

**Plastic Waste Prevention Advisory Council**  
**September 29, 2022 Meeting**  
**10:00 am – 4:00 pm**  
**Meeting Minutes**

**Advisory Council Members Present:**

Sharon Baxter, Department of Environmental Quality (DEQ) (Attending on behalf of DEQ Director, Mike Rolband)

Dr. Rob Alexander, James Madison University

Dr. Jennifer Russell, Virginia Tech

Paige Wernig, Virginia Manufacturers Association (VMA) (Attending on behalf of Brett Vassey, President of the VMA)

Morgan Guthridge, Lindl Corp (Attending on behalf of Virginia Chamber of Commerce President, Keith Martin)

Jennifer Cole, Clean Fairfax

Joe Hilbert, Virginia Department of Health (Attending on behalf of the State Health Commissioner)

**Advisory Council Members Absent:**

Senator Chapman Petersen

Anne Johnson, Resource Recycling Systems, Inc.

Delegate Lee Ware

**Meeting Participants:**

Meghann Quinn, DEQ

Morgan Goodman, DEQ

Keith Boisvert, DEQ

Jennifer Walle, Deputy Secretary of Natural and Historic Resources

**Welcome and Framing**

The meeting was called to order. Chair Alexander thanked the council for reviewing the information that he provided prior to the meeting. Chair Alexander discussed the council giving themselves a “pressure relief valve” in order to not force a report during today’s meeting. He proposed that today’s meeting be focused on revisiting the problems the Council was tasked with addressing, reviewing the decision rule and decision making criteria, mapping all possible recommendations against a diagram of the problem system and then discussing recommendations for the report. At a minimum, he suggested this would include identifying a set of immediate-term recommendations to lay the groundwork for changing the plastic system to address the problem. At a maximum, it would include identifying a holistic set of recommendations organized by short, medium, and long-term for changing the plastic system to address the problem. Chair Alexander proposed that if the Council did not have time to reach the holistic set of recommendations during today’s meeting, the Council should focus on immediate-term recommendations for November’s report and meet twice in the spring to craft medium and long-term recommendations. Legislatively the Council is authorized through June 2023. This would reduce the pressure on today’s meeting to allow for more open discussion. The Council could use additional time during two meetings in 2023 to go into depth on more complicated recommendations.

Chair Alexander mentioned that he reached out to others who previously held positions on advisory councils and they recommended the Council focus on the problem they are tasked with addressing. The

Council is not a decision making council. It is a recommendation making council. For today's discussion, Chair Alexander asked Council members to set aside what they would be able to support and focus on what would address the problem in an ideal way. Then the Council can discuss administrative feasibility.

Chair Alexander reviewed the agenda for the day, which can be found in Attachment 1.

Dr. Russell asked for clarification about the November report. It was clarified that the Council is required to submit a report this year. If the Council wanted to go into more detail, we can consider additional meetings and an additional report.

Paige Wernig noted that it is important to have this report as complete as possible. It will be relevant to this legislative session. Jennifer Cole suggested that the Council has reviewed so much information that they should be able to develop a list of low hanging fruit today and in the spring the Council could discuss suggestions for the future.

### **Introductions and Interests Review**

Chair Alexander asked each Council member to describe the problem that they are trying to solve by being part of this council.

- Vice Chair Morgan Guthridge noted that he participates in the Council representing the Virginia Chamber of Commerce and he works with the Virginia Beverage Association. His goal is to work towards a circular closed loop economy that is in line with the goals of his industry. Vice Chair Guthridge acknowledged that there could be points of disagreement between Council members, but that he is here, willing to listen and work together.
- Dr. Jennifer Russell is faculty at Virginia Tech where she studies systems and sustainability. She brings to the Council a systems based approach to address the problem and focuses on what levers can be applied to create change within the system. Dr. Russell noted that for a long time, dominant actors have worked to keep the system static and we have an opportunity to change that. Not all of the obvious solutions have good long-term outcomes and her expertise can help the Council work through the outcomes.
- Ms. Wernig is with the Virginia Manufacturers Association, which represents recycling manufacturers and those that use recycled material as a feedstock.
- Ms. Cole is an environmental advocate with Clean Fairfax. Ms. Cole's aim is to figure out a way to turn off the tap of disposable plastics that are ending up in the environment. She is looking to get meaningful legislation enacted and start reducing the amount of plastic pollution.
- Joe Hilbert participates on the Council on behalf of the State Health Commissioner. He has learned a lot in this role and aims to help get the best product possible to the general assembly.
- Sharon Baxter participates on the Council on behalf of the DEQ Director. Ms. Baxter noted that this is an issue that has been discussed for a long time, especially through Virginia's Coastal Zone Management Program which is in her division. Ms. Baxter hopes the Council can suggest strategies that can be implemented and noted there is a large need for education.

- Chair Alexander is faculty at James Madison University. Chair Alexander stated that he is very interested in the process by which recommendations get made. He noted that when the Council can find consensus it will hold weight and be very meaningful. There is a need to balance the stakeholders involved and a need to clearly link how the Council's recommendations reduce plastic pollution.

Other meeting attendees were asked to introduce themselves.

### **Administrative Reminders**

Meghann Quinn provided administrative reminders. She thanked the Council for following FOIA requirements. Attendance for the November meeting was reviewed to ensure that quorum would be met. DEQ staff will follow up with Anne Johnson to confirm attendance for November. The November meeting can be moved, if necessary, but it would be best to avoid that if possible as it has been difficult to find dates that work for Council members.

### **Review and Approve August Minutes**

A motion was made and seconded to approve the minutes from the Council's August meeting. The minutes were approved unanimously with no changes.

### **Reminder of Charter and Shared Expectations**

Chair Alexander reviewed the Council's charge and the shared expectations that were developed during previous meetings:

Charter: The Plastic Waste Prevention Advisory Council (the Council) is established as an advisory council, within the meaning of § 2.2-2100, in the executive branch of state government. The purpose of the Council is 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.

Charge: As a Council, we aspire to authentically listen to one another while responding honestly and directly, particularly when we have a conflict of ideas or values. We will practice systems thinking as we identify effective solutions pertaining to our charge with meaningful consensus. We create broad participation in our work through transparency and authentic stakeholder engagement.

### **Legislative Update**

Jennifer Walle, Deputy Secretary of Natural and Historic Resources, provided a legislative update focusing on the implementation of [Executive Order 17, Recognizing the Value of Recycling and Waste Reduction](#) (EO 17). Deputy Secretary Walle noted that the administration is problem focused and looking at long-term solutions. Currently, they are in the assessment phase and ensuring that all stakeholders are at the table, including business and industry. Deputy Secretary Walle noted that they have been working with state agencies. The Department of General Services surveyed all state agencies to develop a baseline. Virginia State Parks has also been actively involved. They are a natural fit as their efforts overlap and they have outreach to the whole commonwealth. They are working on a public/private collaborative effort to fund more waste collection receptacles. In addition, they have met

with the business and environmental communities to get a baseline measure in order to have an idea of what is currently being implemented.

The administration is looking for ways to work with localities to keep curbside recycling including potential educational tools. They are currently working on educational tools for densely populated areas and working with the business community and the Virginia Economic Development Partnership. The business community is highlighting supply and staffing issues. Deputy Secretary Walle noted that Virginia has great opportunities and companies are looking for innovative solutions. They are looking at grant opportunities and would be interested in hearing suggestions from the Council. The private sector feels that there is a lot of focus on litter funding, but not recycling. They would like to see federal money brought in to support recycling.

Deputy Secretary Walle brought up the section of the executive order that addressed food waste. Chair Alexander noted that as a Council, they are not focused on food waste, but there is an overlap in single-use packaging. Deputy Secretary Walle noted that DEQ and VDACS are working to survey large-scale suppliers of food.

Deputy Secretary Walle highlighted that listening to all stakeholders has been an important step. They are looking for solutions that are scalable and measurable. From discussions with stakeholders a lot of barriers are being identified.

Deputy Secretary Walle noted that the baseline is the initial work. They are welcoming input from stakeholders and want the process to be collaborative, including the business community and private citizens. She mentioned that she would be willing to return to provide additional updates to the council.

Dr. Russell asked if there is interest in research. Deputy Secretary Walle confirmed, stating that data is meaningful.

Mr. Guthridge thanked Deputy Secretary Walle for the update noting that understanding EO 17 is important for forming recommendations. He noted that industry was not given the opportunity to give feedback on Governor Northam's EO 77, Virginia Leading by Example to Reduce Plastic Pollution and Solid Waste, and they want to ensure that EO 17 is in place long enough for the industry to respond. The industry has dealt with a lot of changes recently, including COVID-19. It will be important to put together recommendations that are in alignment with the administration and legislation.

Ms. Baxter informed the Council that EPA is developing a grant program to support recycling infrastructure and education noting that the grant guidance is not available yet.

Chair Alexander reviewed the Council's purpose, stating that part of it mentions the circular economy and asked what problems were being addressed with EO 17. Deputy Secretary Walle mentioned that there is a focus on education, and they are looking into whether that is something the private sector can help provide. There is an opportunity to work with the business community to address the problem. They are also working with localities on curbside recycling. There is a global education piece as well, which is being addressed through State Parks. Their goal is to make recycling and food waste reduction easier. They can assist both the business community and the average citizen.

Dr. Alexander reflected the response back, noting that Deputy Secretary Walle is trying to address a lack of understanding of what is available, improve access to recycling, and that there is a problem with the supply of quality material.

Deputy Secretary Walle said that the assessment is to figure out where the gaps are. It is important to meet people where they are and not put undue burdens on them. We want to help overcome issues.

Mr. Guthridge noted that collection is a large issue. He is a member of the Waste Diversion and Recycling Task Force (Task Force), which discussed a bottle bill. He said that from an industry perspective there is a lack of consensus and buy in. The Task Force wasn't able to support a bottle bill in its report. Mr. Guthridge noted that as a member of the Task Force he did not support it either. He echoed support for the focus on curbside recycling and scalability that Deputy Secretary Walle discussed and requested that she pay attention to the Task Forces' report.

Chair Alexander reminded the Council that it, the Plastic Waste Prevention Advisory Council, is a separate body from the Task Force and the Council has a different charge. The Council's charge includes pollution reduction. The Council was also structured differently and has met more. The Chair suggested looking for where the reports connect and understanding the difference between the groups.

In response to a question about incentivizing localities to participate in curbside recycling programs, Deputy Secretary Walle noted that they are looking at Chesterfield and others with the intent to retain existing programs and develop new programs.

In response to a question, Mr. Guthridge said that the Virginia Beverage Association is focused on collection and is concerned with how and who is paying for the system. He followed up with a question about outreach to higher education.

Deputy Secretary Walle responded that they have discussed outreach to higher education and that they are looking at the total landscape. State Parks is at the top of the list, but higher education is not far behind. She emphasized that this is an ongoing process.

Chair Alexander thanked Deputy Secretary Walle for the information and confirmed that she would be willing to continue the conversation in the spring.

Dr. Russell recommended that the spring meeting and report could look back at the baselines being created. Mr. Guthridge commented that the Council is focused on plastics, noting that the Task Force had consensus around a need for more data and identifying where the deficiencies are.

## **BREAK**

### **Establishing Criteria for Decision-Making and Revisiting Decision Rule**

The Council then began discussing possible criteria for decision making. Chair Alexander asked Council members, when thinking about the problems the Council is working to address, what is most important. He noted that Mr. Guthridge previously mentioned that solutions need to generate certainty for markets and maybe be more successful if they align with administrative and legislative priorities.

The Council continued to discuss criteria for coming to a consensus and documented the various criteria suggested by the Council. Ms. Baxter suggested that the Council understand what is happening outside of Virginia. Dr. Russell added that the mandate does not require the Council's recommendations to be Virginia-based, continuing that we cannot look so narrowly that Virginia is left behind when the states around us are running forward. Mr. Guthridge said the Council should keep national legislation in mind and that the sequencing of recommendations will be important to avoid the about-face that happened when EO 77 was rescinded. Ms. Baxter noted that California recently passed a law requiring single-use plastics to be recyclable and because California is such a large market, their mandates often affect other markets. Ms. Wernig commented that considering what other states are doing is not a bad thing, but Virginia is not California. Dr. Russell highlighted that the Council does not need to constrain itself to a compliance lens as many companies are acting voluntarily. She also noted that it is unlikely to create consensus and certainty.

Chair Alexander referred the Council to the list of criteria that had been created thus far and asked the Council to review the criteria asking if they would lead to recommendations that move towards eliminating plastic pollution and contributing to achieving plastics packaging circular economy industry standards. Ms. Cole asked that when the Council evaluate a recommendation for eliminating plastic pollution it should be clear how it reaches that goal.

Dr. Russell clarified for the Council that the circular economy is not recycling 2.0; it's assigning value to things that did not have value before. Virginia's economy is not isolated, so we should not focus on the state boundary. Virginia is embedded in a larger system. Feedstock is not coming only from Virginia. Ms. Wernig mentioned that the recommendations need to be effective across regions, including urban versus rural and different areas of the state. Dr. Alexander noted we also need to ensure that the recommendations do not exacerbate environmental and social justice issues.

Chair Alexander mentioned the feasibility of implementation and Ms. Wernig focused on agency capacities for implementation. Dr. Russell suggested that the Council should not set the bar too low, continuing that implementation challenges should not be why a recommendation is not made. If there are implementation issues, the Council should make the recommendation and include a recommendation to address that challenge. She went on, suggesting that the Council should consider where the cost and benefits are within the system and work to distribute them equitably. Ms. Wernig suggested that there should be measurable benchmarks. Ms. Cole highlighted that a lot of criteria being discussed are setting up barriers to low hanging fruit. She continued, stating we do not need to add extra barriers and we should give the recommendations that we want to give.

Chair Alexander clarified for the Council that we do not all need to follow all these criteria, but it is helpful to be transparent to understand what everyone is thinking. The list of possible criteria developed during the discussion is captured in the table below. The mandate from the Council's charge was added. Chair Alexander then asked that each Council member submit 4 votes for which criteria they found most important. It was assumed that the mandate requirements were important to all and clarified that multiple votes could be used on the same criteria.

#	Possible Criteria	Num. of Votes
1	Mandate a. Reduce/eliminate plastic pollution	Assumed

	b. Moves system towards circular economy c. Clear link to addressing pollution	
2	Improves resiliency for markets	6
3	Alignment with administrative and legislative priorities	2
4	Take into consideration other state, federal, global policies and market changes	2
5	Effective at regional level (capacity, cultural differences...)	4
6	Does not exacerbate/ improves upon environmental and social justice issues	5
7	State agency capacities for implementation	1
8	Cost burden/benefits distributed equitably from multiple lenses	2
9	Measurable outcomes	2

Chair Alexander reminded the Council that this criteria is not binding, but shows what is collectively important to the group.

Chair Alexander then moved the discussion to the decision rule. Below is the decision rule that had previously developed:

The Council decision rule requires a quorum present to vote which is a governance requirement. In the case of the PWPAC, this means having at least 6 members present. Presuming that a quorum is present for a vote, decisions are based on the support of a simple majority of the members present (i.e., 4 out of 6 or 6 out of 10). Upon request, the minority opinion is recorded and made part of the meeting record. Council members can only vote if present per state requirement. The decision-rule will be used for legislative and administrative recommendations for the reports.

Chair Alexander reviewed it with the Council. The Council aspires for consensus. Chair Alexander noted that Brett Vassey had reached out to him prior to the meeting to recommend that the report denote consensus and non-consensus recommendation and include a space for concerns to be captured. Mr. Guthridge also voiced support to include a minority opinion in the report.

While discussing recommendations today, Chair Alexander asked that Council members to use the scale described below to indicate their level of support:

1. One finger indicating that you absolutely do not support the recommendation
2. Two fingers indicating that you slightly support/ are not greatly opposed to the recommendation
3. Three fingers indicating that you support the recommendation

He clarified that both two and three fingers indicate you are voting to include the recommendation in the report. During the discussion, the Council will work to see if there are changes to the recommendations that would increase support.

### **Revisiting Our Problem System/Mapping Possible Recommendations**

Chair Alexander distributed a systems map from The Pew Charitable Trusts' report on ocean plastics to the Council. The map is included as Attachment 2. He asked that the Council focus on the headings and suggested the Council use the systems map as they make recommendations to ensure that not all recommendations being made are focusing on the same point in the system. Chair Alexander emphasized paying attention to the heading, saying that the systems map came from a report on ocean

plastics, which accounts for why the ocean pollution box is red. He clarified that for the purpose of the Council, the map is being used as a visual representation of the system as a whole.

Ms. Wernig wanted it noted that Mr. Vassey pointed out that waste mining and waste-to-energy were not included in the system map. Dr. Russell noted that waste-to-energy is included as incineration and there could be a line drawn from engineered landfills/unsorted managed waste to recycling to capture waste mining.

### **Analysis of EV Poll and Meeting Data**

Chair Alexander then distributed a chart which was an analysis of the results of all the EV Poll responses from the Council. The chart is included as Attachment 3. He went through the chart column by column describing what was covered in each.

- A. Meeting: What meeting the item was discussed during
- B. Reference Number: Number used just for reference on the chart
- C. Policy Option: Name of the policy option
- D. Qualitative Summary: Summary of poll responses
- E. Timing: When the policy should be implemented (short, medium, or long-term)
- F. Policy Type: Type of policy being used (regulation, information, administration...)
- G. System Intervention: Where the policy falls on the systems map
- H. Policy Target: Who's behavior is the policy trying to change
- I. S/D: Does the policy address supply or demand
- J. Revenue: Will the policy create revenue

Chair Alexander asked Council members to review both the system map and the chart during the break. He requested feedback on both, including if anything needed to be added or edited from the chart.

### **Lunch Break**

The Council broke for lunch.

### **Identifying Recommendations**

Chair Alexander invited the Council members to gather around a table with the systems map in the middle. He also had laid the policy options from the chart out to visually show where within the system each intervention fell. He asked the council if there was a particular place or intervention that they should start with, clarifying that intervention and recommendation have the same meaning. Ms. Baxter noted that the federal funding from EPA will be focused on infrastructure and education.

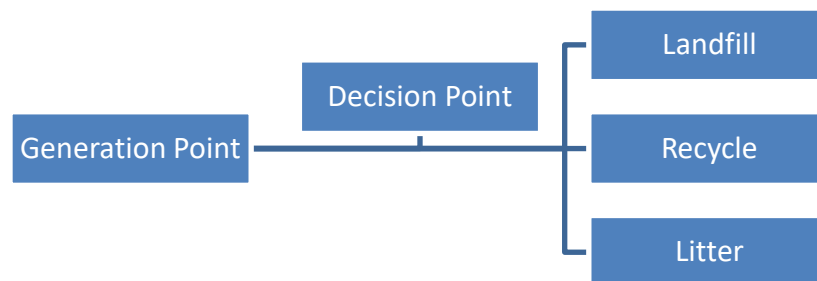
The Council then discussed recommendations that affect recycling infrastructure. It was noted that the Task Force discussed a similar issue including capacity. Ms. Cole noted that plastics in water can be traced back to mismanaged waste, suggesting that we need to figure out how to make the collection more robust. She is less interested in beefing up material recovery facilities (MRFs) and would vote for making sure every locality has recycling available via a mandate for them to provide that service.

Dr. Russell replied that it is most effective when a mandate is coupled with an incentive, for instance a landfill ban combined with an incentive. Dr. Russell pointed out that Virginians are generating plastic waste across the system in many different locations, and it needs to be consolidated. Ms. Wernig remarked that even when recycling services are available, not everyone participates. She continued,



saying that population density affects access, either being far from services or having bins that are not large enough to meet demand. There can be too many people and not enough recycling bins or trucks for collection. The solution cannot be one-size fits all.

Dr. Russell mentioned that other larger cities have figured out ways to collect recyclables. Their systems might not be perfect, but they are better than nothing. She suggested that market value of the material should be secondary. It is important to ensure that plastics are not escaping the system. Once all materials are captured in the system the market will have a better chance to develop. To clarify the process around getting plastics into the system, Dr. Russell used the diagram below. She asked what recommendations can be made to push the decision away from landfill or litter and towards recycling.



Chair Alexander reviewed the options that the Council discussed during previous meetings that could affect this decision point, including:

- Consumer education: The decision point happens at the consumer level. Council discussed consumer education needing to be part of the solution, but it is not enough on its own. It was suggested that education is not just a government responsibility and it's not static. Education needs to be done over and over.
- Mandatory Recycling: The Council saw some capacity challenges with this option.
- Container deposit legislation
- Disposal ban: This is primarily a disincentive for landfilling.
- Labeling Requirements: This would require recycling labeling for when material is recyclable and would reduce barriers to recycling.
- Access: The Council discussed needing an actual plan taking into consideration all of the locations and would involve determining the barriers to access.

Dr. Russell noted that financial incentives could land in different markets, highlighting that if localities could compile enough material they would be able to get a financial incentive for it. Money is needed for recycling bins and the collection system, whether a locality ran the collection system or subcontracted it. Ms. Cole referenced the purple bin program which was discussed during the previous meeting as a success, noting that Fairfax painted old dumpsters they already had, educated the public, and now for the first time in 20 years is making money on glass collection. The purple bin collection system has very low levels of contamination which increases the value of the material. Dr. Russell noted that this is similar to the program that Coca-Cola runs at stadiums.

Ms. Cole was asked about her impression of the administration's goals and efforts that were described earlier and she responded that it was 'kicking it down the road'. Mr. Guthridge noted that the larger industry players are more able to scale solutions than mom-and-pop shops. Dr. Russell remarked that public-private partnerships are about cost and benefit sharing. She continued by pointing out that a big driver in other systems is having to pay; increase the cost of landfilling and decrease the cost of

recycling. Mr. Guthridge noted that the tipping fees were recently raised and there is not support for increasing them again. Dr. Russell stated that taking away people's choice leads to them acting out; our goal should be to make it easier to make the good choice and avoid the backlash, while getting better results overall.

Next the Council discussed consumer education. Ms. Baxter noted that DEQ does not currently have staff for this. It was something DEQ did previously. Ms. Wernig asked if the Council has discussed why counties are halting recycling programs, stating that it is because the counties can use that funding elsewhere. Ms. Cole mentioned that counties used to make money from their recycling programs, but they no longer do. Dr. Russell remarked that if counties are not making money, it is not because the materials do not have value. It is because they do not have enough materials. She also highlighted that markets are changing.

Ms. Wernig noted that landfill mining allows for private sector growth, but we are currently incentivizing other practices. Chair Alexander observed that landfill mining does not help with reducing plastic pollution and commented that he would rank an intervention/incentive that addresses plastic pollution above landfill mining.

Chair Alexander moved the discussion to the next part of the system, asking the council to consider what would need to change in the recycling system. Dr. Russell noted that contamination is an issue in the collection process and asked how to reduce contamination of plastics collected for recycling. She suggested that technology could alleviate contamination.

An intervention to support this could be grants and/or subsidies for material recovery facilities (MRFs) to acquire technologies for sorting and screening. Chair Alexander highlighted that he sees one of the Council's key findings as a shift toward recycled content which is shifting demand. Dr. Russell commented that the reason we see the price increases is because of the limited material supply.

Chair Alexander brought up HB 1287, which had a requirement that state purchasing require target amounts of recycled content; however, the bill that was passed did not include content targets. Ms. Cole suggested the need for a new mental model in which plastics are valued.

Chair Alexander asked the Council to review the remaining recommendations that had been discussed throughout the year, like labeling and container deposits.

Dr. Russell commented that container deposits put the cost on the consumer, which can be an environmental justice issue; whereas extended producer responsibility (EPR) puts the cost on industry. Chair Alexander noted that from poll results at previous meetings, Council members agreed that EPR would shift the market towards a circular economy. Dr. Russell mentioned that EPR has a large up-front cost. Mr. Guthridge shared that from the beverage industry he has observed there are some parts that have embraced EPR but other areas that want to wait to see how EPR works in the markets that are implementing it. Dr. Russell highlighted that EPR works well and becomes self-sustaining when there is a large focus on access and education.

Chair Alexander then shifted the Council's discussion to the consumption and production portion of the system, including the following interventions: repair and reuse systems; material bans and opt-in plastic ware. Mr. Guthridge commented that previously bans have not been received well by the industry. Ms. Cole noted that it is hard for restaurants to get containers at a similar or cheaper rate to what they are

currently paying for polystyrene between supply issues and inflation. She suggested the state could buy alternatives in bulk and sell at cost. Ms. Cole also noted that as the polystyrene ban goes into effect, there will be more sources for alternatives to polystyrene. There was a suggestion to move large food service chains back to the timeline suggested in the original bill before it was changed in the budget. Ms. Baxter suggested the Council discuss the opt-in for plastic utensils recommendation.

Chair Alexander brought up two other interventions that the Council had discussed: container deposits and recycling labeling requirements. There was not significant support for container deposits. During a discussion on labeling, Council members question how this would happen at the state level especially with recycling opportunities differing across the state. Ms. Wernig suggested the Council should be careful not to create an issue and suggested the Council follow federal guidance.

Chair Alexander then asked the Council to review data needs. A summary is provided in Attachment 4. Mr. Guthridge noted that the Task Force made a recommendation to address the waste management capacity and process. It was asked what is needed to start the data collection. Ms. Cole suggested there should be a recycling office to share educational materials, to collect the data and establish a materials marketplace. The Council discussed where a recycling office would fit best.

Chair Alexander asked the Council what recommendations discussed should be included in the next report. He led the Council through the recommendations that received support and interest during the meeting and asked Council members to use the one, two or three finger system discussed earlier.

**Recommendation:** Package the following interventions:

- Increase consumer education
- A mandate to require local governments to provide recycling system access
- Financial incentives for recycling system equipment (which can go to either government or private sector) and require data collection

Note that this recommendation addresses the collection part of the system.

Council members then shared their level of support as noted below:

Council Member	Support Level
Chair Alexander	3
Ms. Baxter	Abstain
Ms. Cole	1
Mr. Guthridge	3
Dr. Russell	3
Ms. Wernig	3
Mr. Hilbert	Abstain

Chair Alexander asked if there were any changes to the recommendation that could increase Ms. Cole's support. Ms. Cole stated that there needs to be a clear link to addressing pollution and plastic in the world. This recommendation does not reduce that amount of plastic. It is focused on getting material to MRFs.

Dr. Russell commented that the recommendation is not just about putting recycling bins out. It could be tied to a set of parameters about how pollution is being reduced. Chair Alexander suggested adding a requirement to measure litter.

**Recommendation:** Provide grants and/or subsidies for MRF technologies for sorting and screening. Council members then shared their level of support as noted below:

Council Member	Support Level
Chair Alexander	2
Ms. Baxter	Abstain
Ms. Cole	1
Mr. Guthridge	3
Dr. Russell	3
Ms. Wernig	3
Mr. Hilbert	Abstain

Ms. Cole noted that this recommendation is industry specific and does not address how you get litter out of the environment, like streams. She continued, the way to get less plastic waste in streams is to have less plastic – not processing more plastic. She stated that the circular economy is not her top priority until she sees that it is helping the environment.

**Recommendation:** Require specific recycled content targets for purchases. The Council decided to table this discussion and did not vote.

**Recommendation:** Incentivizing new business development to fill in geographic gaps Council members then shared their level of support as noted below:

Council Member	Support Level
Chair Alexander	3
Ms. Baxter	Abstain
Ms. Cole	2
Mr. Guthridge	3
Dr. Russell	3
Ms. Wernig	3
Mr. Hilbert	Abstain

**Recommendation:** Opt-in plastic utensils (require customers to request plastic utensils instead of automatically providing them to all) Council members then shared their level of support as noted below:

Council Member	Support Level
Chair Alexander	3
Ms. Baxter	Abstain
Ms. Cole	3
Mr. Guthridge	2
Dr. Russell	3
Ms. Wernig	2

Mr. Hilbert	Abstain
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Ms. Wernig noted that the Council does not have representation from the affected industry groups.

**Recommendation:** Shift the timeline for the polystyrene ban back to the original timeline for the large food vendors.

Council members then shared their level of support as noted below:

Council Member	Support Level
Chair Alexander	2
Ms. Baxter	Abstain
Ms. Cole	3
Mr. Guthridge	2
Dr. Russell	3
Ms. Wernig	1
Mr. Hilbert	Abstain

**Recommendation:** DEQ to create a recycling office for data collection, material marketplace, etc. (Other potential locations included VEDP or state university).

Council members then shared their level of support as noted below:

Council Member	Support Level
Chair Alexander	3
Ms. Baxter	Abstain
Ms. Cole	3
Mr. Guthridge	3
Dr. Russell	3
Ms. Wernig	3
Mr. Hilbert	Abstain

The Council discussed where it would be best to house an office that focuses on recycling, noting that other states have universities or economic development as the lead. Ms. Cole noted that she would not support this recommendation if the office was under the Virginia Economic Development Partnership.

### Public Comment

Katie Register, the Executive Director of Clean Virginia Waterways of Longwood University and Co-Founder of the Virginia Plastic Pollution Prevention Network, provided a public comment to the Council. Slides from Ms. Register's comment are included in Attachment 5. Ms. Register referenced part of the Council's charge, highlighting that the Council should be looking to eliminate plastic waste and make policy and funding recommendations. Ms. Register directed the Council to the top of the waste hierarchy. Source reduction is the top strategy. Ms. Register encourages more emphasis on source reduction. This Council has spent a lot of time on recycling and some on reuse. We need to turn off the faucet, cutting the pollution at the source.

Ms. Register also asked the Council what costs were being considered when cost was discussed. Costs do not just include economics. There are ecological costs. If we only focus on bottom lines we are not going to be making the best decision for the planet.

Ms. Register noted that data is great, but in addition to data there are actions we can take now. The Council should look at the places that have implemented policies. Oregon for example has a 90% return rate for beverage containers.

Continuing, Ms. Register stated that political will exists. Voters are aware and concerned about plastics. There is bipartisan support for the issue. The Virginia Coastal Zone Management Program, Clean Virginia Waterways and NOAA recently contracted with Opinion Works to conduct a survey of Virginia voters on plastic pollution policies. Survey results, which can be found in the slides attached, show voters rank plastics in the ocean and plastics in human food as a serious problem. It also shows they are in favor of policies to address plastics:

- Ban on single-use plastic bags: 61% in favor, 21% oppose, 18% not sure
- 5-cent fee on single-use plastic bags: 48% in favor, 32% oppose, 20% not sure
- Ban on plastic straws: 47% in favor, 28% oppose, 25% not sure
- Ban on polystyrene containers: 63% in favor, 15% oppose, 22% not sure
- Bottle deposit: 65% in favor, 17% oppose, 18% not sure
- 50-cent per cigarette pack litter fee: 64% in favor, 19% oppose, 16% not sure
- Require less plastic in packaging: 76% in favor, 8% oppose, 17% not sure
- Require manufacturers to pay for recycling: 71% in favor, 12% oppose, 17% not sure

Ms. Register reviewed the research method briefly showing that 901 people were surveyed plus 10 in-depth interviews.

In closing, Ms. Register asked the Council to focus on turning off the faucet of plastic production.

**Adjourn**

**Attachment 1**  
Meeting Agenda

**Plastic Waste Prevention Advisory Council  
AGENDA**

September 29, 2022  
10:00am - 4:00pm  
3<sup>rd</sup> Floor Conference Room  
1111 East Main Street, Richmond Virginia 23219

<b>Timing</b>	<b>Activity</b>
10:00	<ul style="list-style-type: none"><li>• Welcome and Framing – Dr. Rob Alexander</li></ul>
10:05	<ul style="list-style-type: none"><li>• Introductions and Interests Review</li></ul>
10:15	<ul style="list-style-type: none"><li>• Administrative Reminders – Meghann Quinn</li></ul>
10:20	<ul style="list-style-type: none"><li>• Review and Approve May Minutes</li></ul>
10:25	<ul style="list-style-type: none"><li>• Reminder of Charter and Shared Expectations</li></ul>
10:30	<ul style="list-style-type: none"><li>• Establishing Criteria for Decision-Making and Revisiting Decision Rule</li></ul>
10:45	<ul style="list-style-type: none"><li>• Legislative Update – Jennifer Walle, Deputy Secretary of Natural and Historic Resources</li></ul>
11:00	BREAK
11:10	<ul style="list-style-type: none"><li>• Revisiting Our Problem System/Mapping Possible Recommendations</li></ul>
11:45	<ul style="list-style-type: none"><li>• Analysis of EV Poll and Meeting Data – Dr. Rob Alexander</li></ul>
12:15	LUNCH BREAK
1:00	<ul style="list-style-type: none"><li>• Identifying Recommendations (Break as needed)</li></ul>
3:30	<ul style="list-style-type: none"><li>• Public Comment</li></ul>
4:00	<ul style="list-style-type: none"><li>• Adjourn</li></ul>



**Attachment 2**

The Pew Charitable Trusts: Breaking the Plastic Wave  
Global Macroplastic System Map

The macroplastic system map depicts the five major components of the global plastic system: production and consumption; collection and sorting; recycling; disposal; and mismanaged. The boxes labelled with letters (A to W) represent mass aggregation points in the model, and the arrows represent mass flows. Boxes outlined in solid lines represent places where plastic mass leaves the system, including where it leaks into the ocean (see Box W). The boxes to the left of Box A reflect plastic demand. See Appendix A and the technical appendix for details on the modelling methodology and parameters used.

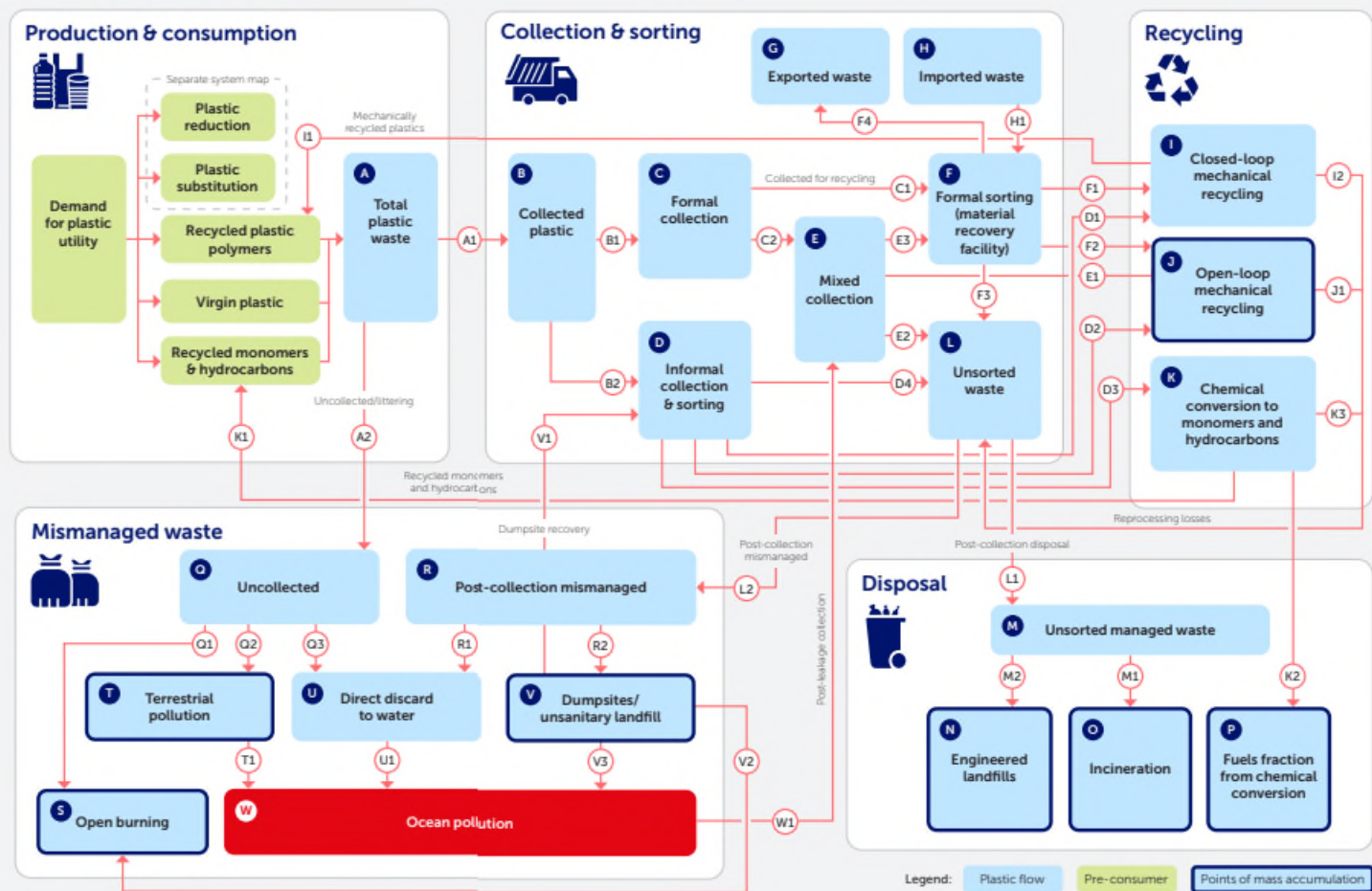
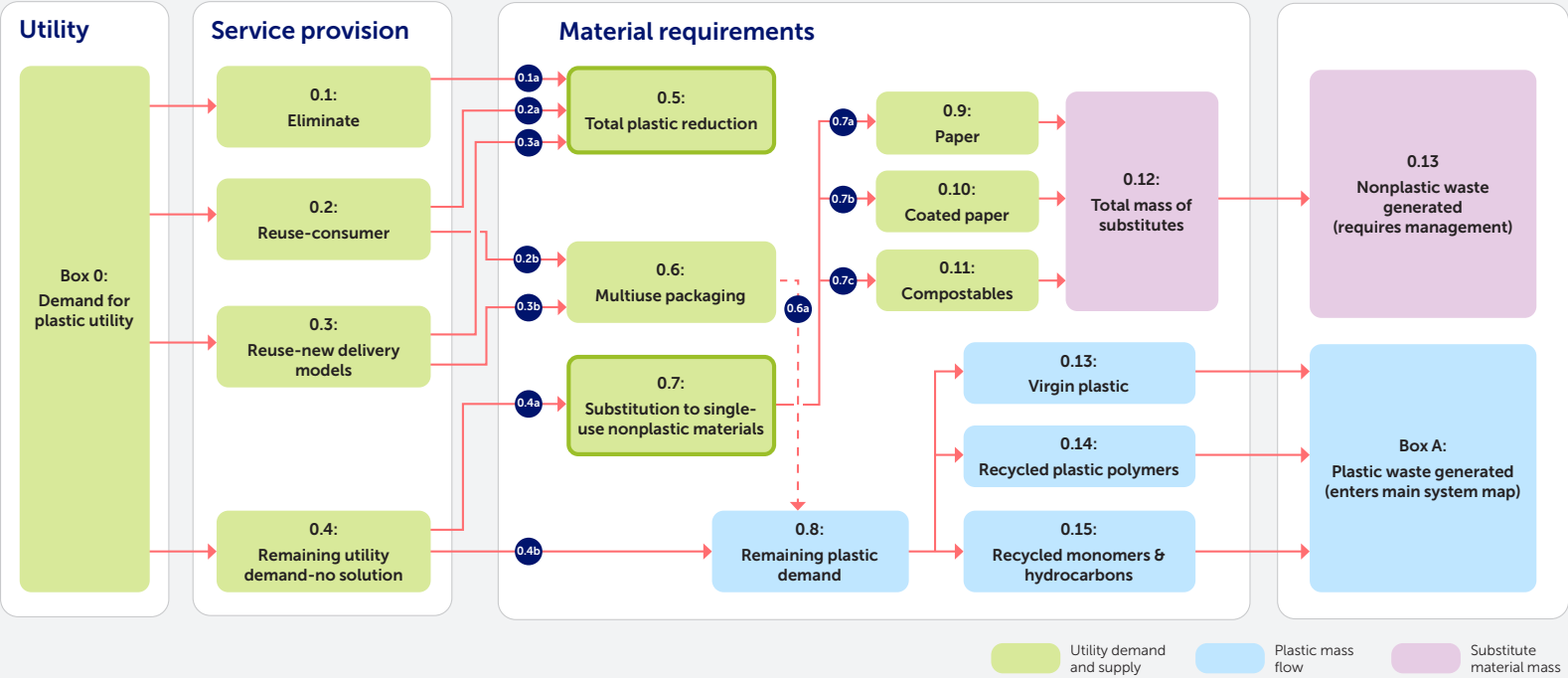


Figure B.2: Detailed view of the subsystem map of the Reduction and Substitution boxes

Box 0 and the Plastic Reduction and Plastic Substitution boxes in Figure B.1 are detailed in this subsystem map. The numbered boxes depict the flows of utility demand and supply (green boxes), plastic mass demand and supply (blue boxes), and substitute material mass (pink boxes; not modelled). Business-as-Usual (BAU) demand for plastic mass that accumulates in the system is estimated in Boxes 0.5 and 0.7 such that utility in boxes 0.5, 0.7, and 0.8 adds up to the sum of Box 0. Arrow 0.6 is a dotted arrow because it represents a partial flow as only multiuse packaging for nonfood applications was modelled as plastic. The three Reduce levers are depicted in Boxes 0.1, 0.2, and 0.3. See Appendix A and the technical appendix for details on the modelling methodology and parameters used.



**Attachment 3**

Analysis of EV Poll and Meeting Data  
Chart compiled by Chair Alexander

Meeting	#	Policy Option	Qualitative Summary	Timing	Policy Type	System Intervention	Policy Target	S/D	Revenue
Feb	5	Mandatory recycling	Creates improved recycling access and material supply but puts cost burden on municipalities; does not reduce plastic use.	Short	Regulation	Collection	Municipalities	S	
August	16	Reporting requirements by material		Short	Regulation	Collection	Collectors	S	
Other	22	Recyclable labelling requirements	Better informs consumers which plastics are actually recyclable to clean up what is collected, but materials markets change.	Short	Regulation	Consumption	Manufacturers	S	
August	17	Consumer education		Short	Information	Consumption	Consumers	S	
May	4	Solid waste disposal surcharge to fund recycling and litter cleanups	Revenue generating plus correcting actual landfill costs but adversely impacts waste haulers and rural communities with hauling distance issues. Linked to landfill space supply.	Short	Fee	Disposal	Haulers, Waste Generators	S	x
May	10	State level sustainability/recycling economic development team	Creates relationships and momentum that can transcend administrations IF protected in budgets. Need to determine agency home - Econ Dev and not DNR?	Short	Administrative	Full System	Whole System	S/D	
Feb	8	Recycled content requirement for plastic packaging	Demand-side policy that requires sufficient plastic reclaimers available to create product options. Also, enforcement challenges and need to specify which products.	Short	Regulation	Production, Consumption	Retail	D	
Other	23	Materials bans	Reduces materials most found as pollution, but can incur cost on users of material if no cost-effective substitutions are available	Short	Regulation	Production, Consumption	Manufacturers, Procurement	D (reduce)	
Feb	1	Statewide plastic recycling target	Setting targets important to provide goal and track progress but must be clear (i.e. which materials, who participates), tailored to the Virginia context, championed, part of a broader policy package and linked to what happens after target reached.	Short	Goal	Recycling	Municipalities, State Agencies	S	
May	13	State procurement specifications that include recycled content in plastics	A demand-side intervention but requires specific targets plus specific referencing of materials to ensure quality end product ***See current EO***	Short	Regulation	Recycling	State Agencies	D	
August	15	Incentives for business/localities/institutions for repair/remanufacture systems		Short	Financial Tools	Reuse	Food Service	N/A	
August	14	State encouraged/incentivized localities and businesses to set up reuse/refill collection and washing infrastructure and programs		Short	Tax rebate/incentive/ grant, etc.	Reuse	Restaurants, Municipalities	N/A	

Feb	7	Container deposit legislation	Generates high volume and high quality materials but requires collection and transport infrastructure, especially for rural.	Medium	Deposit	Collection	Consumers	S	x
May	9	State level grant program to support investments in plastic reclamation infrastructure	Current policy gives small grants to municipalities - this could expand grant size and eligibility to private entities, especially for equipment upgrades. Could stop loss of municipal collection programs.	Medium	Grants	Collection, Recycling	Collectors, MRFs	S	
May	11	State facilitated supply and demand matching – Materials Marketplace	Could fix mismatch between what municipalities collect and what MRFs can sell currently. Jump start private sector for market development for circular economy	Medium	Information	Collection, Recycling	Plastic Buyers and Sellers	S/D	
August	21	Opt in plasticware		Medium	Regulation	Consumption	Restaurants	D (reduce)	
Feb	2	Disposal bans	Bans signal value of materials but there needs to be demand for materials so they have a place to go. With appropriate industry incentive, creates market-based relamation. Rural vs. urban challenge.	Medium	Regulation	Disposal	Haulers, Waste Generators	S	
Feb	3	Landfill taxes	Adjusts prices of disposal to better reflect costs.	Medium	Tax	Disposal	Haulers, Waste Generators	S	x
Feb	6	Extended producer responsibility	Changes system while allowing producer-influenced flexibility; reduces burden on municipalities. Requires high levels of educationa and time to start up.	Medium	Multiple	Production, Collection, Recycling	Producers	S, D	x
August	18	Grant writing guidance/support for federal/state and private funding		Medium	Tech Assist	Recycling, Disposal	MRFs, Municipalities	S	
May	12	State level program to catalyze and incubate investment in the Circular Economy for plastics	(Something about Public Private Partnerships for leveraging private investment dollars into a new market-based system where plastic waste is valued and reincorporated into manufacturing, reducing waste and pollution)	Medium	Various	System-Wide	Manufacturers, Collectors, Recyclers, Procurers	S/D	
August	19	Incentivizing recycling technologies that produce plastic, not fuel		Long	Grant, Loan, Tax Incentive	Recycling	Manufacturers	S	
August	20	Tax incentives or loans for milk run logistics service companies	???	???	Loan, Tax incentive				

**Attachment 4**  
Data Needs

## Data Needs

In our August 2021 meeting, we identified several needs for additional data that, if filled, would allow us to feel comfortable that we were crafting informed, systems-based recommendations. The primary data needs included:

- **Materials science questions and needs**
  - i. *What are the negative environmental externalities of the currently available plastic and plastics alternatives?*
  - ii. *How does life cycle and end of life data of currently available alternatives compare to EPS and plastic bags?*
- **Waste management capacity and process questions and needs**
  - i. *What are the procurement guidelines for state agencies by plastic type and use?*
  - ii. *What items could be reclaimed in VA under existing systems that currently are not?*
  - iii. *Pairing waste collection systems to litter data by municipality*
  - iv. *Data about business/resident/municipality access to waste management infrastructure*
  - v. *What systems exist in Virginia for EPS and plastic bag-specific waste management?*
  - vi. *What are Virginia's current (baseline) data for plastics recovery by type? (Need this to be able to measure policy effectiveness)*
  - vii. *What is the current ability/capacity to compost vegetable-based plastics?*
- **Market dynamics questions and needs**
  - i. *What is the capacity for post-consumer plastic use?*
  - ii. *What is the demand for post-consumer plastic?*
  - iii. *What is the extent of private sector MSW/recycling?*
- **Extent of problem questions and needs**
  - i. *Improved data on the pathways by which litter occurs*
  - ii. *What proportion of litter is EPS? Plastic bags?*
  - iii. *What is the extent of non-permitted solid waste?*
- **Policy and policy evaluation questions and needs**
  - i. *What do we know from existing bag tax and EPS ban evaluations in the U.S, Canada, and EU?*
  - ii. *What are all of the policy tools being used to address plastic bags and EPS?*
- **What else? What other data needs do we have?**



**Attachment 5**

Slides provided by Katie Register during Public Comment Period

Comments from

## Katie Register

Executive Director, Clean Virginia Waterways and  
co-founder, VA Plastic Pollution Prevention Network

## ELIMINATE PLASTIC WASTE

Policy & funding recommendations

I encourage more emphasis on **source reduction**  
(Box A on the Breaking the Plastic Wave: Top Findings  
for Prevention Plastic Pollution by PEW)

### Waste Hierarchy



# Costs – which costs are we talking about? What do we value?

- Economic Costs of alternatives to EPS
- Ecological Costs of “business as usual”
- Please don’t focus only on economics.
- My concern: if we do cost-benefit analyses based only on economics, we will often choose the path that will save a business money, but the externalities will impact the environment

# Data collection & research

- Yes– we need research
- But we know enough to take action
- “no regret” actions
- Research: how other states have successfully implemented source reduction policies.
  - Oregon– 90% of beverage containers are returned

# Political Will Exists

- Voters are aware, concerned and willing to add
- Bi-partisan Support for public policies to address the sources of plastic pollution

# Virginia Voters: Survey on Plastic Pollution Policies

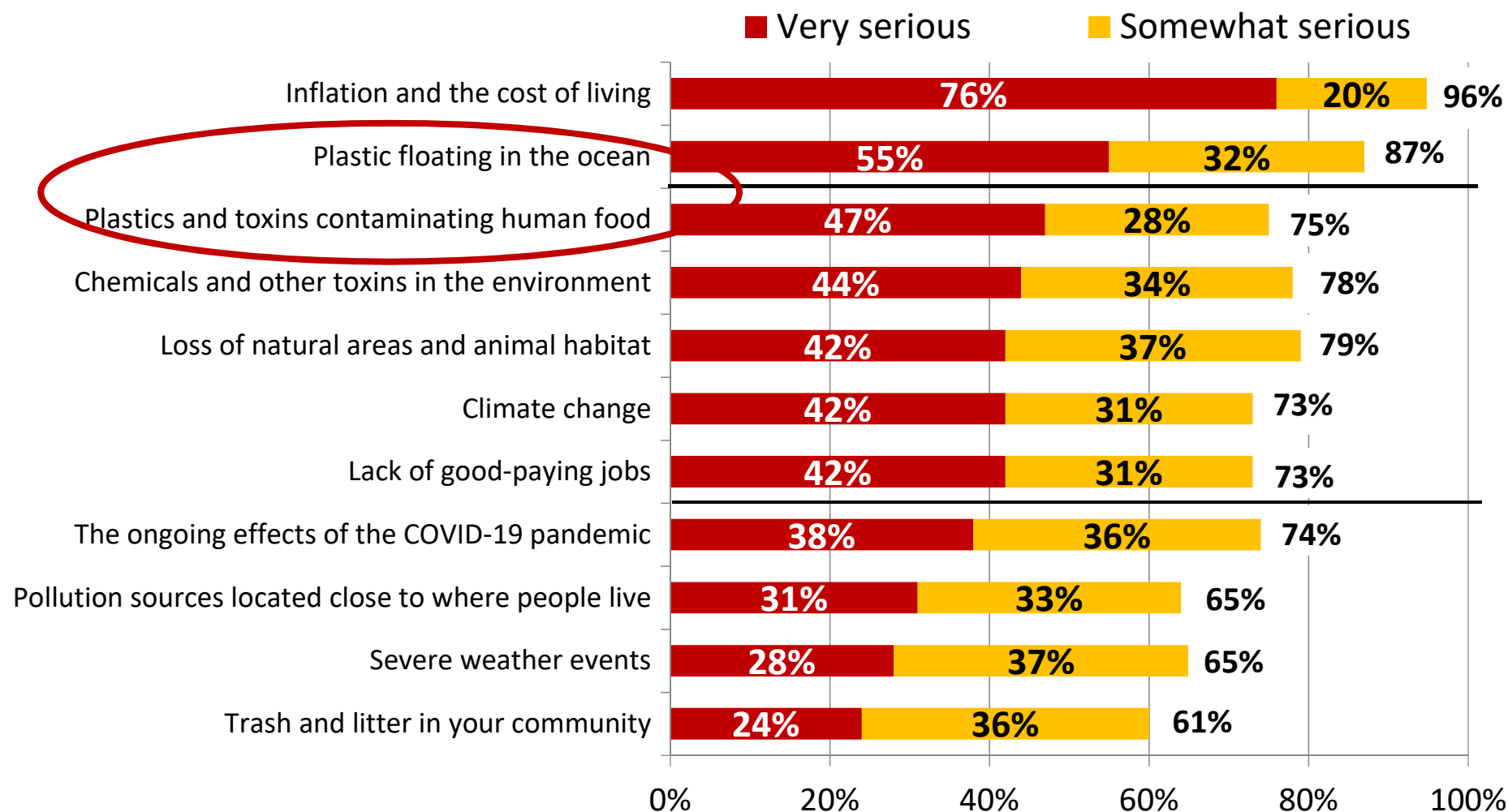
**Steve Raabe, President, OpinionWorks LLC**  
as presented at the Virginia Marine Debris Summit  
September 28, 2022

at the Virginia Aquarium & Marine Science Center



# Rating the Seriousness of Problems

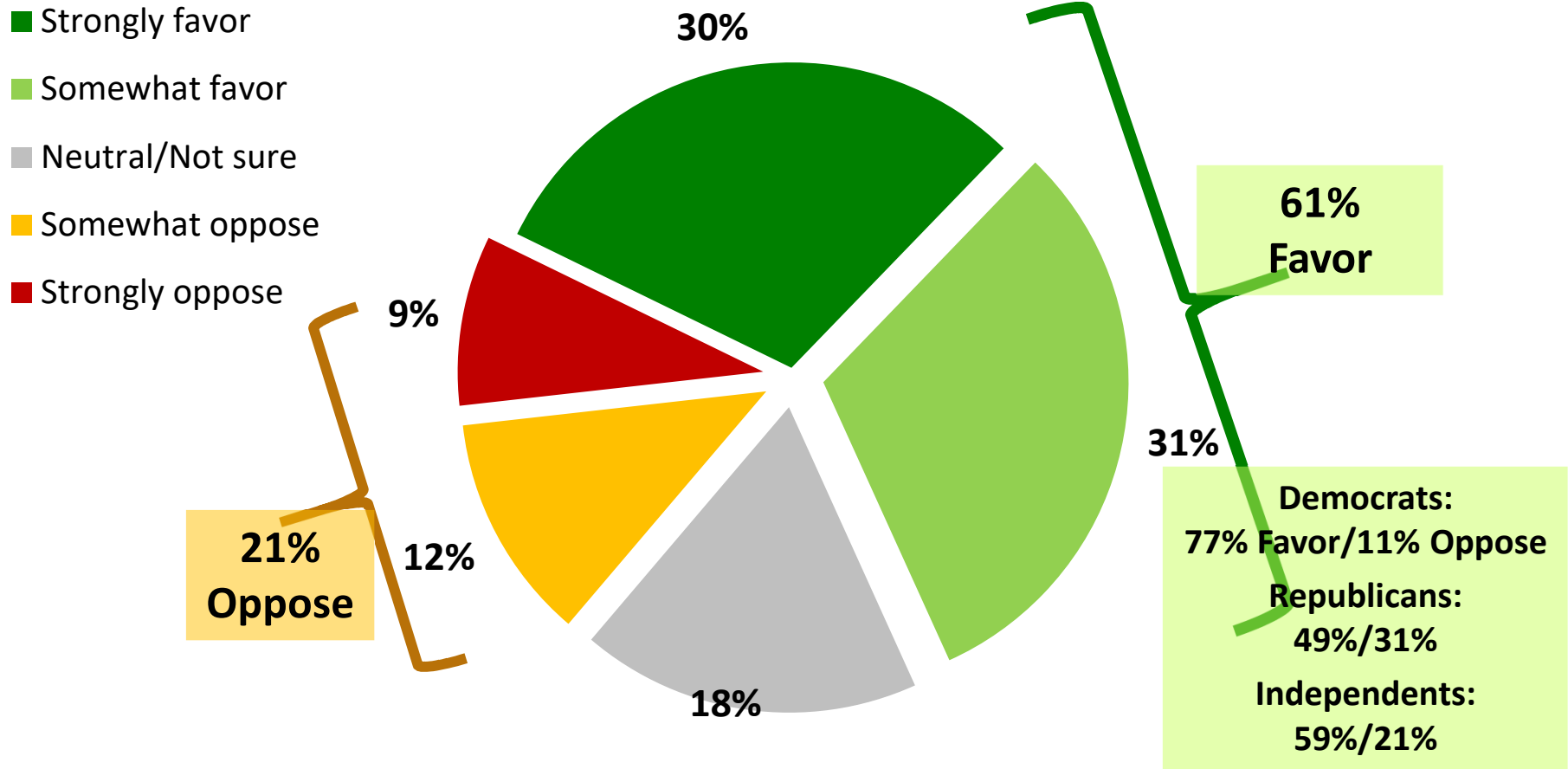
Virginia Voter Survey, March 2022



Do you consider each of the following to be a very serious problem, somewhat serious problem, not much of a problem, or not a problem at all?

# Ban Single-Use Plastic Bags

Virginia Voter Survey, March 2022



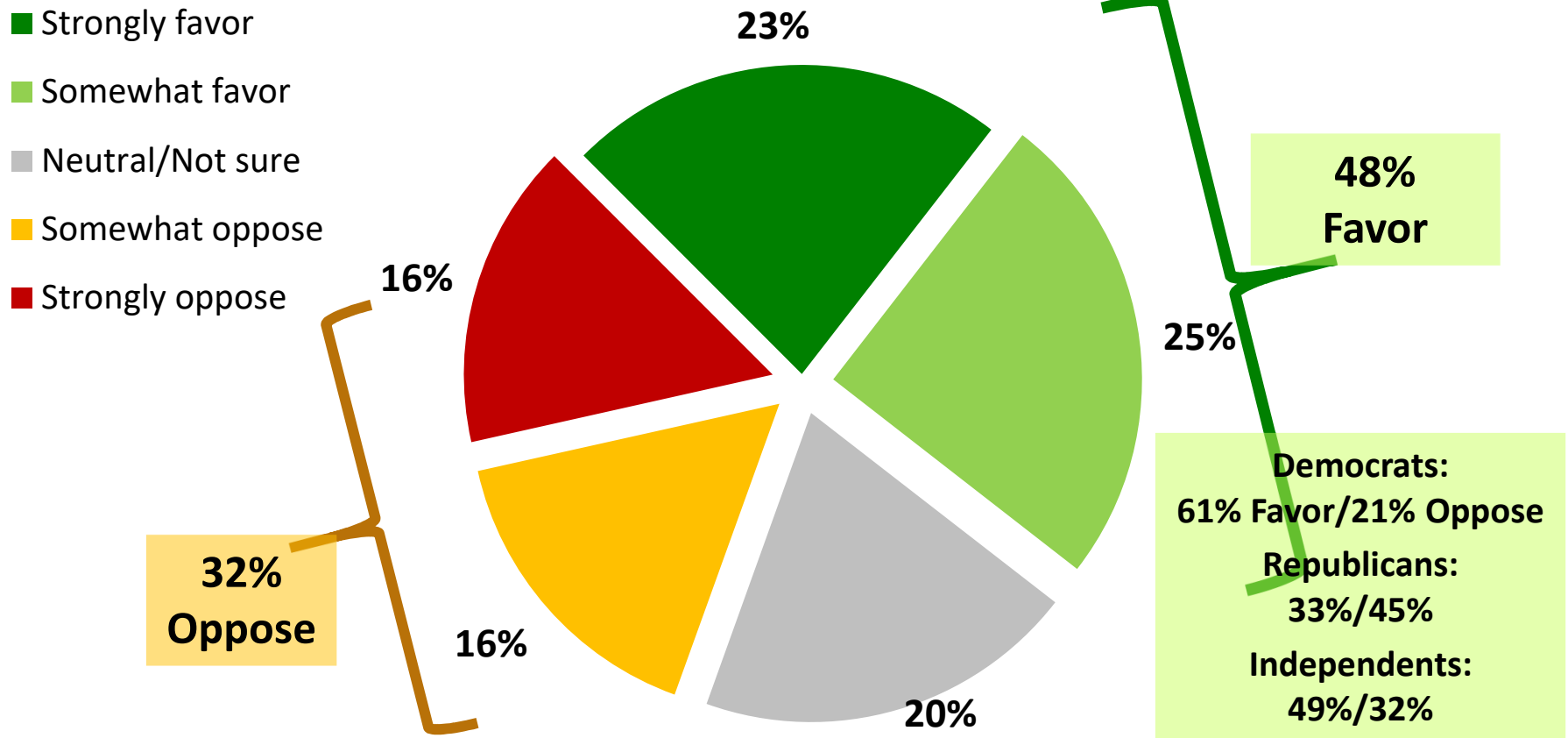
...For each idea, please say if you strongly favor it, somewhat favor it, are neutral, somewhat oppose it, or strongly oppose it.

**Ban single-use plastic grocery and shopping bags  
and require paper or reusable bags instead.**



# 5-Cent Fee on Single-Use Plastic Bags

Virginia Voter Survey, March 2022

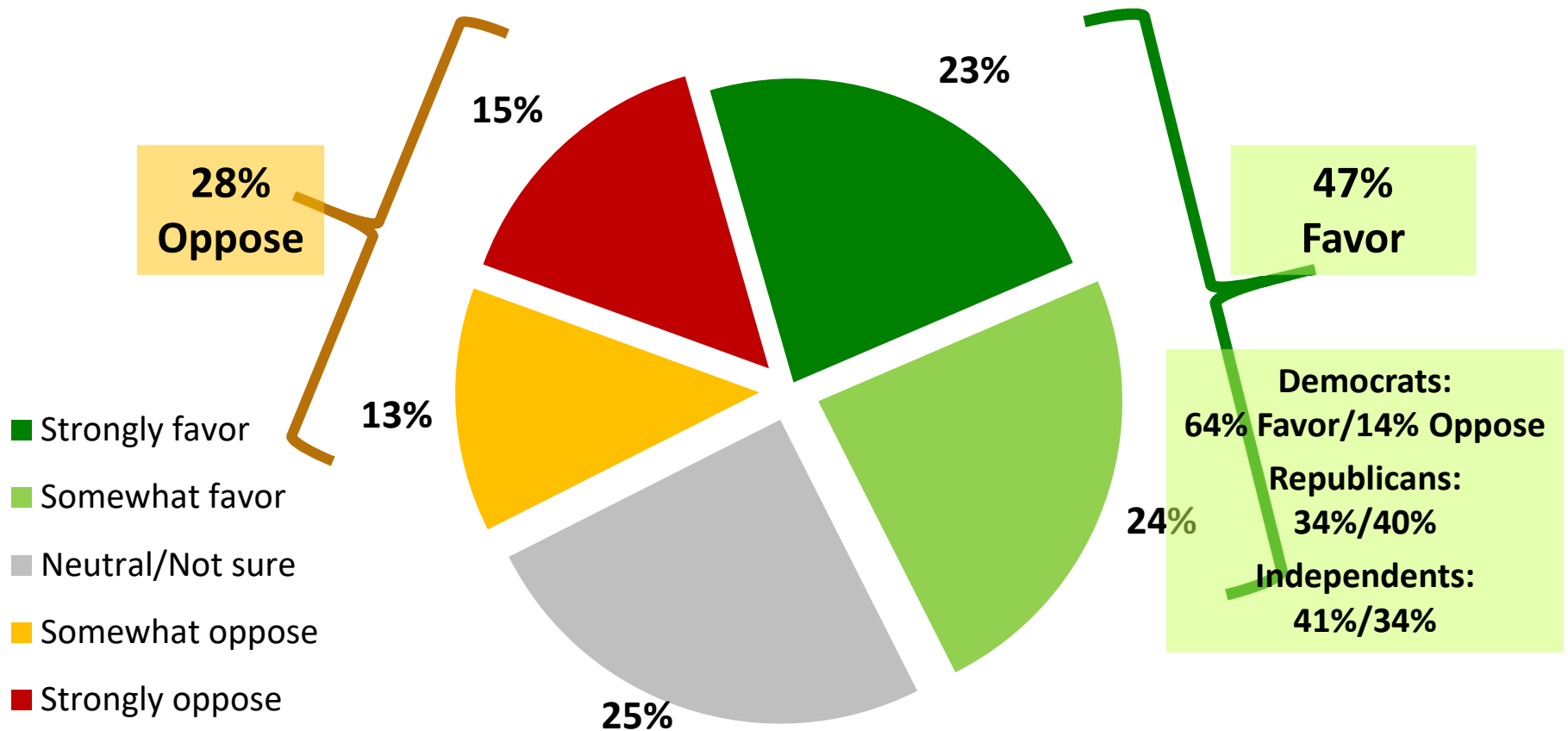


...For each idea, please say if you strongly favor it, somewhat favor it, are neutral, somewhat oppose it, or strongly oppose it.

**Place a 5-cent fee on single-use plastic bags to discourage their use.**

# Ban Plastic Straws

Virginia Voter Survey, March 2022

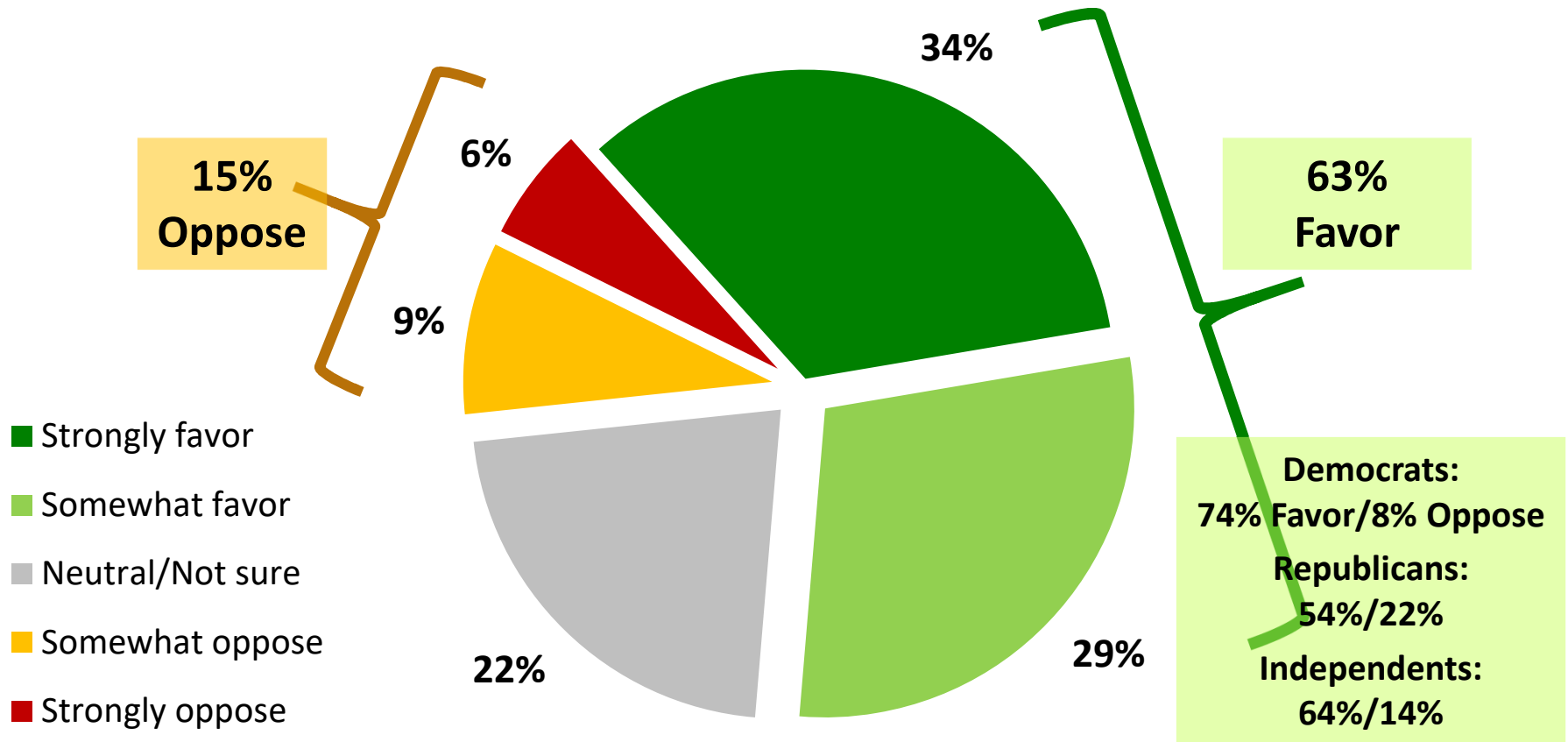


...For each idea, please say if you strongly favor it, somewhat favor it, are neutral, somewhat oppose it, or strongly oppose it.

**Ban plastic straws.**

# Ban Polystyrene Containers

Virginia Voter Survey, March 2022

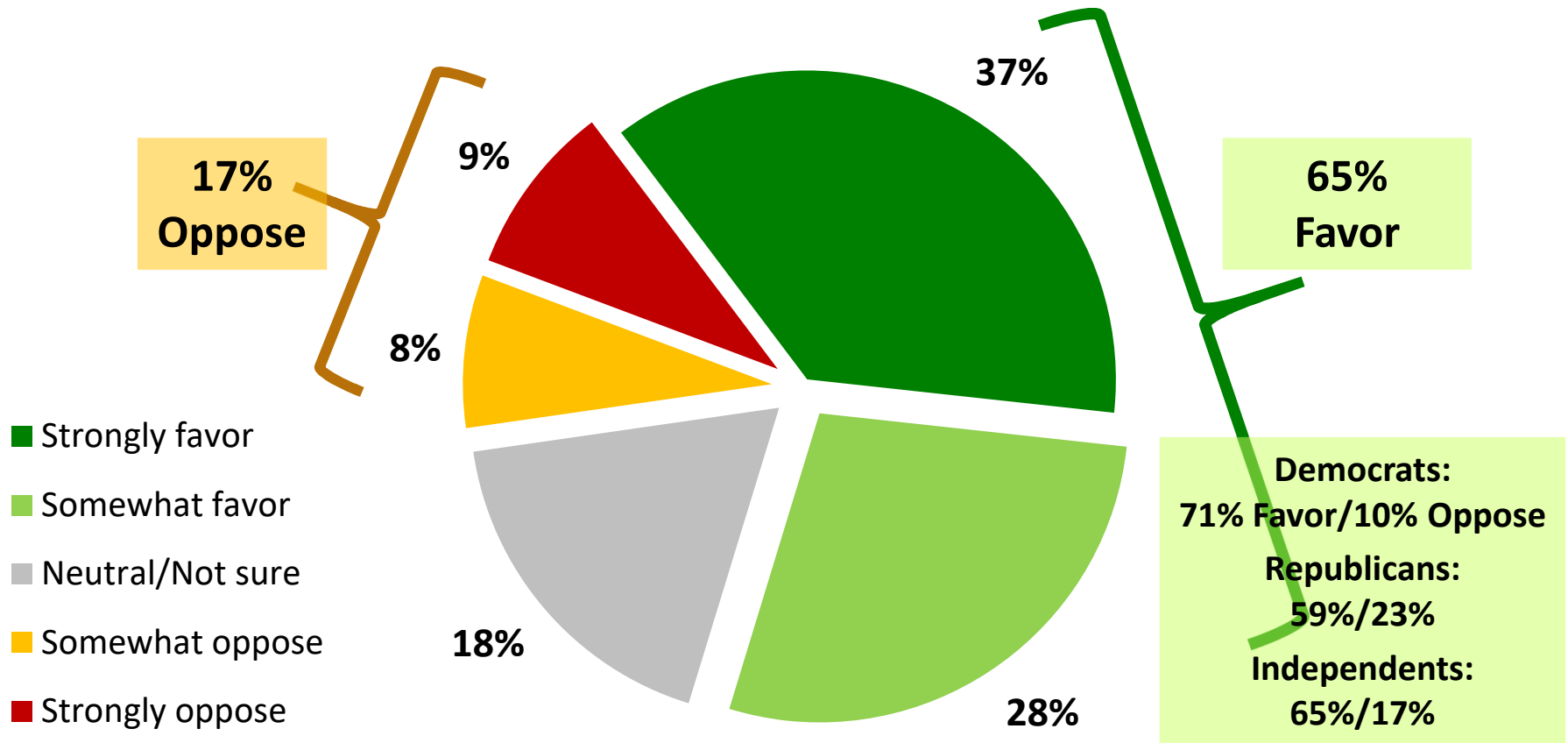


...For each idea, please say if you strongly favor it, somewhat favor it, are neutral, somewhat oppose it, or strongly oppose it.

**Ban polystyrene or foam take-out containers.**

# Bottle Deposit

Virginia Voter Survey, March 2022

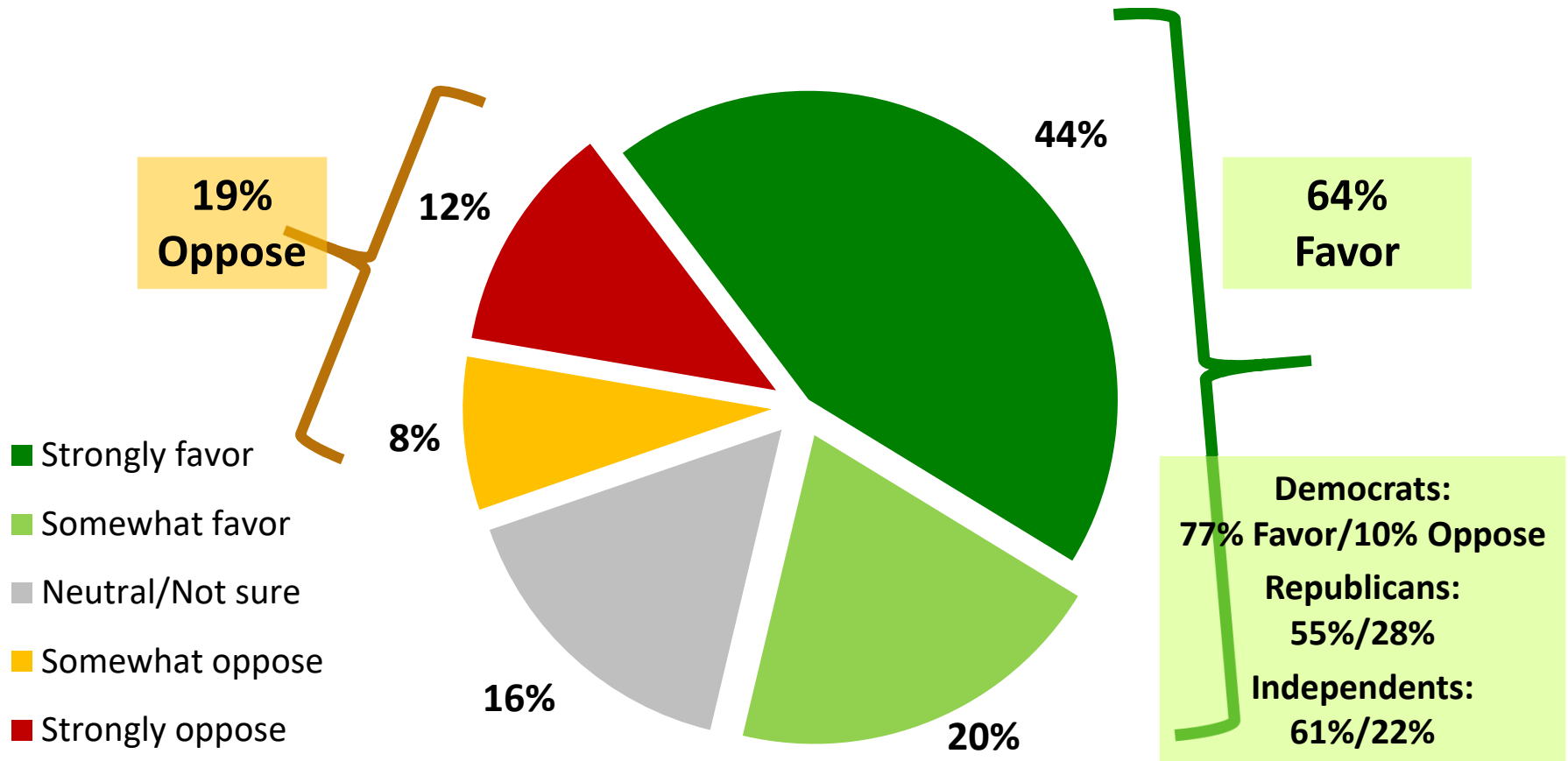


...For each idea, please say if you strongly favor it, somewhat favor it, are neutral, somewhat oppose it, or strongly oppose it.

**Charge a 5-cent or 10-cent fee on bottled drinks that you get back when you return the bottles to a store or redemption center.**

# 50-Cent per Cigarette Pack Litter Fee

Virginia Voter Survey, March 2022

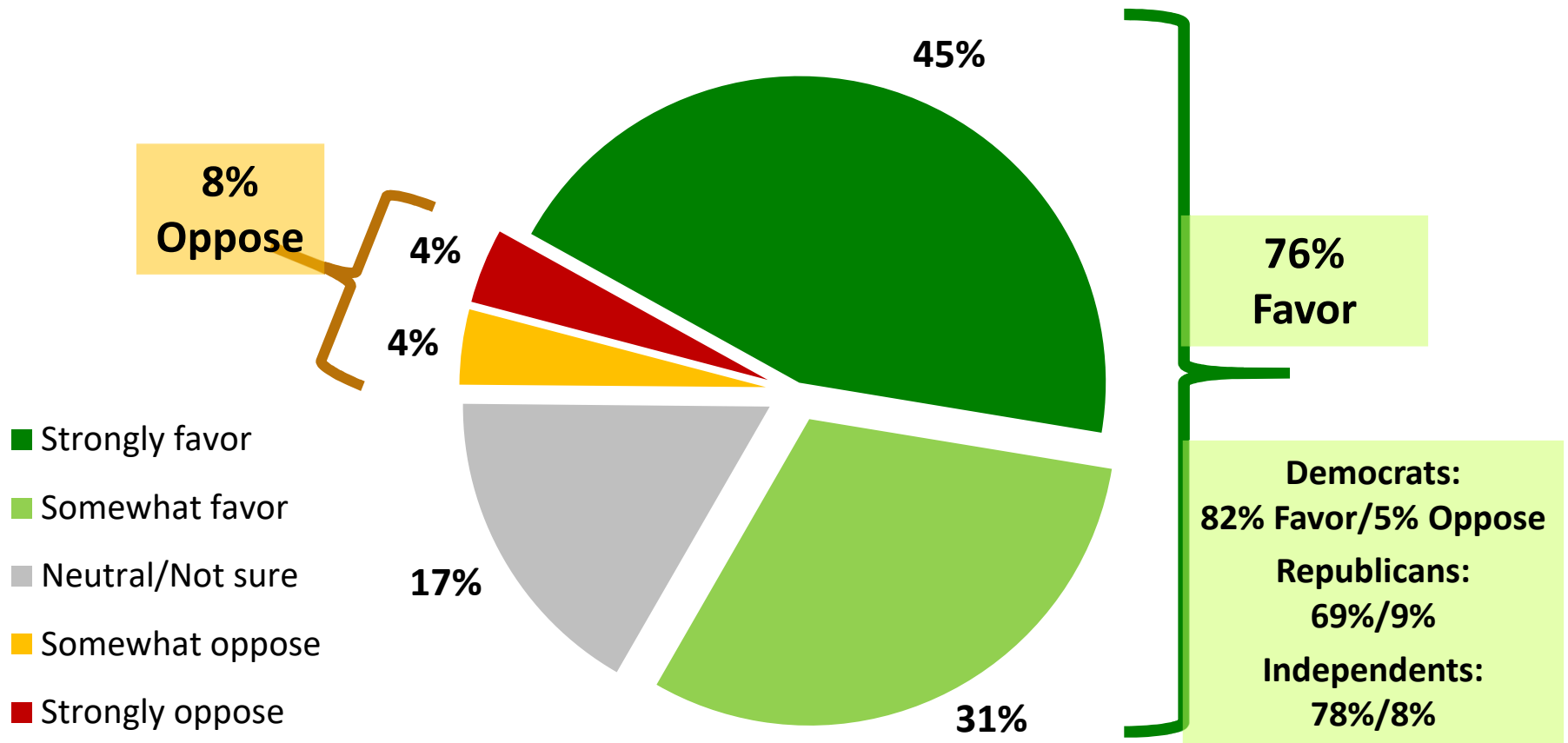


...For each idea, please say if you strongly favor it, somewhat favor it, are neutral, somewhat oppose it, or strongly oppose it.

**Charge a 50-cent-fee on each pack of cigarettes to help pay the cost of cleaning up littered cigarette butts.**

# Require Less Plastic in Packaging

Virginia Voter Survey, March 2022

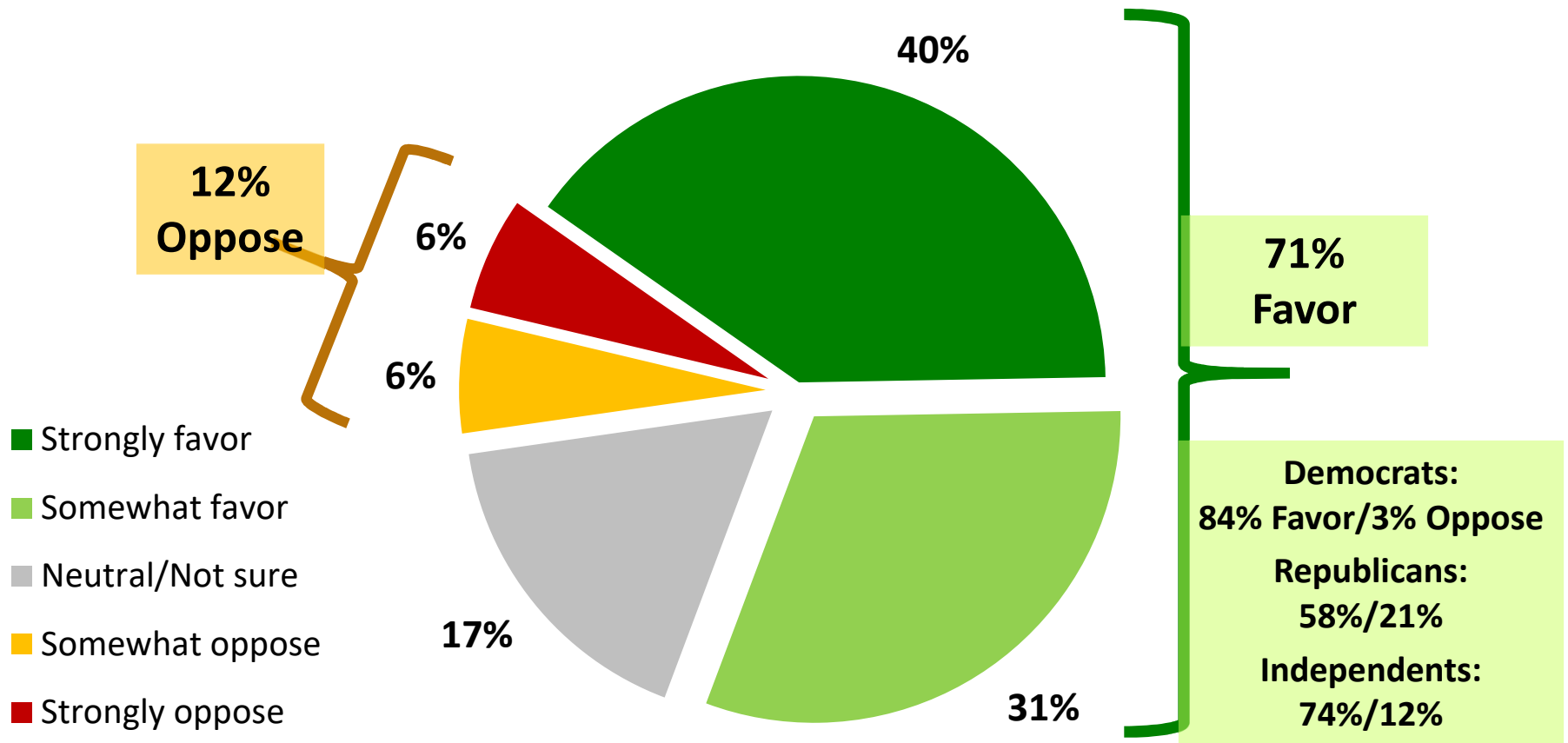


...For each idea, please say if you strongly favor it, somewhat favor it, are neutral, somewhat oppose it, or strongly oppose it.

**Require manufacturers to use less plastic in product packaging.**

# Require Manufacturers to Pay for Recycling

Virginia Voter Survey, March 2022



...For each idea, please say if you strongly favor it, somewhat favor it, are neutral, somewhat oppose it, or strongly oppose it.

**Require manufacturers to help pay for recycling pick-up and processing in local communities, reducing burden on taxpayers.**

# Research Method

- **Representative statewide sample**
  - 901 interviews
  - Very good ability to segment the data, understand audience segments
  - Representative of Commonwealth's population
  - $\pm 3.3\%$  sampling error, 95% confidence
- **Mixed-mode sampling**
  - Online using consumer panels
  - Wireless and landline phone
- **Fielded March 8–13, 2022**
- **10 in-depth follow-up interviews to understand thinking**
  - On-on-one, virtually; May 2022



# Survey Sample Composition

Under age 25	7%
20 to 34	18%
35 to 44	17%
45 to 54	17%
55 to 64	16%
65 or more	19%
Prefer not to say	6%
Caucasian or White	69%
African-American or Black	21%
Hispanic or Latino	5%
Asian	8%
All others	5%
Prefer not to say or not sure	2%
Male	49%
Female	50%
Another gender category	1%
Prefer not to say	1%
Democrats	33%
Republicans	32%
Unaffiliated or not sure	35%
Politically Progressive	27%
Moderate	39%
Conservative	29%
Prefer not to say or not sure	6%