Solid Waste Management Plan (SWMP)/ Zero Waste Plan (ZWP) Overview

October 23, 2023

Two-Fold Purpose of the Combined Plan

1. Meet the State requirements for a Solid Waste Management Plan
   - Considers all elements of waste management during generation, collection, transportation, treatment, storage, disposal, and litter control - must include:
     - An integrated waste management strategy
     - Objectives and schedule for implementation
     - Funding needs & sources
     - Public education strategy
     - Info on source reduction, reuse, recycling, and public/private partnerships
     - Adopt minimum 25% recycling rate
     - Record of all known disposal sites – closed, active, and inactive
     - Adopt method to monitor amount of solid waste produced
     - 20-year plan (2024-2044)
2. Fulfill County Board's 2015 Zero Waste Resolution
   - Divert 90% of County's waste from incineration or landfill by 2038

Planning Process Recap

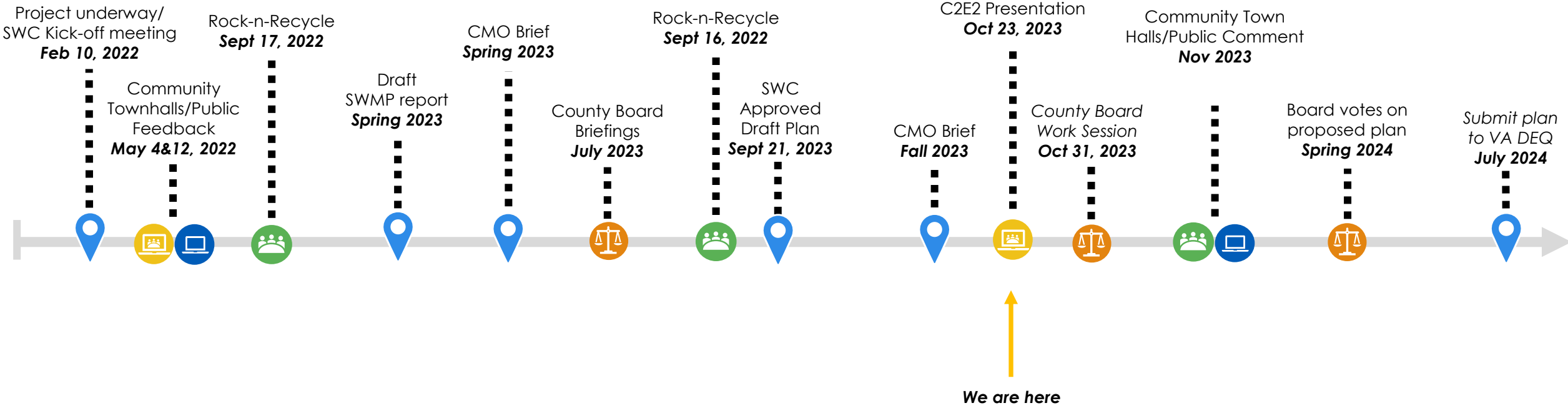
- Solid Waste Committee
  - 16 Meetings (Feb 2022 – Sept 2023)

Carrie Thompson - Committee Chair, C2E2 Co-Chair
Dean Amel - SWC member, NAACP, Forestry, Sierra Club
Marlene RedDoor - SWC member
Kimberly Fedinatz - SWC member
Caroline White - SWC member
Sam Watzman - SWC member
Gabriel Calvo - SWC member
Scott Pedowitz - Apartment and Office Building Association
David Dunn & Lisa Worrell - Capitol Trash service

Charles Meng - Arlington Food Assistance Center
Barry Harte - Marymount University
Anne Germain - National Waste & Recycling Association
Saul Reyes - BU-GATA
Larry Straub - Fairlington Villages
Che Ruddell-Tabisola - Restaurant Association of Metropolitan Washington
Brian Goggin - Arlington Partnership for Affordable Housing
John Musso - Arlington Chamber of Commerce
Kerm Towler – Arlington Public Schools

- Community Engagement
  - Two Townhall meetings (May 2022)
  - Public Feedback Period (May 2022)
  - Rock N Recycle Event (Sept 2022 & Sept 2023)

SWMP/ZWP – Timeline



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Online Feedback (e.g, questionnaire, feedback form, etc.)

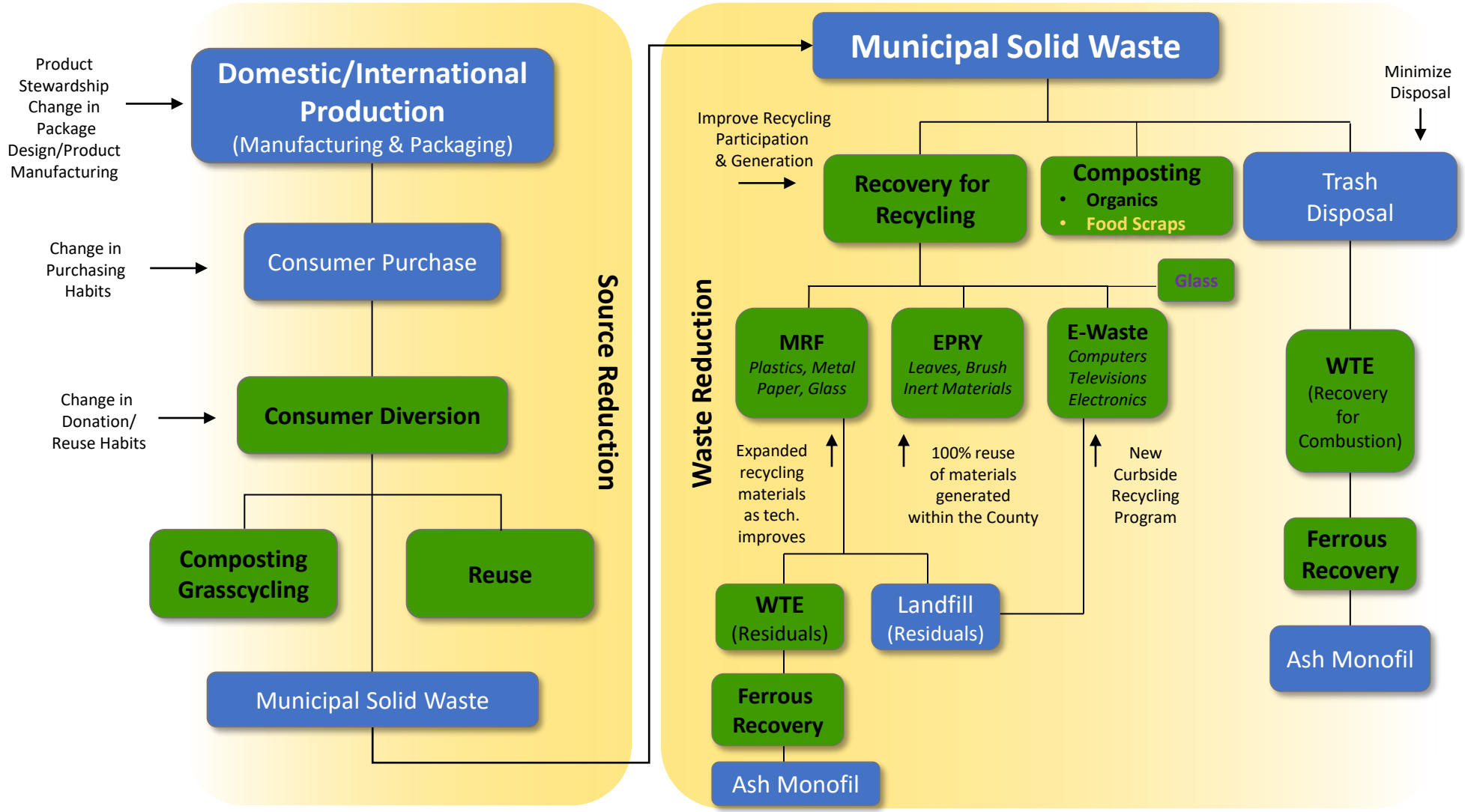
In-Person Engagement and Pop-Ups (e.g, community meeting, roundtable, tabling, walking/bus tour, deliberative dialogue, etc.)

Virtual Meeting (e.g., TEAMS, TEAMS live, Zoom, etc.)

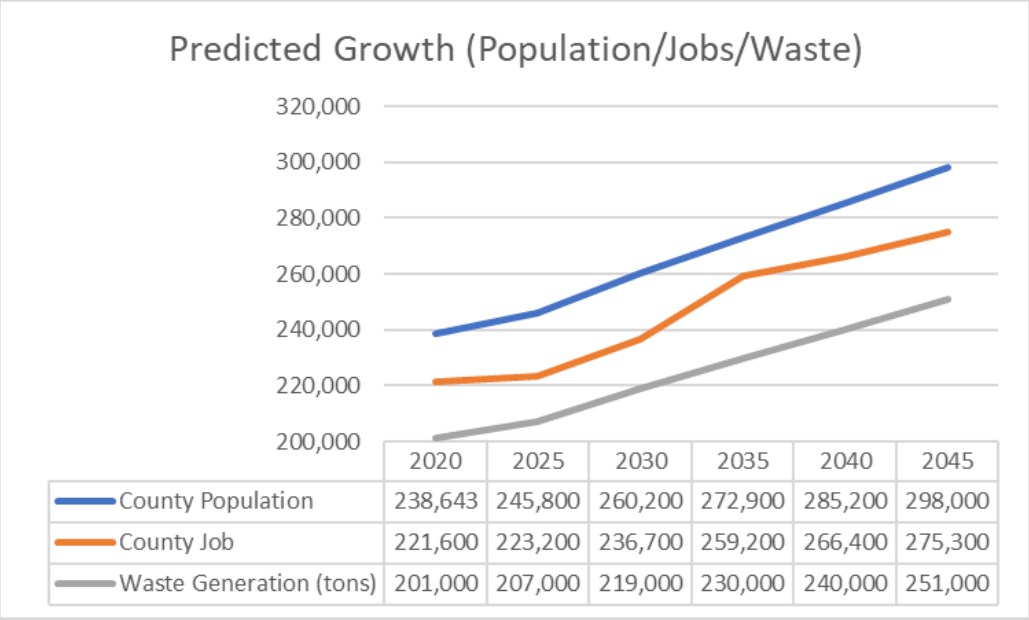
County Board Engagement (e.g, public hearing, Board work session, open door Monday, commission meeting etc.)

Key Milestone

Solid Waste Management System

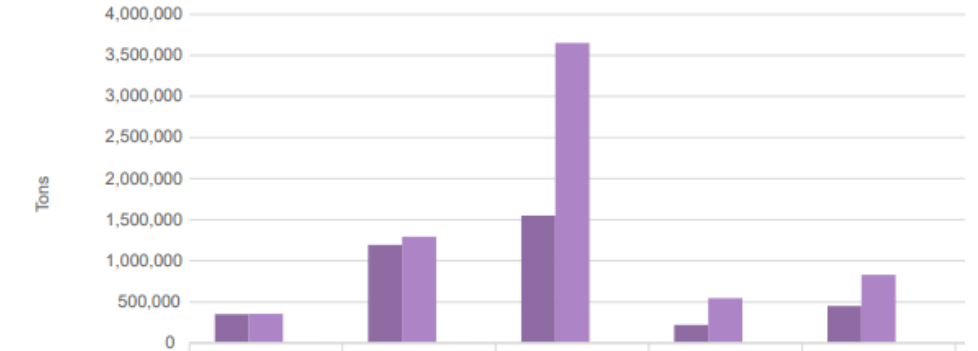


Increasing Waste/Fixed Disposal Capacity



	2020	2025	2030	2035	2040	2045
County Population	238,643	245,800	260,200	272,900	285,200	298,000
County Job	221,600	223,200	236,700	259,200	266,400	275,300
Waste Generation (tons)	201,000	207,000	219,000	230,000	240,000	251,000

Figure 22: Waste Received vs Annual Permitted Capacity of Facilities used by Northern Virginia and District of Columbia 2020



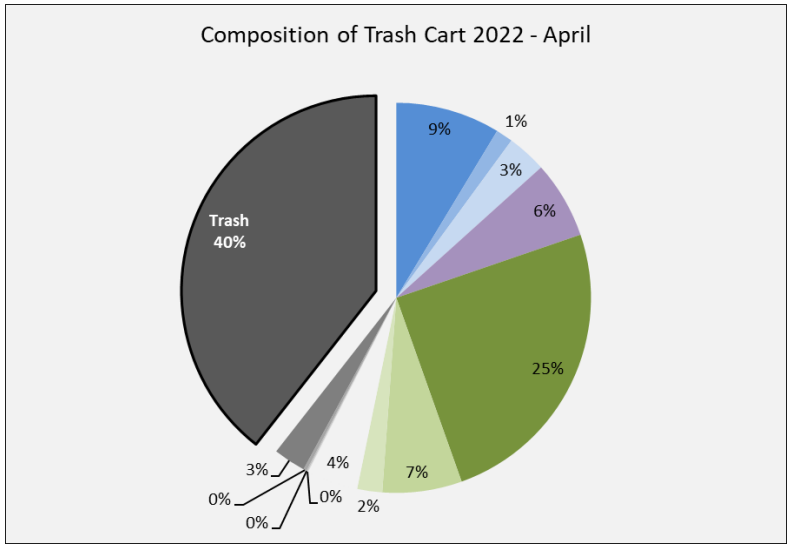
	Covanta Alexandria Arlington Limited Liability Co	Covanta Fairfax Limited Liability Company	King George Landfill Incorporated	Loudoun County Solid Waste Management Facility	Prince William County Sanitary Landfill
Waste Received	351,482	1,195,606	1,549,910	218,719	451,511
Permitted Capacity	355,875	1,292,100	3,650,000	547,500	830,375
Percent Permitted	98.8%	92.5%	42.5%	39.9%	54.4%

Source:DEQ SWIA Report 2020

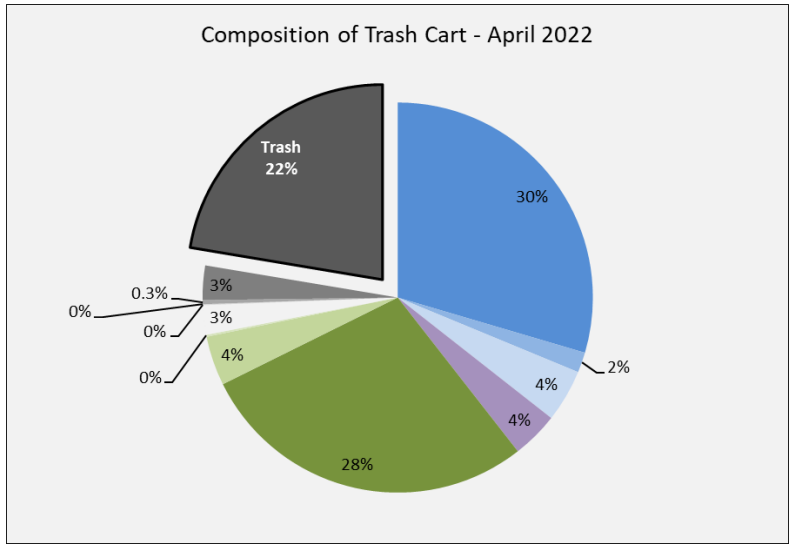
- County will need to focus on re-allocating waste stream disposal as population and waste generation increase over the planning period.
- The SWMP's efforts to encourage recycling and organics diversion should ensure future disposal capacity for County generated waste.

Arlington Trash Stream Composition

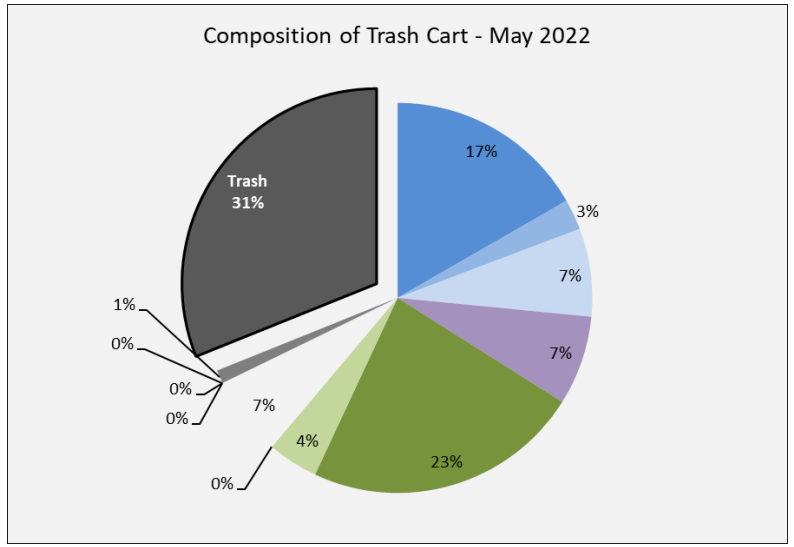
Residential



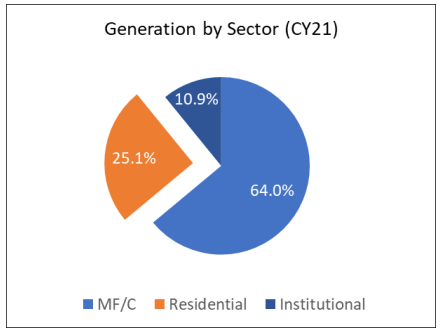
Multi-Family



Commercial



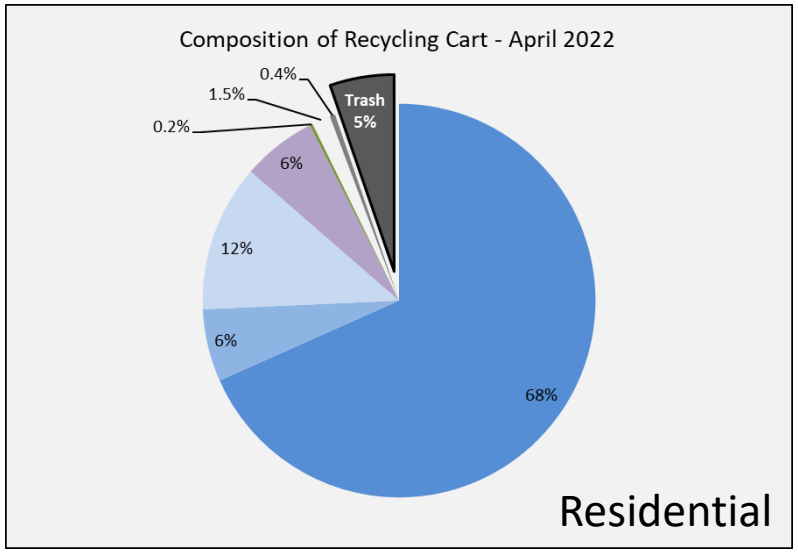
- >2/3 of material in Multi-Family & Commercial trash could be diverted
- Food waste is biggest opportunity to divert across all 3 sectors

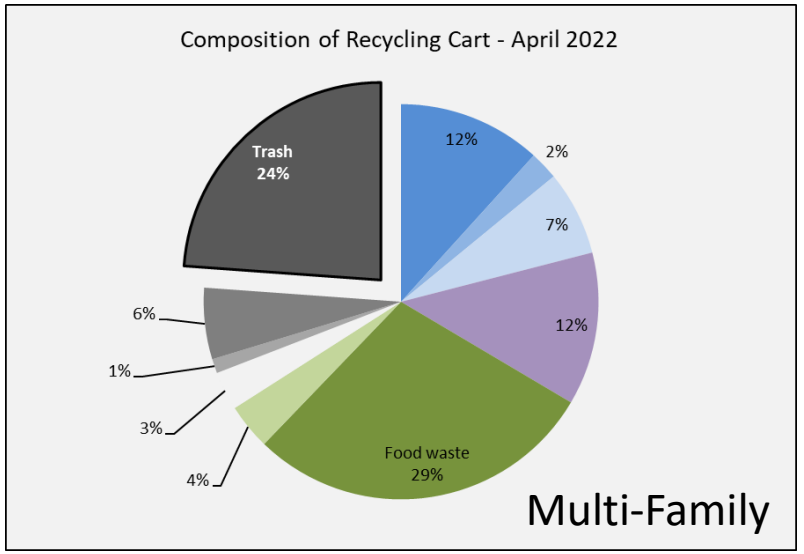


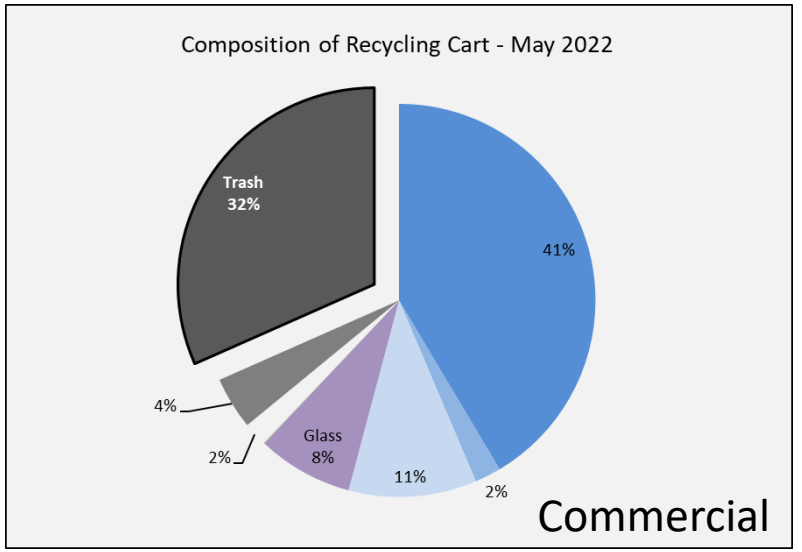
Pie Chart Legend

- Paper and Cardboard
- Metals
- Plastics
- Glass
- Food waste
- Compostable Paper
- Yard waste
- Plastic Bags/Film
- HHM
- C&D
- E-waste
- Textiles
- Trash

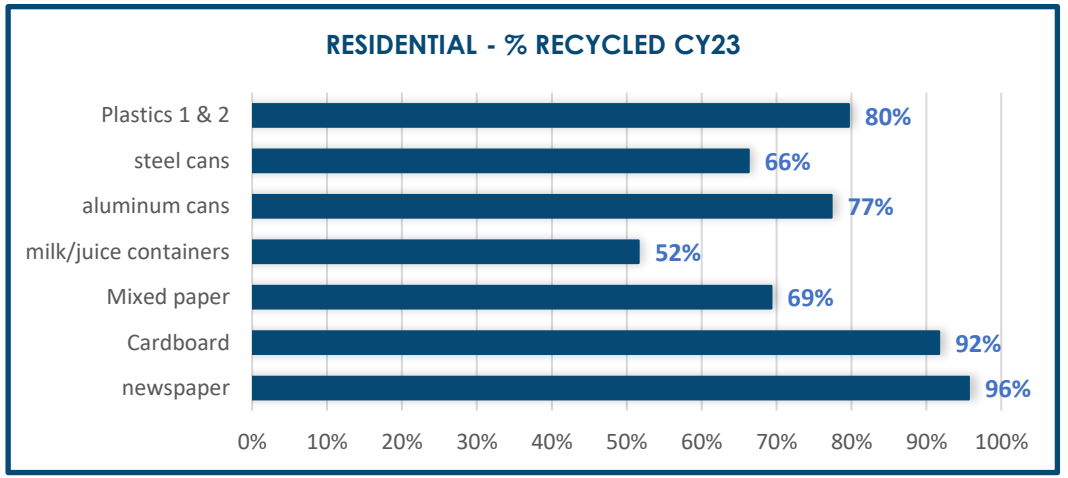
Arlington Recycling Stream Composition



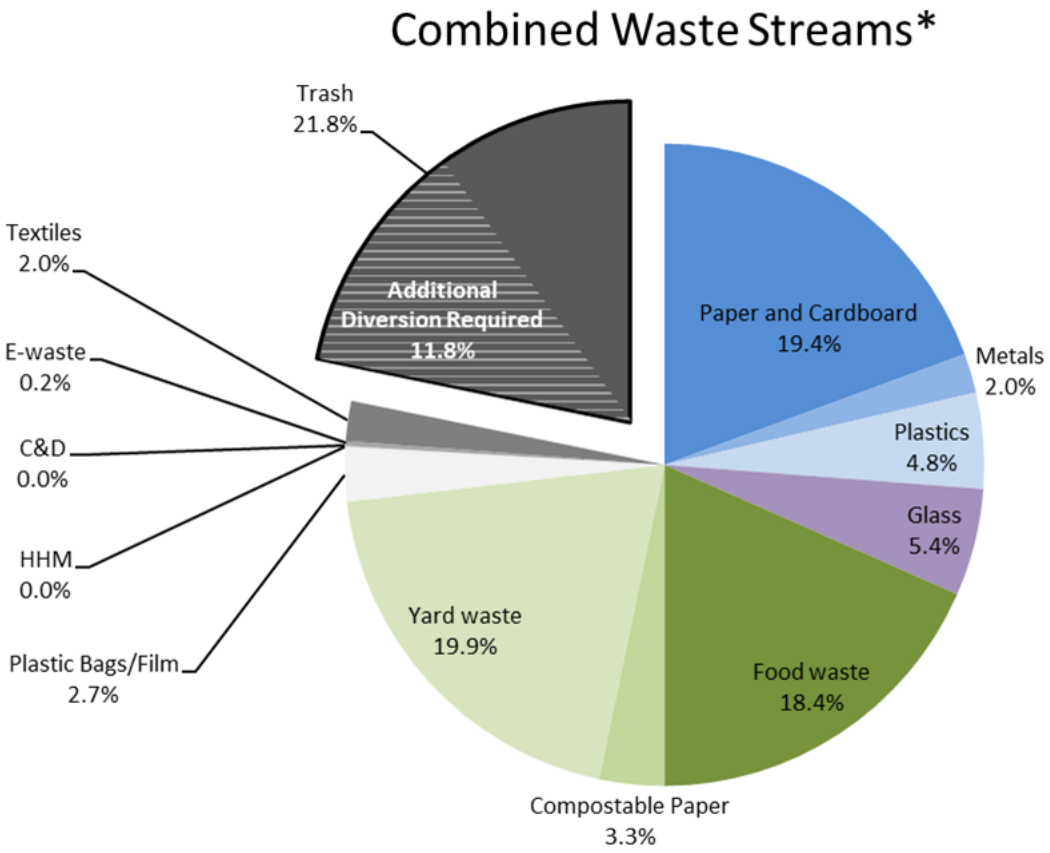




- Multi-Family & Commercial have substantial contamination
- Residential recycling performance is high

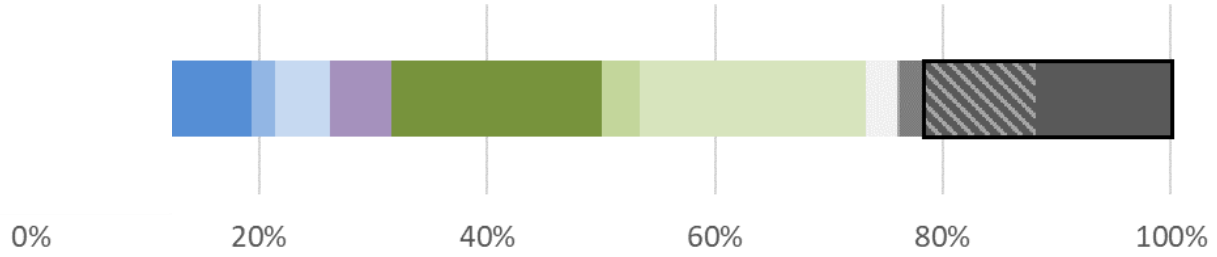


Diversion Potential



*excludes County facilities and APS.

- Attain up to **78.2%** diversion through
  - 100% proper disposal
  - Additional regulation (organics)
- How does the County attain the additional **11.8%** diversion?



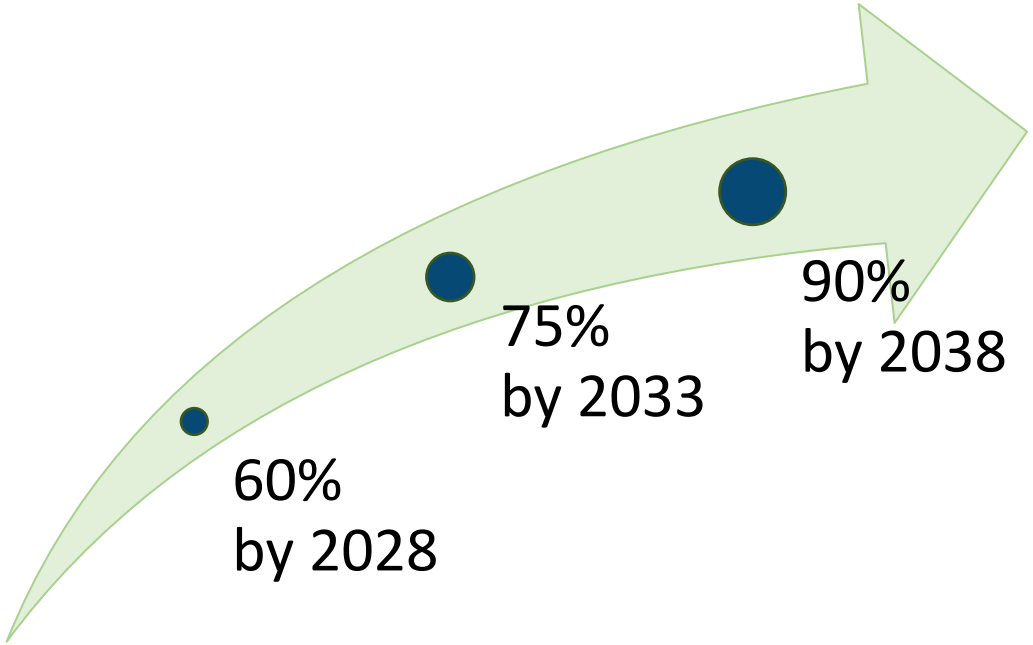
Plan Recommended Goals

- Classify goals as Mandatory (as required by DEQ), and Aspirational (not enforceable by DEQ) Goals
  - Employ a comprehensive solid waste management system that considers the Commonwealth's hierarchy.
  - Ensure that the County implements a strong diversion/recycling program, and that the County recycles at a rate that, at a minimum, meets the Commonwealth's recycling goals.
  - Carefully evaluate the waste management needs of the county for the next 20 years and identify actions to be taken to meet those needs.
  - Divert 90% or more of generated waste from landfilling or incineration by 2038
  - Voluntary program enhancements to achieve zero waste goal
    - Enhanced education and outreach efforts to achieve better waste reduction and recycling outcomes
    - Comprehensive organics management
    - Legislative efforts

90% Diversion – How do we get there?

SWMP/ZWP proposes:

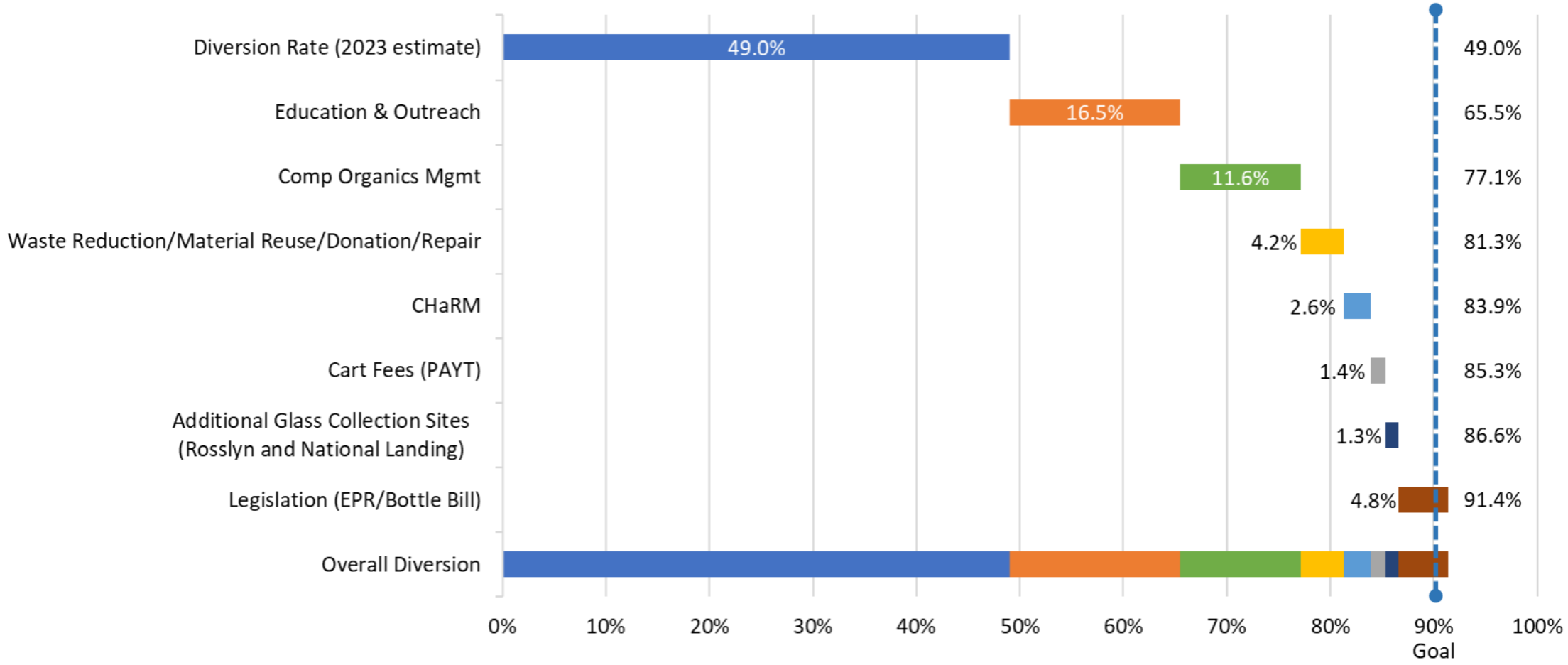
- 15 Voluntary Program Enhancements/Initiatives
- 4 Policy Programs
- Three intermediate diversion targets to gauge progress (excludes 5% bonus from state)



Voluntary Program Enhancements

- Developed by SWC, SWB staff, and public feedback
- Each program enhancement/initiative was evaluated to understand potential impacts in three areas.
  - Diversion Impact
  - Greenhouse Gas Emissions Impact
  - Financial Impact to the County
- Prioritized into short, medium, long term and policies

How Do We Get There?



Evaluated diversion impacts, GHG impacts and cost for each proposal

MFC Targeted Initiatives (64% of Waste Stream)

- Expanded Education and Outreach
  - Initial focus on MF - "Recycling Right" to reduce high contamination levels in MF sector
- Organics Diversion from MF and restaurants
  - Assistance and incentives for voluntary diversion of organics at MFC properties
- Comprehensive Organics Management
- Additional Glass Drop Off Locations
  - Focused on high-density development corridors, such as Rosslyn-Ballston and Richmond Highway

Implementation Considerations

Resources

Staff

Education/Outreach materials

Programmatic Resources

Space

Infrastructure

WTE

CHaRM Facility

Drop-off Locations

Public MRF

AD Facility

Legislation/Regulations

Extended Producer Responsibility

Flow Control- Organics

Bottle Bill

Circular Economy Support

Zoning Regulations

Implementation schedule (Near, Mid, Long)

		Near-Term					Mid-Term					Long -Term								
	Voluntary Initiatives	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43
1	Expand Education & Outreach*	$369																		
2	Waste Reduction, Material Reuse/Donation, & Recycle Right Campaigns	$70																		
3	Organics Diversion at Farmer's Markets		$7																	
4	Outreach to Support Voluntary Organics Diversion from MF/C Sectors			$70																
5	Additional Glass Collection Services	$70																		
6	Additional Trash Cart Charges	$2																		
7	Center for Hard to Recycle Materials (excludes facility costs)*		$149																	
8	Comprehensive Organics Management*						$110													
9	EP4 Policy*							$110												
10	Zero Waste Special Events							$3												
11	Reuse-Repair Fairs								$11											
12	Equipment Sharing Program								$11											
13	Reusable Takeout Packaging at Restaurants (Grants)								$10											
14	Online Zero Waste Tracking Dashboard						$22													
	Legislative (As opportunities present themselves)																			
15	Extended Producer Responsibility Legislation	$0																		
16	Bottle Bill Legislation	$0																		
17	State Level Circular Economy	$0																		
18	Other Legislative Initiatives	$0																		
	Ongoing Costs (in thousands)	$511	$156	$ 70	$ -	$ -	$132	$113	$ 32	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

* Will require additional staff

Financial Costs & Funding Streams

Costs

- Staffing (adding 5 FTEs)
- Program Costs
- Infrastructure
- Outreach/Educational Materials
- Waste-to-Energy facility retrofit in 2038
  - $50M-$100M estimated cost (Arlington share $30M-$60M)
- Grants/Subsidies

Est. Total County Costs of All Voluntary Initiatives:

- $11.3 – 17.4 million (over 20 years)

Est. Total GHG Emissions Reductions:

- 143,000 MTCO2e

Funding Streams

- Current Funding Streams
  - Household Solid Waste Rate (HSWR) – full cost recovery structure for single-family residential
  - Multi-Family and Commercial Recycling Program Fee – full cost recovery for administration of MF/C requirements
  - Plastic Bag Fee Tax
    - Statute limits use to environmental cleanup, environmental education, and reusable bags
- Potential Future Funding Streams
  - General fund
  - Environmental Investment Fee
  - GO Bonds / Industrial Development Bond
  - Others?

HSWR Impacts (For HSWR related costs)

	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
HSWR	$306.00	$319.03	$318.61	$307.89	$406.14	$434-$438	$440-$452	$453-$465	$474-$485	$495-$507
Inflation (4.5% est.)						~$18	~$19.50	~$20	~$21	~$21.50
Education Efforts/Glass Collection (33% HSWR)						~$5				
CHaRM facility (33% HSWR)								$1.55		
MRF Contract (10% increase)						$4.70				
Zero Tip Fee							(-$25.06)	(-$8.35)		
Collection Contract (5%-10% increase)							$12-$23			

*Only a portion of the costs for the CHaRM facility, enhanced educational efforts and expanded glass collection will be captured in the HSWR.

**Majority of the anticipated HSWR increases are contractual cost increases for current HSWR programs

***The most significant ZWP expenditures are associated with the MF/C sector - these programs will need to be generated from sources other than the HSWR.

Overarching Strategies For Success

1. Producer Responsibility
   - Front-End
   - Industrial design, production
2. Community/Consumer Responsibility
   - Back-End
   - Purchase, consumption, disposal
     - Use Less Stuff
     - Reuse More Stuff
     - Recycle Right
     - Compost Food Scraps & Organics
3. Policy & Political Leadership
   - Craft policies to align and incentivize Producer & Consumer responsibilities (EPR)
   - Support programs, policies, systems

Next Steps

- Public Town Halls
  - November 1 & 2, 6:30pm-7:30pm
  - November 2, 11am-12pm
- Public Comment Period
  - November 1-December 1
- Funding of short term initiatives
- Adoption of proposed plan

Questions?