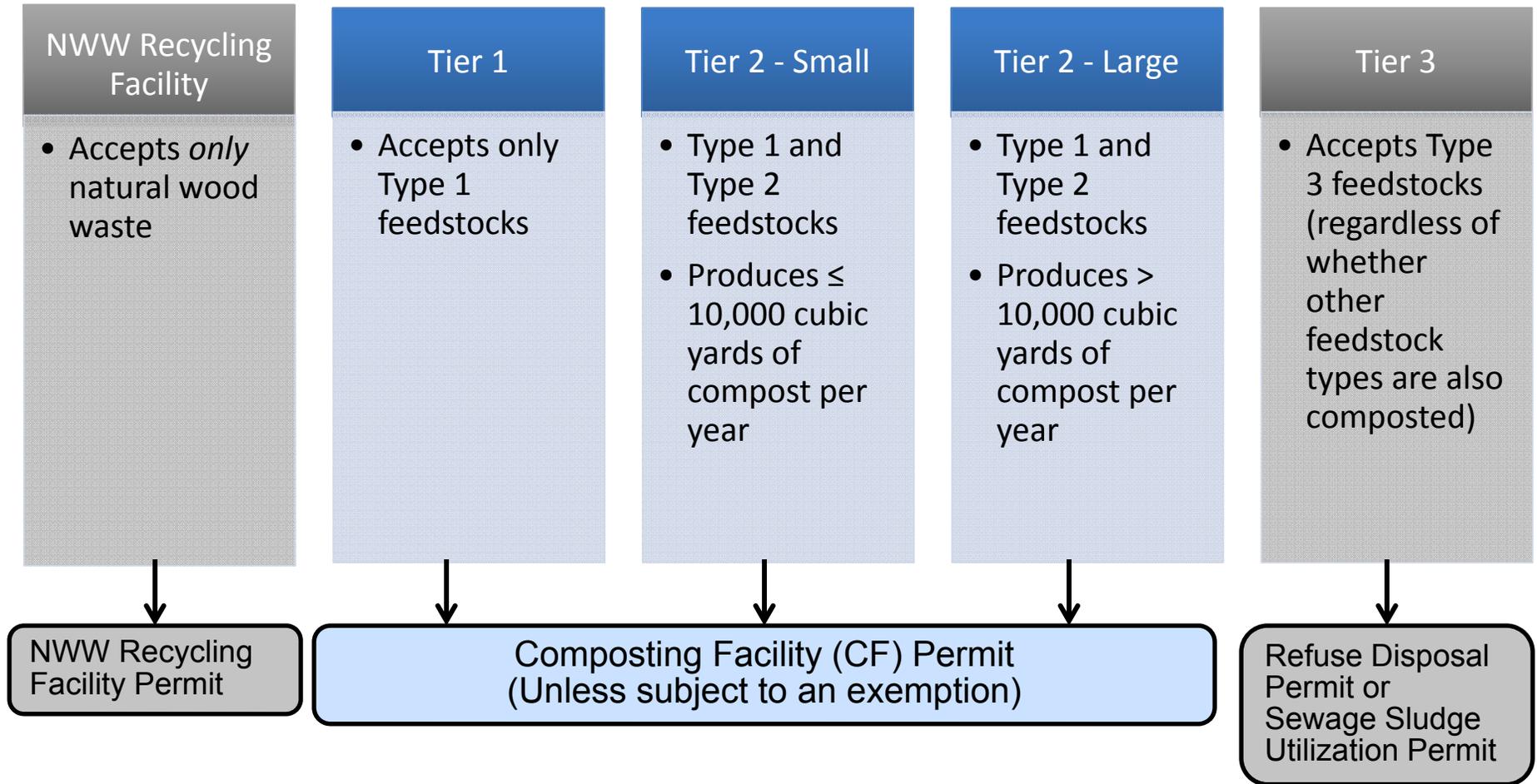
- Food scraps
- Non-recyclable paper
- Animal manure and bedding
- Industrial food processing materials
- Animal mortalities
- Compostable products

Type 3

- Sewage Sludge or Biosolids
- Used diapers
- Mixed municipal solid waste (MSW)



Facility Tiers





CF Permit Exemptions For On-Farm Facilities





What qualifies as a “farm”?

“Farm” means the site of a business or activity operated for the **primary purpose** of tilling, cropping, keeping, pasturing, or producing an **agricultural product other than compost**, including livestock, poultry, plants, trees, sod, food, feed, or fiber, by in-ground, out-of-ground, container, or other culture.

“Farm” does not include the site of a business or activity operated for the primary purpose of producing compost.



Exemption 1: Exempt up to any size

- Must compost only feedstocks generated on-site (or at another farm controlled by the same operator).
- All compost must be used on-site (or at another farm controlled by the same operator).



Exemption 2: 40,000 ft² Exemption

- May not use more than 40,000 ft² of area “in support of composting.”
- May only compost certain feedstocks:
 - Any feedstocks generated on site
 - Type 1 feedstocks, manure, and bedding from off site
 - May not accept food scraps from off site
- No restrictions on distribution of finished compost.



Exemption 2: 40,000 ft² Exemption

- Must be operated in accordance with:
 - Nutrient management plan, if one is required; and
 - One of two agricultural plans that must address certain aspects of the composting activity, including basic operational procedures to ensure the general restrictions are met:
 - Soil conservation and water quality plan; or
 - Agricultural waste management system plan.



Exemption 3: 5,000 ft² Exemption

- May not use more than 5,000 ft² of area in support of composting.
- Must comply with the following pile height limits:
 - 9 ft for raw feedstocks
 - 12 ft for active, curing, or finished compost piles
 - Except where smaller pile size required by local law
- No restrictions on feedstocks or distribution of finished compost.





Exemption 4: Emergency Animal Mortality Composting

- Temporary composting of animal mortalities generated as result of a non-routine die-off
- Must operate under approval of and as directed by MDA, in consultation with MDE





Area “Used in Support of Composting”

Includes:

- Feedstock receiving and preparation area
- Active composting area
- Curing area
- Finished compost storage area
- Composting equipment storage areas
- Areas used for storage of solid waste (e.g. items screened out of finished compost)

Does not include:

- Areas used to store mobile, general use farm equipment (tractors, backhoes, etc.)
- Areas used for housing or movement of animals where manure may accumulate prior to composting
- Roads to and from composting area, or roads between different parts of the composting area





Summary of On-Farm Exemptions

On-Farm Facilities

1. Exempt up to any size

- Composts only feedstocks generated on-site*
- All compost used on-site*

2. 40,000 ft² exemption

- Feedstocks generated on-site* PLUS may accept Type 1 and manure/bedding from off-site
- Must have one of two agricultural plans that address certain aspects of the composting
- No limitation on distribution of finished compost

3. 5,000 ft² exemption

- Pile height limits
- No limitation on feedstocks used or distribution of finished compost

4. Emergency animal mortality composting

- If approved by MDA

* "On-site" includes the farm where composting takes place and other farms owned or controlled by the same operator.





Summary of Other Exemptions

Non-Farm Facilities

1. “Backyard” composting

- Located at a residence
- Feedstocks generated on site
- Compost used on site

2. 5,000 ft² exemption **[SAME AS FOR FARMS]**

- Pile height limits apply

3. Animal mortality composting at government-managed site

- For roadway or other maintenance

4. Composting at a solid waste acceptance facility (e.g. Landfill)

- Under Refuse Disposal Permit containing composting conditions



General Restrictions

- Apply to all composting facilities, even exempt facilities.
- A person may not engage in composting in a manner which will likely...
 - Create a nuisance, harbor animals, cause an infestation of disease vectors
 - Cause air pollution or operate without required air permit
 - Cause unpermitted discharge of pollutants to waters of the State
 - Harm the environment, create hazards to public health, safety, or comfort.

Major Design and Operational Requirements

(Not applicable to exempt facilities)



Facility Location

Setbacks:

- 50 feet from a property line of property not controlled by operator
- 300 feet from a dwelling not controlled by the operator
- 100 feet from wells and surface water
- Minimum of 2 to 4 feet depth to seasonal high water table, depending on where the facility is located (4 feet in Montgomery County)



Composting Pad

Tier 1

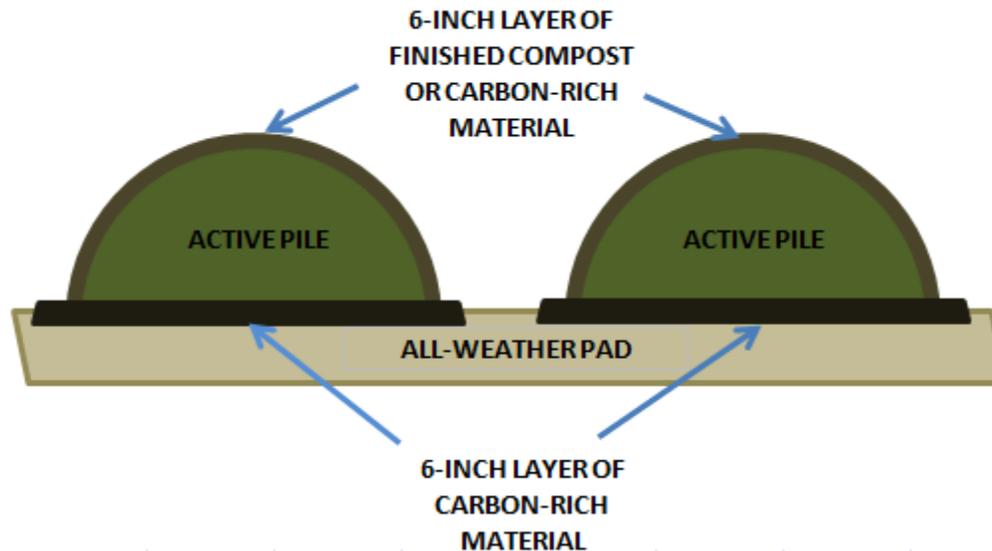
- Feedstock receiving, active composting, curing, and storage must be on an “all-weather pad.”
- “All-weather pad” means a pad of sufficient construction and firmness for vehicles and equipment to traverse during normal inclement weather, including expected rain, snow, and freezing temperatures.



Composting Pad

Tier 2 - Small

- All-weather pad
- PLUS 6-inch layer of carbon-rich materials **underneath** each **active** composting pile
- PLUS 6-inch layer of carbon-rich material or finished compost **overtop** of each **active** pile.





Composting Pad

Tier 2 - Large

- For feedstock receiving and active composting areas: Low permeability pad
 - 10^{-5} cm/sec if on surface
 - 10^{-6} cm/sec if buried
 - Examples: asphalt, concrete, compacted clay
- For curing/finished compost areas: All-weather pad



Management of Contact Water

- Contact water:
 - Liquid that has contacted raw feedstocks or active composting material
 - Runoff from feedstock receiving area, feedstock storage area, or active composting area.
- For Tier 1 and Tier 2 - Small:
 - No separate requirements for contact water
 - Manage as stormwater



Management of Contact Water

Tier 2 - Large

- Must collect and contain contact water prior to:
 - Reuse on feedstock or active composting piles;
 - Transport off site for treatment at a permitted facility; or
 - Discharge on site pursuant to COMAR 26.08.01 - .04. (MDE surface or groundwater discharge permit).
- Contact water containment system
 - Must be sized to handle at least a 24-hour, 25-year storm event*
 - Low-permeability

* Does not apply to “covered” facilities



Covered Facility Examples



Photo: Maryland Environmental Service



Photo: Washington State University



Stormwater Management

- Run-on
 - Structures such as berms or ditches shall be used to prevent run-on to the feedstock receiving, feedstock storage, active composting, curing, and compost storage areas.

- Stormwater
 - Manage in accordance with General Permit for Stormwater Discharges Associated with Industrial Activity (for commercial facilities whose primary activity is composting)
 - Manage in accordance with any local stormwater and sediment and erosion control requirements



Operational Requirements

- Composting Facility Operations Plan (CFOP)
 - Nuisance prevention plan
 - Monitoring plan
 - Emergency plan
- Management of Incoming Feedstocks:
 - All feedstocks: manage in a timeframe to prevent nuisance odors, unauthorized discharge of contact water, fire, and scavenging by pests
 - Type 2: must be incorporated into composting piles, mixed with bulking material and covered, or transferred to leak-proof containment, by the end of the operating day
 - Type 2: feedstocks with free liquid shall be promptly mixed with drier feedstocks, bulking material, or compost so the liquid is absorbed and not allowed to flow from piles



Operational Requirements, Cont'd.

- 12 month time limit for storage of finished compost (Department may approve a longer time-frame)
- Solid Waste:
 - Maintain facility in a clean and sanitary condition, free of unsecured trash at the end of each operating day
 - Non-compostable waste shall be removed or stored in a waste container or containment area before proper disposal or recycling
- Recordkeeping: maintain records for 5 years
- Reporting: annual report to MDE
- Closure notification and plan



Pathogen Reduction

- Time and temperature combination
- Same as MDA requirements
- In-vessel or aerated static pile:
 - 55°C or higher for 3 days
- Windrows:
 - 55°C or higher for 15 days
 - During this period, minimum of 5 turnings





Composting Facility Permits – 2 Options

Individual Permit	General Permit
<ul style="list-style-type: none">• Detailed application, including maps, drawings, site plans• Each application is distributed to relevant state and local agencies for comment• Public notice via MDE's website, with a written comment period, but no public meeting• The applicant may apply for variances	<ul style="list-style-type: none">• Submit a brief Notice of Intent and a copy of the operations plan• Public comment period and opportunity for a meeting on the general permit itself• No public notice or comment for each facility covered under the general permit• Variances are not allowed

No fees for either type of permit.





Variations and Pilot Approvals

Variance	Pilot or Research Approval
<ul style="list-style-type: none">• Individual permit only• Applies for the entire permit term (unless rescinded)• May have a technological, environmental, or economic justification• Proposed alternative must be equally protective of the environment	<ul style="list-style-type: none">• General or individual permit• Temporary – maximum duration is 1 year (but may reapply thereafter)• Must have a valid research or pilot purpose, such as to:<ul style="list-style-type: none">- Test acceptance of Type 2 materials- Conduct academic research- Fulfill temporary or seasonal need for handling certain materials



Other Requirements - MDE

- Water Permits:
 - General Permit for Stormwater Discharges Associated with Industrial Activity - commercial facilities whose primary activity is composting
 - Individual surface or groundwater discharge permit - if Tier 2 Large facility is discharging contact water on site

- Air Permits:
 - Potentially required for certain equipment
 - Not required for electric powered equipment or mobile sources (bucket loaders, etc.)
 - Permit to Construct: internal combustion engine powered equipment with ≥ 500 brake horsepower, such as a tub grinder. COMAR 26.11.02.10E.
 - Permit to Operate: sources listed in COMAR 26.11.02.13





Other Requirements

- MDA Requirements
 - Apply to compost that is distributed in Maryland
 - Product registration, labeling, testing, operator certification
 - For more information:
 - Regulations: COMAR 15.18.04
 - http://mda.maryland.gov/plants-pests/pages/state_chemist.aspx

- Local Requirements
 - Must comply with any local requirements that apply (zoning & land use, fire codes, etc.)





Next Steps

- Existing Facilities:
 - Were required to notify MDE by submitting Existing Facility Notification Form
 - Existing facilities that notified MDE have until Jan. 1, 2017 to come into compliance

- General CF Permit:
 - Currently under internal review
 - Will be published online for 30-day comment period prior to issuance



For Additional Information...

- Full regulations: COMAR 26.04.11
- MDE's Composting Website:
www.mde.maryland.gov/composting
- Contact the Resource Management Program for assistance: (410) 537-3314



Maryland Department of the Environment



Questions

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