



July 12, 2021

*Electronic Delivery*

Honorable Ralph S. Northam  
Governor of Virginia  
Executive Mansion  
PO Box 1475  
Richmond, VA 23218

**RE: Public Comments relating to fiscal, environmental, and economic impacts of 2021  
Executive Order 77 "Virginia Leading by Example to Reduce Plastic Pollution and Solid Waste"**

Dear Governor Northam,

On behalf of the members of the Coalition for Consumer Choices<sup>1</sup> (Coalition), thank you for this opportunity to comment on Executive Order 77 (EO77) "Virginia Leading by Example to Reduce Plastic Pollution and Solid Waste<sup>2</sup>."

Under EO77, all state agencies (and concessioners) must:

1. Stop purchasing or using certain plastics products (primarily foodservice) within 120 days; and
2. Phase out all single use plastic items by 2025.

Non-plastic alternatives must be reusable, compostable, or recyclable regardless of increased environmental impact including increased greenhouse gas (GHG) emissions and economic impact.

While the Coalition is **not** supportive of the executive order in its current form, we offer the following comments in support of common goals, such as reducing waste, and look forward to working constructively with your office and stakeholders on a path forward to integrate Virginia's circular economy goals.

## Summary

The Coalition thinks EO77 makes Virginia far less sustainable and is perhaps the most unrealistic and overreaching regulation of its kind in the United States today. Impractical and unrealistic regulation

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<sup>1</sup> "Coalition For Consumer Choices," (Website), Coalition For Consumer Choices, accessed May, 2021, <https://consumerchoices.org/virginia/>.

<sup>2</sup> "Virginia Leading by Example to Reduce Plastic Pollution and Solid Waste, Issued March 23, 2021," in *E.O. 77*, ed. Executive Office of the Governor (Richmond, VA: Reg. Reg., April 12, 2021 2021), 6. <https://www.governor.virginia.gov/media/governorvirginiagov/executive-actions/EO-77-Virginia-Leading-by-Example-to-Reduce-Plastic-Pollution-and-Solid-Waste.pdf>  
<http://register.dls.virginia.gov/issue.aspx?voliss=37:17&type=7>  
<https://advance.lexis.com/api/permalink/be24d046-1530-412c-aea0-d8f1e9cddcd2/?context=1519360>.

should not be misinterpreted as leading by example. As such, it is our goal to provide an analysis of EO77 and demonstrate how EO77 adversely affects the:

- Environment by increasing waste and greenhouse gas emissions
- Economy by increasing costs for students, state agencies, and taxpayers
- Society by reducing the availability of healthy and safely packaged food products, products essential to the differently abled, and food service products essential to public safety.

We also request an improved, deliberative, and more transparent decision-making process for EO77 implementation, including actions associated with:

1. **Administrative Process Act.** Government agencies' decision-making or actions under this executive order are subject to the Administrative Process Act<sup>3</sup>
2. **Fiscal Estimate and Environmental Impact Requirements.** A fiscal estimate<sup>4</sup> and environmental impact statement<sup>5</sup> must be prepared and subject to public comment
3. **Public Procurement Act Compliance.** Agencies must disclose how decisions pursuant to this executive order will comply with the Virginia Public Procurement Act<sup>6</sup>
4. **Open Records.** Pursuant to the Virginia Public Records Act<sup>7</sup>, we request all records related to EO77 from your office, the offices of cabinet members copied on this letter, and all state agencies and institutions of higher education

Below, please find our detailed sustainability and process concerns with EO77 as well as our suggestions. The coalition is eager to work with your administration and stakeholders on sustainable policy alternatives to help create a more circular economy in Virginia.

Thank you for the opportunity to provide this information for your consideration. If you have any questions, please feel free to contact Brett A. Vassey at (804) 709-1322 or [BVassey@VAManufacturers.com](mailto:BVassey@VAManufacturers.com).

Sincerely,

Brett Vassey  
Coalition for Consumer Choices

cc: Honorable Matthew J. Strickler, Department of Natural Resources  
Honorable Kelly Thomasson, Secretary of the Commonwealth  
Honorable Grindly Johnson, Secretary of Administration

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<sup>3</sup> "Administrative Process Act," in *Title 2.2 Administration of Government*, ed. Commonwealth of Virginia (Richmond, VA: Commonwealth of Virginia). <https://law.lis.virginia.gov/vacode/2.2-4000/>.

<sup>4</sup> "Executive orders; impact statements by the Joint Legislative Audit and Review Commission," in *Title 30*, ed. Commonwealth of Virginia (Richmond, VA: Commonwealth of Virginia). <https://law.lis.virginia.gov/vacode/30-19.1:12/>.

<sup>5</sup> "State agencies to submit environmental impact reports on major projects," in *10.1 Conservation*, ed. Commonwealth of Virginia (Richmond, VA: Commonwealth of Virginia). <https://law.lis.virginia.gov/vacode/title10.1/chapter11.1/section10.1-1188/>.

<sup>6</sup> "Virginia Public Procurement Act," in *2.2 Administration of Government*, ed. Commonwealth of Virginia (Richmond, VA: Commonwealth of Virginia), Va. Code. Ann. <https://law.lis.virginia.gov/vacode/title2.2/chapter43/section2.2-4300/>.

<sup>7</sup> Virginia Public Records Act, Va. Code. Ann. Title 42.1, Ch. 7.

Honorable Bettina Ring, Secretary of Agriculture and Forestry  
Honorable Brian Ball, Secretary of Commerce and Trade  
Honorable Atif Qarni, Secretary of Education  
Honorable Aubrey Layne, Secretary of Finance  
Honorable Daniel Carey, M.D., Secretary of Health and Human Resources  
Honorable Brian J. Moran, Secretary of Public Safety & Homeland Security  
Honorable Shannon Valentine, Secretary of Transportation  
Honorable Kathleen Jabs, Secretary of Veterans and Defense Affairs  
Ms. Megan Healy, Ph.D., Chief Workforce Advisor, Office of the Governor  
Ms. Rita Davis, Esq., Counsel, Office of the Governor  
Ms. Janice Underwood, Ph.D., Chief Diversity Officer, Office of the Governor  
Mr. Carter Hutchinson, Deputy Policy Director, Office of the Governor  
Mr. Cark Mercer, Chief of Staff, Office of the Governor

# Coalition for Consumer Choices – Public Comments

## Table of Contents

- Summary ..... 1
- Coalition for Consumer Choices – Public Comments ..... 4
- Table of Contents..... 4
- Sustainability Concerns of Executive Order 77 ..... 6
  - Environment ..... 6
    - Sustainable Materials Management: Reduce, Reuse, Recycle..... 6
    - Increased Landfilling ..... 6
      - EO77 Not Compatible with Current Recycling System ..... 8
      - Plastics Critical to Reducing Food Waste and Spoilable ..... 8
    - Increased Greenhouse Gas (GHG) Emissions ..... 9
    - Alternatives Unlikely to Lead to Litter Reduction..... 10
    - Unintended Consequences..... 11
  - Economic..... 12
    - State Finance ..... 12
    - Small Business Impact..... 12
  - Social Impact..... 13
    - Health and Safety..... 13
      - Executive Order Distracts from Pandemic Response ..... 13
      - Executive Order Promotes Food Insecurity ..... 14
      - Executive Order Threatens Wilson Center Program ..... 14
    - Open Government ..... 15
      - Transparency ..... 15
      - Participation..... 16
      - Collaboration ..... 16
- Sustainable Alternatives for a Circular Economy ..... 17
  - Industry Commitment..... 17
  - Policy Suggestions..... 17
    - Procurement and Recycling..... 18
    - Green Bond ..... 18
    - Circular Asphalt..... 19

Recycling Market Development .....	19
Waste Audits and Policy .....	19
Uniform Recycling Guidelines.....	20
Industry engagement.....	20
Conclusion.....	20
Works Cited.....	21
Attachment 1. American Chemistry Council .....	25
Attachment 2 Fiscal Analysis .....	26

## Sustainability Concerns of Executive Order 77

### Environment

#### Sustainable Materials Management: Reduce, Reuse, Recycle

Every item (including banned items and alternatives covered by EO77) requires natural resources, manufacturing, and transportation to create, use, and recycle or dispose of them – all of which creates an environmental impact. For some, ideologically all decision-making would weigh the total lifetime environmental impact of every product, its transportation impacts, its societal and economic impacts (positive and negative), alternatives (products and social behavioral), and externalities created by those alternatives, but that is not feasible in a free market society.

***The executive order with its “one-size fits-all” approach will lead to unintended consequences.***

Rather than evaluate items, actions, and systems through the waste management hierarchy or life-cycle assessment – weighing tradeoffs and benefits – EO77 falsely assumes that alternatives to plastics will *always* be environmentally preferable - which is *not* the case. Accordingly, the Coalition thinks EO77 will lead to *increased landfilling, more greenhouse gas emissions, less food safety, fewer healthy food/beverage choices, and increased littering.*

#### Increased Landfilling

In 2018, plastics made up 12.2 percent of municipal solid waste (MSW) nationally. This includes plastic durable goods, containers, and packaging which has varied from 12.2 to 13.2 percent over the past eight years. In 2018, 146.1 million tons of MSW was landfilled nationally. At 24 percent, food is the largest category of MSW landfilled.<sup>8</sup>

Virginia has a calculated recycling rate of 43.2 percent,<sup>9</sup> but not all jurisdictions in the Commonwealth must reach the 25 percent threshold. According to Virginia Code §10.1-1411.D, some jurisdictions are still allowed to hold at a 15 percent threshold, which puts those jurisdictions with less than 100 persons per square mile, or those with a civilian unemployment rate that is 50 percent or more above the state unemployment average at a disadvantage. Further, these rates and the recycling infrastructure funding assistance to these localities, particularly rural and have high unemployment jurisdictions, have not changed in decades.

Regardless, the percentage of plastics in the MSW has increased. However, this increase in plastics also aligns with a general reduction of glass, metal, and paper. Generally, plastic replaced glass, paper

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<sup>8</sup> "National Overview: Facts and Figures on Materials, Wastes and Recycling," Environmental Protection Agency, accessed May 19, 2021, <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>.

<sup>9</sup> *Virginia Recycling Summary Report for 2019*, Department of Environmental Quality (Richmond, VA: Commonwealth of Virginia, 2021), <https://www.deq.virginia.gov/home/showpublisheddocument/5524/637503709360970000>.

containers and packaging. This substitution is critical, because less material is required for plastic containers or packaging over a glass, metal, or paper construction.<sup>10</sup>

***Studies show alternatives generally weigh four times as much as plastic<sup>11</sup> and in many cases will not be recyclable or compostable using Virginia's existing infrastructure – increasing the demand for landfilling.***

It is also important to understand that “Recycling Rates” are based upon tonnage. So, plastics will generally represent the lowest percentage of all recyclables collected because they are the lightest materials. For example, an empty 12-ounce aluminum can weigh .53 ounces, or .03 pounds and a 16.9-ounce plastic bottle can weigh .049 ounces or .003 pounds. In other words, a plastic water bottle can hold 33 percent more water and weigh 1/10<sup>th</sup> of an aluminum can. So, comparing the weight or tonnage of recyclable materials against each other without understanding the benefits or impacts paints a misleading picture. Further, plastics quality and packaging design continues to improve. Beginning in 2000, plastic packaging weight continually decreased 3 percent annually until it reached a quarter of the replaced weight.<sup>12</sup>

Another critical data point is the positive impact of privately managed recycling. Manufacturers, distributors, and retailers have diverted recyclable materials from the municipal solid waste stream for decades. The paper industry collects corrugated and other fiber materials. The glass industry collects glass cullet from beneficiation facilities. Metals manufacturers collect aluminum and steel cans. And, the plastics industry collects PET, film<sup>13</sup>, and other materials to recycle into thousands of products from plastic bags to Personal Protective Equipment (PPE) to food containers. For example, Wal-Mart reported in 2020 that it recycled 690 tons of PETE and plastic film; 1,655 tons of Low Density Polyethylene (LDPE); and 494 tons of Mixed Recyclable Bales (MRB)<sup>14</sup>. One of Virginia's best-known branded manufacturers, Trex, has managed a private recycling network<sup>15</sup> for decades to produce its decking materials. Novolex,<sup>16</sup> a Virginia plastic bag manufacturer, recycles plastic bags from over 30,000 drop-off locations through its “Bag 2 Bag” program. Retail partners in this program include but are not limited to Food Lion, Kroger, Kohl's, Lowe's, Publix, Target, and Wal-Mart.

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<sup>10</sup> D. A. Tsiamis, M. Torres, and M. J. Castaldi, "Role of plastics in decoupling municipal solid waste and economic growth in the U.S.," *Waste Manag* 77 (Jul 2018), <https://doi.org/10.1016/j.wasman.2018.05.003>, <https://www.ncbi.nlm.nih.gov/pubmed/30008404>.

<sup>11</sup> Rick Lord, *Plastics and Sustainability: A Valuation of Environmental Benefits, Costs, and Opportunities for Continuous Improvement*, Plastics Division, American Chemistry Council (Washington, DC, July 2016 2016), <https://plastics.americanchemistry.com/Plastics-and-Sustainability.pdf>.

<sup>12</sup> Tsiamis, Torres, and Castaldi, "Role of plastics in decoupling municipal solid waste and economic growth in the U.S."

<sup>13</sup> "Wrap Recycling Action Program (WRAP)," American Chemistry Council, 2020, <https://www.plasticfilmrecycling.org/recycling-bags-and-wraps/wrap-consumer-content/>.

<sup>14</sup> "Recycling Reports," Department of Environmental Quality, 2020, accessed Jun 28, 2021, <https://www.deq.virginia.gov/land-waste/recycling/recycling-data/recycling-rate-report>.

<sup>15</sup> "Commercial Recycling Partnerships," Trex, 2021, accessed Jun 28, 2021, <https://www.trex.com/recycling/recycling-partnerships/>.

<sup>16</sup> Terrance Dixon, "Recyclable plastic grocery bags made in Richmond facility," TV and website, *NBC 12 WWBT* (Richmond, VA), Jan. 21 2020, <https://www.nbc12.com/2020/01/22/recyclable-plastic-grocery-bags-made-richmond-facility/>.

These private recycling networks also do not account for the growing benefits of advanced recycling facilities that could recover as much as 60 percent of the plastic materials that are harder to recycle due to cross-contamination from single stream and MRB recycling. Other emerging technologies such as UBQ has tested at Central Virginia Waste Management Authority have incredible promise of increasing plastics recycling.<sup>17 & 18</sup>

As agencies comply with EO77, the heavier alternative materials purchased may lead to increased waste requiring increased landfilling.

#### *EO77 Not Compatible with Current Recycling System*

While composting is a part of recycling, it is important to recognize its limitations. The Oregon Department of Environmental Quality found that compostable foodservice often has a larger environmental impact than non-compostable items because of increased energy used in manufacturing.<sup>19</sup> That increase in energy use also increases greenhouse gas emissions<sup>20</sup>.

Most compostable foodservice only decomposes in a controlled composting environment such as large industrial facilities that generate temperatures exceeding 140 degrees. Currently, there appear to only be four commercially available facilities in the Commonwealth. Of these only one is a municipal facility,<sup>21</sup> and none are scaled in Virginia for the collection of these materials. Finally, this service is not available in over 95 percent of jurisdictions.

***That means that compostable collections will require increased landfilling.***<sup>22</sup>

#### *Plastics Critical to Reducing Food Waste and Spoilable*

The United Nations estimates that annually nearly a third of all food produced in the world for human consumption never makes it to people.<sup>23</sup> Not only is this a missed opportunity to increase food security,<sup>24</sup> but it also wastes the natural resources required to grow, process, package, and transport food. In addition to wasted natural resources, food wastage makes up the largest part of landfilled material<sup>25</sup> (24.14 percent). This results in enormous amounts of methane. Methane has a global warming potential 84 to 86 times worse for climate stability than carbon<sup>26</sup>. If food waste were tracked as a country, it would be the third largest emitter of greenhouse gas<sup>27</sup>.

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<sup>17</sup> "Turning trash to treasure," UBQ, accessed May 19, 2021, <https://www.ubqmaterials.com/technology/ubq-process/> (Website).

<sup>18</sup> Theresa Cottom, "Virginia debuts partnership to turn MSW into plastic substitute," *Recycling Today*, August 29 2019, <https://www.recyclingtoday.com/article/virginia-waste-ubq-materials-partnership-msw-plastic-substitute-sabra/>.

<sup>19</sup> Material Attribute: Compostable: How well does it predict the life cycle environmental impacts of packaging and food service ware?, (Salem, OR: State of Oregon, 2018).

<sup>20</sup> See, Increased Greenhouse Gas (GHG) Emissions on page 6.

<sup>21</sup> "Public Works and Environmental Services," (Website), County of Fairfax, VA, 2021, accessed Jun. 28, 2021, <https://www.fairfaxcounty.gov/publicworks/recycling-trash/food-scraps-composting-drop>.

<sup>22</sup> It is important to note that compostable do not "biodegrade" when landfilled or littered.

<sup>23</sup> United Nations, Food Wastage Footprint & Climate Change, (New York 2011).

<sup>24</sup> See, Executive Order Promotes Food Insecurity on page 11.

<sup>25</sup> "National Overview: Facts and Figures on Materials, Wastes and Recycling."

<sup>26</sup> *ISSP-SA Study Guide*, First Edition, 2016 ed. (Portland, OR: International Society of Sustainability Professionals, 2016).

<sup>27</sup> Nations, Short Food Wastage Footprint & Climate Change.

Plastic packaging plays a critical role in reducing food waste by:<sup>28 & 29</sup>

- **Extending Shelf Life from Reduced Oxygen in Food Packages.** 1.5 grams of plastic packaging has been shown to extend a cucumber shelf life from 3 to 14 days. Refrigerated cheese shelf life increased from 7 days to 180 with reduced oxygen provided by plastic packaging.
- **Providing Convenience.** Plastic packages are easy to open and reseal, especially for the elderly and differently abled

The environmental impact from food waste increases as food moves along the value chain to the consumer.<sup>30</sup> Unfortunately, EO77 bans the purchase of some of the very items that significantly slow the need for landfilling.

***Given the important role plastics play in reducing food waste, the executive order will likely lead to increased landfilling and more greenhouse gasses.***

### Increased Greenhouse Gas (GHG) Emissions

Climate change is a global challenge that requires long-term commitment and action by every segment of society.

We note that your administration has taken steps to address climate change. Some notable examples include prioritizing carbon reduction,<sup>31</sup> approving the Virginia Clean Economy Act,<sup>32</sup> and joining the Regional Greenhouse Gas Initiative.<sup>33</sup>

However, there is ample evidence that use of common alternatives to plastic packaging items lead to increased GHG emissions, not less. For example:

- Imperial College researchers looked at plastic and GHG emissions and concluded:  
*“it is wrong to assume that alternative packaging materials would perform better, and it is important to consider the carbon benefits that arise from plastics use. When considering the production and manufacturing of the main alternatives to plastic for a 500ml bottle, other packaging types (fiber, glass, steel and aluminum) emit more greenhouse gases than plastic bottles, with glass bottles being the highest emitter overall. By way of example, if all plastic bottles used globally were made from glass instead, the additional carbon emissions would be*

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<sup>28</sup> *A Holistic View of the Role of Flexible Packaging in a Sustainable World*, <https://www.flexpack.org/sustainable-packaging/lca-case-studies/>.

<sup>29</sup> Advisory Committee on Packaging, *Packaging in Perspective* (London, UK, 2008), <http://www.thefactsabout.co.uk/files/98201010542packaginginperspective.pdf>.

<sup>30</sup> Nations, *Short Food Wastage Footprint & Climate Change*, 3.

<sup>31</sup> "Expanding Access to Clean Energy and Growing the Clean Energy Jobs of the Future," ed. Commonwealth of Virginia Office of the Governor (Richmond, VA, 2019), Executive Order. <https://www.governor.virginia.gov/media/governorvirginiagov/executive-actions/EO-43-Expanding-Access-to-Clean-Energy-and-Growing-the-Clean-Energy-Jobs-of-the-Future.pdf>.

<sup>32</sup> Commonwealth of Virginia Office of the Governor, "Governor Northam Signs Clean Energy Legislation," news release, Apr 12, 2020, <https://www.governor.virginia.gov/newsroom/all-releases/2020/april/headline-856056-en.html>.

<sup>33</sup> Commonwealth of Virginia Office of the Governor, "Virginia Becomes First Southern State to Join Regional Greenhouse Gas Initiative," news release, Jul 8, 2020, <https://www.governor.virginia.gov/newsroom/all-releases/2020/july/headline-859128-en.html>.

*equivalent to powering around 22 large coal-fired power plants. This is equivalent to the electricity consumed by a third of the UK.* <sup>34</sup>

- Replacing 14.4 million metric tons of plastic packaging would result in more than 64 million tons of other material. This would result in significant increase in total energy demand, expended energy, and water consumption, solid waste by weight and by volume, global warming potential, acidification, eutrophication, smog formation, and ozone depletion.<sup>35</sup>
- A plastic cup requires about 50 percent less energy to produce and creates significantly fewer GHG emissions than many alternatives under this proposal.<sup>36</sup>
- A life cycle assessment (LCA) comparing a plastic food pouch with a glass jar and a steel can demonstrated a plastic food pouch has more than 60 percent lower carbon footprint than alternative materials<sup>37</sup>.

Another consideration that is ignored in EO77 is the origin of alternative products. If these products are sourced from countries such as China or Mexico, it is highly likely that their associated GHG emissions and other environmental impacts will increase, due to less robust manufacturing and energy regulations than domestic requirements. If they are sourced from outside of the Commonwealth, their transportation costs will not be effectively calculated in their GHG emissions impact. For example, if all state aluminum bottles are sourced from Colorado, which is likely for bottled water manufacturers, the GHG impact of trucking those bottles for production in Virginia will be significant.

#### Alternatives Unlikely to Lead to Litter Reduction

A state purchasing ban on single use plastics is unlikely to reduce the amount of litter. In fact, two studies following a similar ban reported an increase in the littering of alternative materials that was greater than the decline in the banned material<sup>38</sup>. This was a primary reason why the California Water Board rejected the use of plastic bans as a compliance mechanism for waterborne trash reduction.<sup>39</sup>

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<sup>34</sup> Voulvoulis N. et al., *Examining Material Evidence: The Carbon Fingerprint*, Centre for Environmental Policy, Imperial College London (London, UK, 2020), <https://www.imperial.ac.uk/media/imperial-college/faculty-of-natural-sciences/centre-for-environmental-policy/public/Veolia-Plastic-Whitepaper.pdf>.

<sup>35</sup> *Life Cycle Impacts of Plastic Packaging Compared to Substitutes in the United States and Canada: Theoretical Substitution Analysis*, Plastics Division, Franklin Associates, Eastern Research Group (Washington, DC: American Chemistry Council, 2018), <https://plastics.americanchemistry.com/Reports-and-Publications/LCA-of-Plastic-Packaging-Compared-to-Substitutes.pdf>.

<sup>36</sup> *Life Cycle Inventory of Foam Polystyrene, Paper-Based, and PLA Foodservice Products*, Plastics Division, Plastic Foodservice Packaging Group (Washington, DC: American Chemistry Council, February 4 2011), [https://www.plasticfoodservicefacts.com/wp-content/uploads/2017/12/Peer\\_Reviewed\\_Foodservice\\_LCA\\_Study-2011.pdf](https://www.plasticfoodservicefacts.com/wp-content/uploads/2017/12/Peer_Reviewed_Foodservice_LCA_Study-2011.pdf).

<sup>37</sup> *Comparative Life Cycle Assessment of different pouches and alternative packaging systems for food (Pasta Sauce and Olives) on the European market (executive summary)*, ifeu Wilckensstraße (Heidelberg: Flexible Packaging Europe (FPE), April 2021), [https://www.flexpack-europe.org/files/FPE/sustainability/ExecutiveSummary\\_PouchLCA\\_Apr2021.pdf](https://www.flexpack-europe.org/files/FPE/sustainability/ExecutiveSummary_PouchLCA_Apr2021.pdf).

<sup>38</sup> *Single-Use Polystyrene Food Containers and Plastic Bag Study*, Report No. 18-04, Council Com. 347 (Honolulu, HI: City and County of Hawaii, 2018).

<sup>39</sup> *Amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, (Sacramento, CA: State of California, 2015).

Ironically, this proposal encourages state agencies to decrease available waste receptacles to reduce trash liner use<sup>40</sup>. However, research clearly demonstrates that reducing the number of trash cans will increase litter. Readily available waste and recycling receptacles is a well-established practice to abate litter and increase recycling for all materials. Keep America Beautiful and The Walt Disney Co. have both demonstrated through extensive research that trash receptacles must be placed at about every 25-30 paces for proper disposal.<sup>41</sup> Further, that same research demonstrated that 85 percent of littering is the result of people's attitudes.

### Unintended Consequences

A recent policy decision at the University of Virginia (UVA) illustrates the misguided nature and unintended consequences of EO77. Last year, UVA began requiring non plastic containers such as aluminum without considering the total environmental lifecycle costs of the switch. Total environmental life cycle cost considers creating the bottle, transportation, reducing leakage and spoilage, use, and disposal or recycling.

The benefits of plastic beverage containers include lesser costs and lighter environmental footprints over other materials when the entire lifecycle is considered. However, due to UVA's switch away from plastic bottles:

- Aluminum containers that already consume more energy than plastic bottles must now be shipped from Colorado adding to their carbon footprint; and
- The change to aluminum bottles will cost an additional \$1,000 per student per year.

This example extends to state operated vendors, vending machines and concessions.

Another unintended consequence of EO77's alternative product mandate is increased costs and additional indirect environmental impacts. For example, 1,000 traditional plastic forks costs about the same as 140 compostable forks. Also, popular alternative products that are marketed as "biodegradable" are often derived from bamboo which is illegal to grow in most of the Commonwealth as it is designated as either an invasive species or noxious weed.<sup>42</sup> With these limitations, the supply chain for raw materials for these products will extend to other states or countries that do not have such regulations and, thus, increase GHG and other emissions to get the products to Virginia. Further, the decomposition of these materials will contribute to additional GHG emissions. Finally, this will likely result in more imported rather than domestically manufactured products.

Yet, another unintended consequence is the reduction in safely packaged and healthy food and beverage choices. The Commonwealth's public health advocates have worked with industry for decades

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<sup>40</sup> Chris Bast, "EO 77: Virginia Leading by Example to Reduce Plastic Pollution and Solid Waste: Overview for State Agencies," (Commonwealth of Virginia, May 13 2021). <https://register.gotowebinar.com/recording/viewRecording/3042771300989220619/5285495746188167436/bvassey@vamanufacturers.com?registrantKey=7444348344419857679&type=ATTENDEEMAILRECORDINGLINK>.

<sup>41</sup> "Being a Good Neighbor: A Guide to Reducing Litter, Managing Trash, and Encouraging Recycling," (National Association of Convenience Stores Keep America Beautiful). [https://kab.org/wp-content/uploads/2017/10/BeingaGoodNeighbor\\_AGuidetoReducingLitterManagingTrashandEncouragingRecycling.pdf](https://kab.org/wp-content/uploads/2017/10/BeingaGoodNeighbor_AGuidetoReducingLitterManagingTrashandEncouragingRecycling.pdf).

<sup>42</sup> 15.2-901.1 Code of Virginia.

to change product formulations so that there are quality food and beverage choices in vending machines, concessions, and direct purchasing. Due to the need for extended shelf-life, limited refrigeration, and desire to avoid pest infestation in public facilities, plastic packaging has been the primary solution. Further, the elimination of plastic water bottles will eliminate a healthy beverage choice that will result in students and state employees only having access to soft drinks and juices in cans in vending machines and even limited choices through concessioners unless they purchase boxed or canned water at a premium.

Finally, for many people with disabilities, plastic straws are the best accommodation for their consumption of food and beverages. Plastic straws are a “necessity for those who are paralyzed, suffer from joint weakness or have difficulty controlling the movements of their mouths and hands<sup>43</sup>” according to advocates children and the differently abled.

## Economic

### State Finance<sup>44</sup>

State agencies use plastic foodservice products. These foodservice product costs will nearly double because of EO77. About half of food services are provided by local schools through the Virginia Department of Education for school lunch, breakfast, summer meals, and other nutrition programs. Also, the foodservice for the criminal justice system, higher education, mental health, senior services, vocational rehabilitation, and services for the visually impaired are subject to EO77 cost increases.

Our own analysis, as shown below, estimates that just current expanded polystyrene foam and rigid plastics disposable foodservice purchases associated with the state nutrition expenditures are \$13.4 million.

**Total additional costs associated with the nutrition expenditures under EO77 will increase 75 to 118 percent or \$10.1 million to \$15.8 million under the compostable case.** These estimates include clamshells, beverage and portion cups, lids, containers, dinnerware (plates and bowls), food trays, and serving trays and carriers. They do not include straws, utensils, or trays for meat, poultry, fish, and eggs.

### Small Business Impact

While data specific to Virginia businesses potentially affected by EO77 are not readily available, some general comments can be made based on the data used in this memo. In particular, there are many small business vendors and concessioners to state agencies, higher education institutions, public safety institutions, and prison systems that will be affected and will be forced to find new material suppliers and increase their operational expenditures. With so many small businesses particularly impacted by COVID, now is an especially challenging time to raise their financial burdens.

Food service operations are generally low profit margin businesses. According to the Restaurant Association’s Restaurant Operations Reports, profits range from an estimated 3 percent for full-service restaurants to an estimated 6 percent for limited service restaurants. Using results from analyzing the

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<sup>43</sup> A. Pawlowski, "Plastic straw bans hurt kids and adults with disabilities, advocates say: Fueled by concerns about the environment, straw bans keep expanding. But many people with disabilities say they need them to safely drink.," Online, *Today*, Jul. 16 2019, <https://www.today.com/health/plastic-straw-bans-hurt-kids-adults-disabilities-advocates-say-t158808>.

<sup>44</sup> See, full fiscal analysis in Attachment 2 Fiscal Analysis on page 22.

Freedonia data, the average expenditures for the plastic disposable foodservice ranges from 0.3 percent of revenues for a full-service restaurant, 0.6 percent for a fast casual restaurant, 1.3 percent for a quick service restaurant, and 2.3 percent for coffee and snack shops. At an operating profit margin of 6 percent, a forced shift to specific foodservice products could consume from 5 percent to nearly 40 percent of business profits. So, any mandated product cost increase will further erode the profitability and availability of small business vendors to the Commonwealth.

## Social Impact

### Health and Safety

#### *Executive Order Distracts from Pandemic Response*

There has been an unprecedented comprehensive government response to the pandemic caused by the coronavirus. Every commonwealth agency plays an important role in the pandemic response. Agencies already indicate that additional staff are needed to implement recent priorities.<sup>45</sup> Requiring agencies to dedicate time and resources (and increased funds) towards complying with the order is counterproductive. For example:

- It is unclear what action an agency should take if no alternative exists
- Agencies will need to examine adequate availability and fitness of alternatives
- Agencies will need to adjust finances to reflect increased cost of alternatives
- The executive order templates direct agencies towards reusable use without providing any expertise on sanitation and hygiene which may increase the spread of disease. This is especially critical as Virginia emerges from the pandemic
- Agencies will need to examine if infrastructure exists to sanitize reusable alternatives and cover costs
- How will agencies ensure it is not “shifting the burden” to staff. For example, providing a reusable an employee must wash at home?
- How will agencies create onsite composting for employee use?

This executive order creates an unreasonable and unhealthy burden on agencies which is exacerbated by the unrealistic compliance timeline. Additionally, intentionally decreasing the polystyrene (PS) market makes little sense:

- Schools and universities as well as restaurants rely on PS containers to safely deliver food; and
- PS is critical to safely transporting COVID vaccines<sup>46</sup> by helping maintain a constant temperature.

**PS and plastic elimination only makes Virginia more vulnerable to COVID 19 challenges, not less.**

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<sup>45</sup> 2020 Environmental Justice Interagency Working Group Report, (Richmond, VA: Commonwealth of Virginia, 2020).

<sup>46</sup> "Transporting COVID-19 Vaccines Off-Site," (UPS, March 4 2021), Toolkit.

<https://www.usp.org/sites/default/files/usp/document/our-impact/covid-19/transporting-covid19-vaccines-offsite.pdf>.

### *Executive Order Promotes Food Insecurity*

Food security is increasingly recognized as integral to sustainability.<sup>47</sup> Like many other places in the US, ending food insecurity in Virginia has been exacerbated by the pandemic.<sup>48</sup> We applaud the ambitious goals articulated in “The Virginia Roadmap to End Hunger<sup>49</sup> championed by the Children’s Cabinet and other stakeholders.

The Commonwealth operates a number of programs which directly provide (or through community organizations) qualifying Virginians with meals or food: <sup>50</sup> & <sup>51</sup>

- Virginia Direct Certification with Medicaid Demonstration Project
- National School Lunch Program
- School Breakfast Program
- Afterschool Snack Program
- Fresh Fruit and Vegetable Program
- Summer Food Service Program
- Child and Adult Care Food Program (CACFP)
- Older Americans Congregate Nutrition Program and the Home-Delivered Nutrition Program
- Virginia WIC (Women, Infants, and Children)

Many of these programs use items banned under this executive order in order to deliver food and meal in a safe, sanitary and cost-effective way. It is unclear how these programs will switch to more costly alternatives that likely double costs or find additional funds to implement a refillable or reusable system.

### *Executive Order Threatens Wilson Center Program*

The Wilson Workforce and Rehabilitation Center (WWRC) provides differently-abled people with comprehensive individualized services to realize personal independence through employment. This work is under the scope and mission of the Department for Aging and Rehabilitative Services (DARS), specifically the Division of Rehabilitative Services (DRS). Students may live at the center which is very much like a traditional college campus and are provided supportive training, socialization, intervention critical to their success<sup>52</sup>.

Through a special agreement with the Virginia Manufacturers Association and with member support, the students operate a complete bottled water factory on the WWRC campus utilizing plastic bottles.

About sixty students are enrolled under this career path of the Manufacturing Technology Training (MTT) Programs offered at WWRC. In addition to gaining critical technical knowledge, students also earn

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<sup>47</sup> Trade Reforms and Food Security: Conceptualizing the Linkages, (New York: United Nations, 2003).

<sup>48</sup> Virginia Roadmap to End Hunger, (Commonwealth of Virginia, 2020).

<sup>49</sup> Virginia Roadmap to End Hunger, Short.

<sup>50</sup> "Programs, Promotions, and Initiatives," Commonwealth of Virginia, accessed May 23, 2021, <https://www.doe.virginia.gov/support/nutrition/programs/index.shtml>.

<sup>51</sup> "Nutrition," Commonwealth of Virginia, accessed May 23, 2020, <https://www.vda.virginia.gov/nutrition.htm>.

<sup>52</sup> Wilson Workforce and Rehabilitation Center’s (WWRC) Blueprint for Direction, (Fishersville, VA: Commonwealth of Virginia, 2018).

an Occupational Safety and Health Act (OSHA) 10 workforce certificate and to sit for the Manufacturing Specialist (MS) and Manufacturing Technician, Level I (MT1) exams<sup>53</sup>.

As a state agency, WWRC will be banned from purchasing essential materials required for this program to operate. Even if a material purchase is accepted the WWRC campus and state agencies will be prohibited from purchasing or distributing the plastic bottled water created in support of this program.

### Open Government

Public trust is earned when government operates within a system of *transparency, participation, and collaboration*. Openness is a strength that promotes efficiency and effectiveness<sup>54</sup>. We agree with the administration, "...that everyone whose health and environment may be potentially affected by activities should be sought out and included in decision-making. The agency believes that in order to be successful we must find a way forward – together – using a transparent and inclusive process."<sup>55</sup>

***Unfortunately, EO77 was developed through a closed process, does not conform to the Virginia Administrative Process Act, and has an unrealistic timeline that does not allow for adequate public input.***

### Transparency

EO77 will collect incomplete and bias data. Transparency demands accurate information for meaningful public comment and collaboration. Comprehensive economic and environmental impact statements are integral to government regulation transparency and accountability cannot exist without complete information.

Just a few our initial concerns about data integrity and transparency are as follows:

- EO77 focuses on a segment of a product's lifecycle instead of looking at the entire environmental impact such as would be captured in a life cycle analysis.
- EO77 ignores environmental life cycle costing by only collecting environmental data on banned products and not their alternatives.
- Agency data collection is entirely self-reported without independent third-party review.
- Whether agencies have adequate staff resources to set agency baselines, training certification in environmental audits, training in estimating handling and disposal costs, and rubric for comparing the life cycle or environmental impacts of alternatives.

**As a result, to help us assess the concerns of government agencies impacted by EO77, we request access to all relevant public records.<sup>56</sup>**

Additionally, the Virginia Public Procurement Act is predicated on procurement of "high quality goods and services at reasonable cost" and "avoidance of any impropriety or appearance of impropriety." Given inadequate data to support life cycle impacts and costs, it is unclear how EO77 will comply with

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<sup>53</sup> "Manufacturing Technology Training (MTT) Program," Commonwealth of Virginia accessed May 23, 2021, <https://www.wwrc.net/manufacturing.htm> (Website).

<sup>54</sup> Transparency and Open Government: MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES, (Washington, DC: Office of President Barack Obama, 2009).

<sup>55</sup> 2020 Environmental Justice Interagency Working Group Report, Short, 5.

<sup>56</sup> See, page 2.

this statutory mandate and not subject agency procurement staff from making potentially arbitrary and capricious decisions based upon faulty data.

### *Participation*

Public policy and decision-making are enhanced through meaningful engagement. Public decision-makers benefit from access to knowledge and expertise widely dispersed in our community. Your Administration should be seeking ways to increase and improve public participation in government. This is also critical to mitigating unintended consequences.

The executive order is a massive change in public procurement – including purchase of FDA-regulated products – within 120 days.

Virginians should have the right to fully participate in the decision-making of this proposal. The only way to ensure meaningful public participation is by following the Virginia Administrative Process Act. This includes the right to know the impacts of this proposal through required impact statements and the right to comment. This also avoids a one-size-fits-all approach recognizing the different needs in different parts of the Commonwealth.

### *Collaboration*

Government is better when cooperation is encouraged among stakeholders. Active collaboration increases the legitimacy of policy decisions and likelihood of sustainability. The Commonwealth has a strong tradition of collaborative government that is worth defending.

Recently, the Commonwealth created:

**Plastic Waste Prevention Advisory Council**<sup>57</sup> to “advise the governor on policy and funding priorities to eliminate plastic waste impacting native species and polluting the Commonwealth's environment and to contribute to achieving plastics packaging circular economy industry standards”; and the

**Waste Diversion and Recycling Task Force**<sup>58</sup> “to study ways to increase waste diversion and recycling”.

Like other advisory groups, the Council and Task Force are made up representative stakeholders, will hold numerous public meetings, share publicly available material, and be subject to open meetings and records laws, and public participation regulations.

EO77 makes the work of the Council and Task Force harder and less productive since it falsely assumes plastic alternatives are always the environmentally preferential. Actions to reduce the Commonwealth’s environmental footprint deserves scrutiny and discussion that openly deliberates costs, benefits, and tradeoffs. Further, deliberation increases the chances of making informed, evidence-based policy recommendations. Such recommendations decrease the likelihood of unintended consequences.

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<sup>57</sup> Ch. 798. *Plastic Waste Prevention Advisory Council*, 2020 Session, House Bill 1354.

<sup>58</sup> *Requesting the Department of Environmental Quality to establish a Waste Diversion and Recycling Task Force to meet to discuss ways to increase waste diversion and recycling. Report*, 2020 Session, Senate Joint Resolution 42 (Enrolled).

## Sustainable Alternatives for a Circular Economy

### Industry Commitment

Coalition members are deeply committed to creating a more circular economy for plastics. For example, the American Chemistry Council (ACC) established goals to reuse, recycle and recover all plastic packaging in the United States by 2040 and make all plastic packaging recyclable or recoverable by 2030<sup>59</sup>. ACC also developed a Roadmap to Reuse<sup>60</sup> and Guiding Principles<sup>61</sup> which together reflects their strategic framework to reach these goals. To see other examples, please see Attachment 1.

The private sector, including many of America's plastic makers, are investing billions of dollars in plastics recycling that would utilize more material collected for recycling<sup>62</sup>.

- Since July 2017, there have been 66 projects worth more than \$5.5 billion in announced investments in modern recycling technologies in the U.S., with more on the way. Many expand the types and volumes of plastics that can be reused.
- These projects have the potential to divert more than 8 billion pounds of waste annually from landfills.

Eighty-three percent of these investments are in the growing field of advanced recycling, which is crucial modern infrastructure needed to accelerate a circular economy for plastics.

### Policy Suggestions

Creating a circular economy for plastics and putting an end to plastic waste is an ambitious goal that will require modernizing Virginia's recycling infrastructure, as well as ongoing consumer education and stakeholder coordination. Banning plastics—a material that helps to significantly reduce greenhouse gas emissions—will neither protect our environment nor create a more circular economy. We believe there are several alternative policy options that Virginia could consider in order to drive supply and demand for recyclable materials across the state.

A well-designed program should:

- Increase access and the collection and sortation of recyclable materials, including metals, paper, glass and plastic
- Invest in the appropriate infrastructure to increase the types of materials that are currently recycled
- Incentivize stakeholder decisions that lead to lower environmental impacts

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<sup>59</sup> "U.S. Plastics Resin Producers Set Circular Economy Goals to Recycle or Recover 100% of Plastic Packaging by 2040," news release, 9 May 2018, <https://www.americanchemistry.com/Media/PressReleasesTranscripts/ACC-news-releases/US-Plastics-Producers-Set-Circular-Economy-Goals-to-Recycle-or-Recover-100-Percent-of-Plastic-Packaging-by-2040.html>.

<sup>60</sup> *Roadmap to Reuse*, Plastics Division (Washington, DC: American Chemistry Council, 2020), <https://www.reuseplastics.org/advocacy/the-roadmap-to-reuse>.

<sup>61</sup> *Guiding Principles*, Plastics Division, American Chemistry Council (Washington, DC: American Chemistry Council, 2020), <https://www.reuseplastics.org/advocacy/guiding-principles>.

<sup>62</sup> *Roadmap to Reuse: Plastics Solutions for America 2020: A report on eliminating plastic waste through the creation of a circular economy.*, Plastics Division, American Chemistry Council (Washington, DC, 2020), <https://www.reuseplastics.org/advocacy/roadmap-to-reuse-2020-report>.

- Support the existing roles of local government and waste management and recycling companies, and include the voices of key stakeholders including government, waste management and recycling companies, brands, and material suppliers
- Recognize the critical role of mechanical and advanced recycling technologies in recovering more plastic
- Encourage end-market development for recycled content
- Improve outreach and education to consumers to help them recycle more material

An excellent programmatic example that could have substantial statewide impacts if it were properly funded for infrastructure, industry collaboration, outreach, and public education is [www.askHRgreen.org](http://www.askHRgreen.org) where their ground-breaking program, “Smart Start, Recycle Right,” has struck the right balance.<sup>63</sup>

### Procurement and Recycling

State procurement policy can help increase domestic demand for post-consumer recycled (PCR) content. Increasing purchasing of plastics with recycled content promotes the use of PCR in manufacturing new products. This more sustainable development will support increased economic development promoting a more circular economy.

While Virginia does encourage procurement of goods and products with recycled content and recycling, more should be done to incent recycled content use. For example:

- Create policies that give PCR containing products purchasing preference
- Create resources that educate and equip employees to increase PCR procurement and recycling
- Give greater employee recognition for increasing agency procurement of PCR and recycling, for example by expanding the Governor’s Environmental Excellence Award.
- Make procurement guides and programs available to local governments

### Green Bond

Currently, an income tax credit exists for recyclable material processing equipment capital expenditures. Initially, 20 percent of the credit is claimed in the first year and the remainder is claimed over ten years.

Green development bonds<sup>64</sup> provide low-cost, long-term sources of debt capital to further investment in eligible sustainable development projects in the Commonwealth. Green bonds provide a number of benefits:

- Federal tax-exempt and property tax exempt;
- Some of the lowest interest rates; and
- Encourages investment.

Virginia could explore expanding the recyclable material tax credit, green bonds, and accelerated depreciation to property, plant and equipment that use recycled content to create new products and goods. Require proceeds of a local plastic bag tax to support recycling infrastructure.

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<sup>63</sup> "Start Smart, Recycle Right + Quiz," [askHRgreen.org](https://askhrgreen.org), <https://askhrgreen.org/gtk-gtd/start-smart/>.

<sup>64</sup> Green bonds are a form of industrial revenue bonds.

## Circular Asphalt

The Transportation Department includes crushed glass (and a few other materials and applications) in the 2016 Road and Bridge Specifications on Recyclable Materials. These specifications do not require the use of recycled content, but instead create allowable-use standards. Local governments often use these specifications for their own projects.

About 25 percent of asphalt relies on polymers as a modifier to improve asphalt binder performance under heavy traffic and environmental conditions. *Recycled plastic modified (RPM) asphalt uses recycled plastic products instead of virgin components.* Preliminary data suggests that RPM can increase asphalt life and performance (less cracking and rutting). RPM potentially creates an important end market for recycled plastic.

Preliminary data suggests the total environmental impact of RPM is less due to increased asphalt life and performance. Recycling plastics into RPM also creates an important durable end market for recycled plastics. Use of recycled plastics often has a measurable environmental benefit over virgin material.

Multiple states, including Texas, Iowa, and Missouri, have already begun using recycled plastic in some highway repair projects.

## Recycling Market Development

Recycling market development consists of statewide activities and initiatives that enhance the economic vitality of the reuse and recycling industries and allows state and local government programs to coordinate their activities and share information.

A Recycling Market Development Center is needed to research, incentivize, and develop new markets. Virginia could develop a statewide action plan and utilize financial incentives for projects and programs to stimulate the state recycling economy. For example:

- Recognize Recycling Centers, Beneficiation Facilities, and Material Recycling Facilities as critical infrastructure and develop an entirely new tax and incentive structure that would allow these facilities to operate sustainably
- Create incentives for public-benefit corporations to operate recyclable material processing businesses
- Increase the Recyclable Materials Processing Equipment Tax Credit
- Broadly exempt recyclable material processing businesses from sales taxes, local machinery and tools taxation, local property taxation, and local business taxation

## Waste Audits and Policy

State sponsorship of waste audits to better understand and publish the state's waste stream. Studies and ensuing policy should be both material neutral and consider the full environmental impact of items to avoid regrettable substitutions. Washington State recently created the Recycling Center within the Ecology Department to improve markets and better educate residents.

## Uniform Recycling Guidelines

Urge the adoption of uniform recycling guidelines to maximize communications, education, and economies of scale for recyclers. This could also be a platform to encourage best practices such as appropriate moisture reduction or assessing optimal recycling bin sizes and sources.

## Industry engagement.

Continue engagement with the plastics industry and other parts of the value chain to increase awareness of critical issues, alignment on new developments, and foster an informed and productive path forward. Consider hosting regular meetings and publishing discussion drafts for public comments. Robust discussion should occur to properly develop recycled plastic content incentives, evaluate the health, safety, and performance benefits of plastics, consider the market opportunities for recycled content, and fully align with national waste management hierarchy.

These discussions can lead to real world collaborations. For example, UBQ Materials, an Israeli-based company, created 2,000 recycling bins from MSW as a part of a pilot project with the Central Virginia Waste Management Authority.<sup>65</sup> Under UBQ's process, unsorted MSW is broken down into more basic components and reconstituted into a new composite material.

Virginia should engage its economic development organizations to produce additional opportunities like these.

## Conclusion

The Coalition for Consumer Choices has serious sustainability and process concerns with EO77. At the taxpayer's expense, EO77 forces agencies to spend more money for fewer products, create more solid waste and GHG emissions, and flagrantly ignores the necessary transparency and public participation afforded by the Virginia Administrative Process Act, all while negatively impacting small business, the differently abled, students, and agencies whose mission may not be environmental auditing and waste management. Sadly, EO77 bans some of the very products that kept Virginians safe through the COVID-19 pandemic – what a disappointing recognition of public benefits.

Instead of bans and restrictions, policymakers should consider encouraging recycled content use in procurement, increasing the availability of green bonds, supporting other end markets, and educating the public about necessities of reducing, reusing, and recycling all products. Engaging industry is an important part of evaluating these considerations and the other suggestions of our Coalition. As such, it is our recommendation that Executive Order 77 should be set aside to allow the Plastic Waste Prevention Advisory Council and the Waste Diversion and Recycling Task Force to study and make comprehensive recommendations.

(End)

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<sup>65</sup> Cottom, "Virginia debuts partnership to turn MSW into plastic substitute."

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***This entry was generated through inserting a Statute citation for Virginia Public Records Act. Statute references should appear only in the notes. Remove field codes in the final document and then remove this entry.***

*Virginia Roadmap to End Hunger*. Commonwealth of Virginia, 2020.

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## Attachment 1. American Chemistry Council

ACC and our members are deeply committed to creating a more circular economy for plastics. That is why we established goals to reuse, recycle and recover all plastic packaging in the United States by 2040 and make all plastic packaging recyclable or recoverable by 2030<sup>66</sup>. America's Plastic Makers developed a Roadmap to Reuse<sup>67</sup> and Guiding Principles<sup>68</sup> which together reflects our strategic framework to reach these goals. This Roadmap identified gaps in access to recycling including multifamily housing and rural areas and a need for increased outreach. The Guiding Principles provide direction for policies to support Roadmap implantation.

The private sector, including many of America's plastic makers, are investing billions of dollars in plastics recycling that would utilize more material collected<sup>69</sup>.

- Since July 2017, there have been 66 projects worth more than \$5.5 billion in announced investments in modern recycling technologies in the U.S., with more on the way. Many expand the types and volumes of plastics that can be reused.
- These projects have the potential to divert more than 8 billion pounds of waste annually from landfills.

Eighty-three percent of these investments are in the growing field of advanced recycling, which is crucial modern infrastructure needed to accelerate a circular economy for plastics.

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<sup>66</sup> "U.S. Plastics Resin Producers Set Circular Economy Goals to Recycle or Recover 100% of Plastic Packaging by 2040."

<sup>67</sup> *Roadmap to Reuse*.

<sup>68</sup> *Guiding Principles*.

<sup>69</sup> *Roadmap to Reuse: Plastics Solutions for America 2020: A report on eliminating plastic waste through the creation of a circular economy*.

## Attachment 2 Fiscal Analysis

# **mb** PUBLIC AFFAIRS, INC.

TEL: (916) 476-6647 // FAX: (916) 720-0334 // WEB: www.mbpublicaffairs.com

**Date:** April 4, 2021

**To:** Interested Parties

**Re:** Initial Comments on Virginia Executive Order Number 77 (2021)

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The following are some initial comments on the subject Executive Order which: (1) immediately (within 120 days) bans all state agencies and their concessioners from buying or using specified plastic products, primarily food service items; and (2) longer term phase-out by 2025 of all single use plastic items. Alternatives replacing these products are to be reusable, compostable, or recyclable. Due to the compressed timeframe for this review, our comments are based primarily on data developed reviewing similar proposals in other states rather than actual procurement data for the affected agencies.

Our comments are limited to the food serviceware products covered by the Executive Order, and do not incorporate potential cost effects related to banning bags, plastic straws and cutlery, and water bottles. They also do not address the far wider range of products that could be affected by the longer term phase out portion of the Order, including packaging for all products and a wide range of non-food service items. These comments also assume: (1) the term “food service containers” does not include items such as egg cartons and meat/poultry/fish/produce trays and (2) the term “concessioners” covers only foodservice providers rather than being intended to apply to a broader range of state contractors for other purposes.

### 1. Alternatives

The primary alternative materials for food service applications are the following. Their acceptability as “recyclable” or “compostable” varies.

- Paper. Paper products are often the most cost-effective alternative for plastic applications in food serviceware. In most cases, these incorporate a lining of some other material, most often PE but in some more expensive applications PLA as well. In hot applications, material use and cost can be higher due to need for a separate paper sleeve or practices such as double-cupping or double-plating, resulting in an increase in local solid waste management costs. A number of new applications incorporate these features directly into the product, but at a higher cost.

While technically recyclable, actual use in practice means most of these products are not acceptable for the purposes of operating a recycling program. Most if not all local recycling

programs ban food-contaminated materials. The PE lining for a large share of these products causes damage to equipment, thereby raising the cost of the local programs.<sup>70,71,72</sup> The potential for contamination for otherwise marketable paper waste bales is high, presenting concerns over the financial soundness of local programs especially after the move to higher standards following China's Operation National Sword provisions and the overall glut of recycled feedstock in the current economic environment.

PE linings also reduce the practical compostability of these products. The linings are a source of contamination within the compost, and use of the final materials can by itself become a vector for introducing these plastics into the environment. PLA linings are technically compostable but only within industrial composting facilities, and if distributed with compost prior to their long degradation period present the same challenges as do traditional plastics.

- **Bioplastics.** Bioplastics made from plant-based feedstocks, primarily PLA (polylactic acid) and PHA (polyhydroxyalkanoates), are marketed as compostable. They are potentially recyclable but suffer from the same food contamination issues and high sorting and collection costs that mean this option is often not functional in practice.

These products are compostable only in industrial composting facilities, but even challenges within those operations limit this option in practice. Few operators of these facilities are willing to accept these materials. California recently adopted regulations instituting provisions for state agencies similar to those embodied in the Executive Order. In their comments on the draft regulations, the state's composting industry association, California Compost Coalition, indicated:

**Packaging and products made from compostable materials are not welcome at a majority of compost manufacturing facilities, especially those products which are not directly associated with food scrap recovery. Likewise, compostable plastics frequently are a contamination problem for recycling facility operators and remanufacturers.<sup>73</sup>**

The Coalition's letter further stated that a 2019 survey showed only 14 of 38 (37%) permitted mixed materials composting facilities in the state were willing to accept compostable packaging.

Bioplastics also present new issues from the fact they shift food crops to industrial uses, potentially generating results such as the rising food prices that occurred in developing nations following the initial embrace of biofuels by the developed countries.<sup>74,75,76,77</sup> In the US, PLA is primarily made from corn. Expanded use of compostable bioplastics from this material would be associated increased fertilizer use and nitrogen runoff that has led to marine dead zones

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<sup>70</sup> Plastic Recycling: Why are 99.75% of Coffee Cups Not Recycled?, BBC News, April 17, 2018.

<sup>71</sup> A New Target in the Fight Against Plastic: Paper Cups, Wall Street Journal, October 30, 2018.

<sup>72</sup> "Berkeley Approves 25-cent Fee on Disposable Cups at Restaurants," Los Angeles Times, January 29, 2019.

<sup>73</sup> California Compost Coalition, comment letter dated May 21, 2020.

<sup>74</sup> Runge, C. Ford and Benjamin Senauer, "How Biofuels Could Starve the Poor," Foreign Affairs, May/June 2007.

<sup>75</sup> Biofuel Mania Ends the Days of Cheap Food, South China Morning Post, July 20, 2007.

<sup>76</sup> Thousands in Mexico City Protest Rising Food Prices, New York Times, February 1, 2007.

<sup>77</sup> UN Expert Calls Using Food Crops for Fuel "Crime Against Humanity," Associated Press Worldstream, October 27, 2007.

including Chesapeake Bay, Long Island Sound, and many smaller areas due to the fact that the Eastern Seaboard contains a large number of rivers flowing directly into the Atlantic Ocean.<sup>78</sup> Adoption of compostables consequently may not eliminate the intended marine impacts, but simply substitute marine impacts of a different kind.

- Molded Fiber. Molded fiber products including paper pulp and bagasse are available as alternatives for plates, trays, and bowls. Many, however, also contain a PE or PLA lining and present many of the same limitations to comply with the standards in the Order as above.

Consequently, under a strict interpretation of the “recyclable” and “compostable” requirements, there are relatively few materials that could fully replace existing state agency use. The tradeoffs instead will be more the substitute impacts that will occur, and the relative cost increases the state is willing to accept.

## 2. Alternatives Sources

Paper, while often the least costly alternative, in almost all applications does not comply with either the recyclable or compostable standard. A state shift to this option likely would also increase both the volume and weight of solid waste required to be handled in local disposal programs.

A stricter interpretation that would instead substitute products that are at least labeled as “compostable” would likely see state agency procurement turning more to imported products. Both plastic and paper food serviceware are produced primarily by domestic sources. Compostables instead are produced more substantially overseas, both due to sourcing of the feedstock materials and the need to lower production costs in order to compete with traditional products. Molded fiber products are mixed.

For example, World Centric is an often cited example of a domestic compostable products producer. However, the company produces only a portion of its PLA lids in the US, and manufactures the bulk of its offerings in Asia specifically to “*provide an affordable alternative to plastic.*”<sup>79</sup> The higher costs of producing these products means many are produced overseas in order to come near to competitive pricing.

As one indicator of the extent of this sourcing pattern, the table shows the share of products coming from overseas rather than produced in the US (a requirement of some state procurement agencies) from one major food serviceware web supplier. The products listed are those carrying a biodegradable/compostable label either due to the nature of the material or paper products incorporating a PLA rather than a PE lining. The listings, however, just count the number of products in each category, and do not take into account long term availability or production levels of the individual items.

The implications of this sourcing pattern, however, are that domestic manufacturing jobs at least at some level will be affected by the Order’s actions. This outcome should be considered in light of the fact

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<sup>78</sup> Chesapeake Bay Foundation, Biofuels and Water Quality, Meeting the Challenge & Protecting the Environment, April 2007.

<sup>79</sup> World Centric, Customer Support FAQs, <https://www.worldcentric.com/customer-support/faqs/>, accessed April 2, 2021.

that in the latest numbers for February, nonfarm jobs in Virginia still remained 197,300 (4.8%) below their pre-pandemic high in February 2020 (seasonally adjusted). The just-released data for the US shows nonfarm jobs 8.4 million (5.5%) below the pre-pandemic peak.

This sourcing pattern should also be considered with respect to the substantial supply chain disruptions encountered over the past year, including the sharp drop in trade at the beginning of the pandemic and subsequent delays in shipments due to the current extreme congestion in US and other global ports. These disruptions have implications both to the availability of many alternatives along with their prices.

### **Eco-Friendly Disposables**

*Source: www.webstaurantstore.com, accessed 4/2/21*

<b>Product Category</b>	<b>Imported Products</b>
Paper Cold Cups	62%
Biodegradable Paper Hot Cups and Lids	88%
Disposable Cups	54%
Biodegradable, Compostable Straws	56%
Biodegradable, Compostable Cup Carrier Trays	50%
Biodegradable & Compostable Dinnerware & Servingware	84%
Biodegradable & Compostable Take-Out Containers	55%
Biodegradable, Compostable Food Trays	24%
Compostable Deli Take-Out Containers	43%
Recycled Food Packaging	60%
Biodegradable & Compostable Cutlery	88%
All Products	67%

### **3. Fiscal Impacts: Current State Expenditures**

As taken from the current state budget, state agencies are scheduled to spend at least \$775 million on food services in FY 2021 and FY 2022. About half of this amount is through federal funds allocated to local schools through the Department of Education for school lunch, breakfast, summer meals, and other nutrition programs. Because the Executive Order does not address these funds explicitly, they are included in the analysis that follows.

The table listing the different nutrition programs does not cover all state expenditures that could be subject to the Order, including Department of Health spending on Community Nutrition Services and Local Nutrition Services, food banks, various food security and donated food distribution programs, other components of Higher Education including Eastern Virginia Medical School, and incidental agency use. The tally also does include retail outlets, food services, and other concessionaires at state facilities including the state museums. These components were excluded either because of the lack of sufficient data or uncertainties over the use of food packaging associated with some of these programs. Incorporating these components would increase the estimates below.

Due to the compressed timeframe for this initial review, impacts were assessed using national procurement factors rather than attempting a detailed evaluation based on agency procurement records. These national factors are developed from projections prepared by Freedonia Group.<sup>80</sup> Their data was used to develop consistent numbers on disposable food serveware by product type, material type, and end user.

### State of Virginia Food & Nutrition Expenditures

Source: HB 1800, 3/18/21

	<b>FY 2021</b>	<b>FY 2022</b>
Department of Corrections and Criminal Justices Services		
Prisons, Food Services	\$40,296,693	\$40,296,693
Juvenile Corrections, Food Services	2,876,568	2,876,568
Community Residential Facilities, Food Services	833,422	833,422
Admin & Support, Food & Dietary Services	300,267	300,267
Department of Education		
School Nutrition	369,078,569	369,078,569
Summer Food Service	14,250,000	14,250,000
School Nutrition, Central Office Operations	4,567,439	4,567,439
Virginia School for the Deaf & the Blind, Food & Dietary Services	449,885	449,885
Higher Education		
Christopher Newport University, Food Services	17,924,629	17,924,629
College of William and Mary, Food Services	16,436,830	16,436,830
Richard Bland College, Food Services	640,627	640,627
George Mason University, Food Services	37,525,061	37,525,061
James Madison University, Food Services	79,756,129	79,756,129

<sup>80</sup> Freedonia Group, Foodservice Single-Use Products, 9th Edition, Industry Study 3774, February 2020.

Longwood University, Food Services	8,139,258	8,139,258
Norfolk State University, Food Services	1,368,865	1,368,865
Old Dominion University, Food Services	5,260,460	5,260,460
Radford University, Food Services	19,251,178	19,251,178
University of Mary Washington, Food Services	9,250,229	9,250,229
University of Virginia, Food Services	5,370,300	5,370,300
University of Virginia College at Wise, Food Services	294,528	294,528
Virginia Commonwealth University, Food Services	15,997,248	15,997,248
Virginia Community College System, Food Services	1,238,576	1,238,576
Virginia Military Institute, Food Services	7,497,369	7,497,369
Virginia Polytechnic Institute and State University, Food Services	58,017,586	58,017,586
Virginia State University, Food Services	11,489,606	11,489,606
Department of Behavioral Health and Developmental Services		
Mental Health Treatment Centers, Food & Dietary Services	14,355,702	14,355,702
Intellectual Disabilities Training Centers, Food & Dietary Services	5,747,519	5,747,519
Virginia Center for Behavioral Rehabilitation, Food & Dietary Services	3,079,145	3,079,145
Department for Aging and Rehabilitative Services		
Meal/Food Delivery	12,497,856	12,497,856
Congregate Meals	9,521,747	9,521,747
Wilson Workforce and Rehabilitation Center, Food & Dietary Services	1,149,430	1,149,430
Department for the Blind and Vision Impaired		
Virginia Rehabilitation Center for the Blind & Vision Impaired, Food & Dietary Services	278,000	278,000
Total	\$774,740,721	\$774,740,721

Disposables procurement factors (number of units by product and material for each \$100 million in end user revenues) were taken from the Institutional end user group. Some of the individual program components such as Higher Education may operate closer to another group such as fast-food restaurants. Using the Institutional distribution results in a more conservative estimate.

Estimates were made using 2019 use levels and pricing in order to portray a more typical use pattern under a more “normal” economic environment. The 2019 results were then escalated to 2021 numbers using the most recent Producer Price Index for wholesalers.

The results of the analysis, as shown below, estimate that total plastic (expanded polystyrene foam and rigid plastics) disposable foodservice purchases associated with the state nutrition expenditures and that could be affected by the Executive Order are \$13.4 million.

Again, these estimates include clamshells, beverage and portion cups, lids, containers, dinnerware (plates and bowls), food trays, and serving trays and carriers. They do not include straws, utensils, or trays for meat, poultry, fish, and eggs.

#### **Estimated Plastic Food Packaging Expenditures, Virginia**

*Source: See text; \$ million*

Schools	\$6.7
Higher Education	5.1
Other Agencies	1.6
Total	\$13.4

#### **4. Fiscal Impacts: Cost Increases Under the Executive Order**

Proposals and actions to eliminate current product classes are often justified on the basis that the alternatives only cost “a few cents more.” In regard to disposable food serviceware, this contention is often correct as far as it goes. It bypasses the fact that the plastic items by themselves cost only a few cents to begin with, and the actions instead have the potential to raise total current expenditures on these products by double or more.

To evaluate the potential cost impacts, alternatives were analyzed using our previous research assessing the actual prices being paid using procurement data from a number of states, school districts, universities, and other local governments. This approach has two advantages. First, it is based on prices actually paid by government agencies. Second, it provides a like-for-like comparison of alternatives based on performance specifications from the agencies. For example, the lowest cost alternative for a plastic portion cup is paper, but this substitution is likely only appropriate in a setting where food is eaten on the premises. It becomes disastrous when used for prepared food that is transported before being eaten. Similarly, paper is the least costly replacement for expanded polystyrene foam cups, but on its own provides a substitution only based on coffee capacity. Additional costs such as paper sleeves, double cupping, or more costly products with additional features are needed to duplicate other required performance aspects such as insulation and stability.

Cost increments were developed under two scenarios. First, a lowest cost case assuming state agencies would be allowed to substitute paper/pulp products with a PE lining. Second, a compostable case that would require use of products that are at least labeled as compostable/recyclable, even though in practice they may not be as discussed above.

As shown in the table below, total additional costs associated with the nutrition expenditures under the Executive Order would range from \$10.1 million (an additional 75% on top of current plastic disposables purchases) to \$15.8 million (118%) under the compostable case.

### **Estimated Plastic Food Packaging Cost Impact**

*Source: See text; \$ million*

	<i><b>Least Cost</b></i>	<i><b>Compostable</b></i>
Schools	\$5.0	\$7.9
Higher Education	3.8	6.0
Other Agencies	1.2	1.8
Total	\$10.1	\$15.8

For many of the reasons discussed above, these numbers should be treated as “ball park” estimates reflecting the potential direct fiscal impacts of the Order. Actual agency procurement may differ from the national averages. For example, many Higher Education campuses may have already moved to the higher cost compostable alternatives, although use of the 2019 data addresses this effect to a large extent.

For other reasons, the estimates should be considered a conservative estimate, as replacements may be chosen for other considerations and application-specific performance factors that will raise alternatives costs even higher. In researching a similar proposal, we obtained detailed 2015 and 2016 procurement information from concessionaires on a University of California and a California State University campus. Comparing the individual products used, the actual cost increase was 199% for the CSU business and 217% for the UC business or more than twice what a comparison based on lowest cost alternatives indicated.

#### 5. Effects on Concessionaires

While data specific to the Virginia businesses potentially affected by the Order are not readily available, some general comments can be made based on the data used in this memo.

Food service operations are generally low profit margin businesses, which based on various years of the Restaurant Association’s Restaurant Operations Reports range around 3% for full service restaurants and around 6% for limited service restaurants.

Using results from analyzing the Freedonia data, the average expenditures for the plastic disposable food serviceware covered in this memo ranges from 0.3% of revenues for a full service restaurant, 0.6% for a fast casual restaurant, 1.3% for a quick service restaurant, and 2.3% for coffee and snack shops. At an operating profit margin of 6%, a forced shift to specific serviceware products could consume from 5% to nearly 40% of business profits at a time most are struggling to reopen a rebuild a customer base. Given current economic conditions, the share will likely be higher.

Again, these estimates should be treated as an initial review based on the assumptions discussed in this memo. If there are any questions, please contact me directly at 916.647.3467.

(End)