

# RESILIENCY & Sustainability

**DECEMBER 3, 2024**

PRESENTERS:

DEPARTMENT OF PLANNING & GROWTH MANAGEMENT

DEPARTMENT OF PUBLIC WORKS



**GOALS &  
OBJECTIVES  
REPORTING**



## **Resiliency & Sustainability**

Protecting and securing our natural resources, environment, infrastructure, and assets for future generations.

# GOAL 1

## Resiliency & Sustainability

Assure and enhance water supply and infrastructure to support continued advancement.

### OBJECTIVES:

- A. **IMPLEMENT** the alternative water source resource plan in a phased approach in order to diversify the water sources for the public supply.
- B. **PLAN**, develop, and implement resilient water infrastructure.
- C. **IMPLEMENT** strategies to reduce sanitary sewer overflows in order to have zero NPDES violations for wastewater treatment plants.

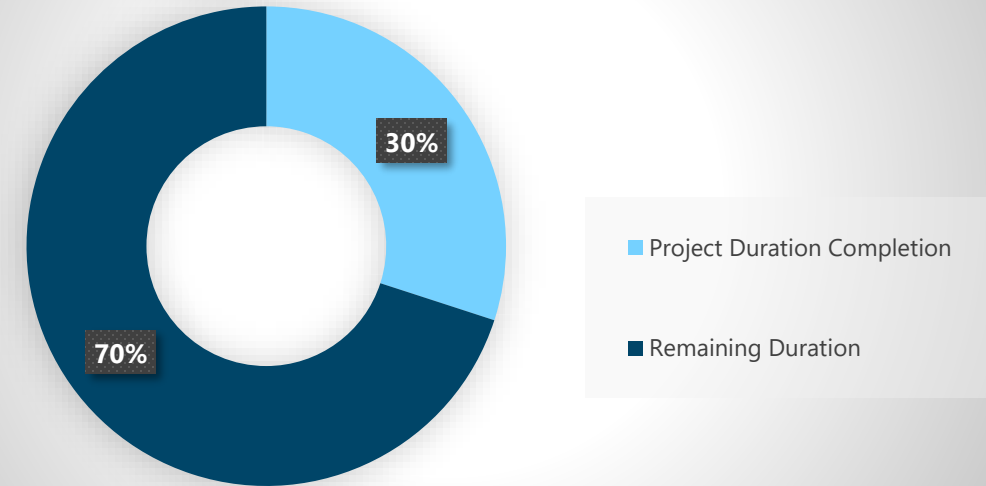
**GOAL 1  
OBJECTIVE A**

Implement the alternative water source resource plan in a phased approach in order to diversify the water sources for the public supply.

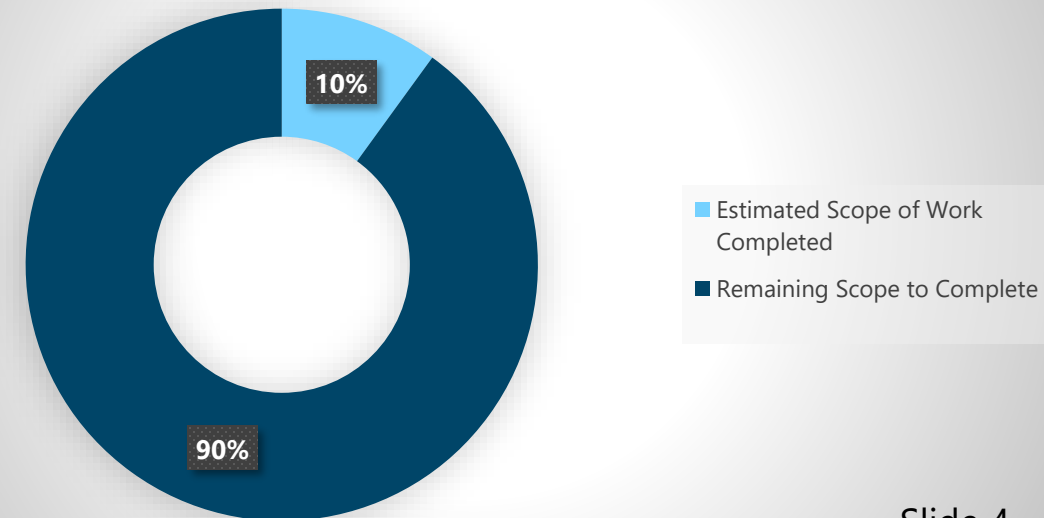
## WSSC Waldorf Interconnection Project

- New pipeline and treatment for up to 5 million gallons per day of WSSC water
- Provides short-term water supply needs for the Waldorf system
- Accommodates for projected growth
- The pipeline is currently under design
- Estimated Completion Date: June 2028

### WSSC Waldorf Interconnection Project



### WSSC Waldorf Interconnection Project



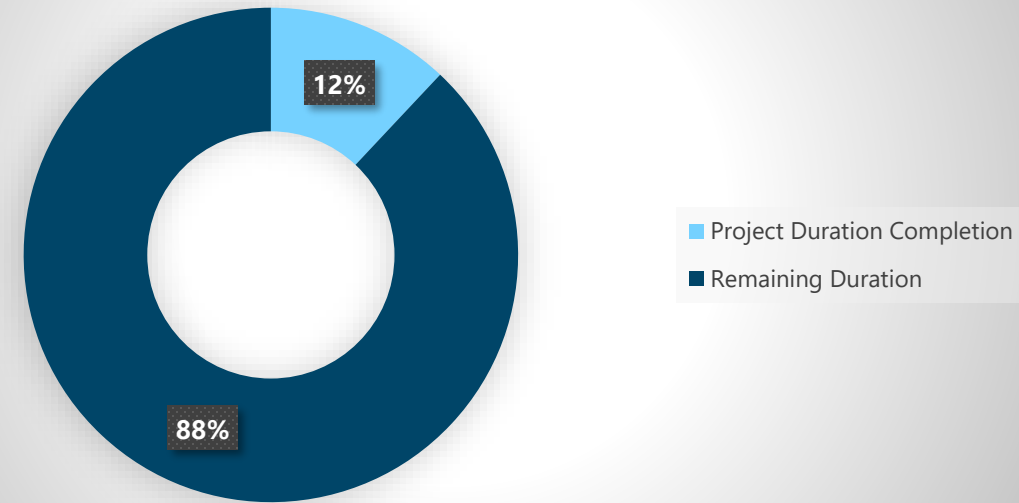
**GOAL 1  
OBJECTIVE B**

Plan, develop, and implement resilient water infrastructure.

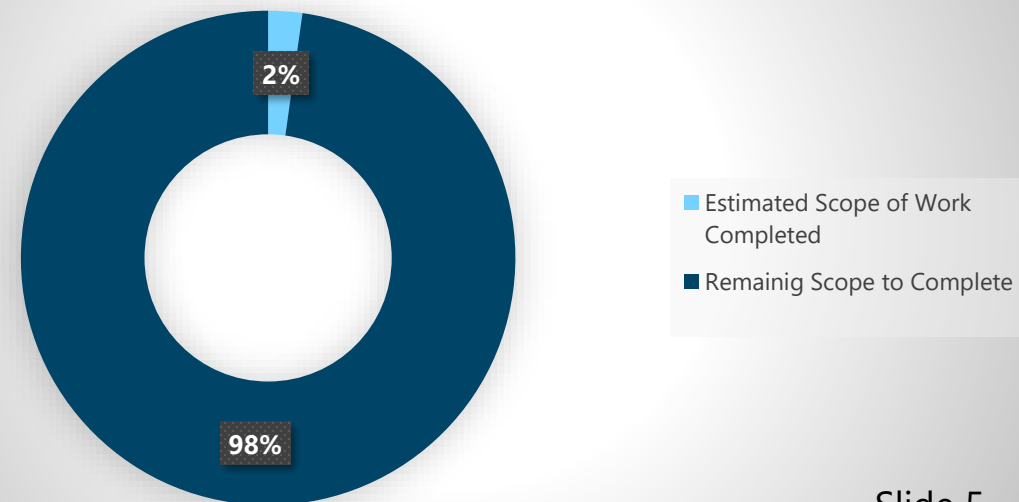
## Potomac River Water Supply Treatment

- Long-term water supply with surface water intake pipeline
  - 5-10 million gallons per day
- Independence for Waldorf and Bryans Road water systems
- Accommodates for future growth
- Currently in the planning, siting, and water quality analysis phase
- Estimated Completion Date: June 2040

### Potomac River Water Supply Treatment



### Potomac River Water Supply Treatment





# GOAL 1 OBJECTIVE C

Implement strategies to reduce sanitary sewer overflows in order to have zero NPDES violations for wastewater treatment plants.

- Completed lining/repairs of defective main line sewer and manholes in Pinefield.
- Lined 227 sanitary house connections (SHCs) in Pinefield. Seventy (70) remain to be lined in 3QTR FY25.
- Perform rehabilitation of defective sewer in Ryon Woods and Hampshire prior to the end of FY25. Tables 1 and 2.

Table 1: Sanitary Sewer Rehabilitation Summary

Rehabilitation	Pipe Diameter	Hampshire Quantity	Ryon Woods Quantity	Total Quantity
CIPP Point Repair (LF)	8	20	10	30
CIPP Lining (LF)	8	0	643	643
CIPP Lining (LF)	12	139	0	139
CIPP Lining (LF)	15	87	0	87
Open Cut Point Repair (LF)	8	20	28	48
Lateral Seal (EA)	N/A	6	0	6
Lateral Heaving Cleaning (EA)	N/A	1	0	1
Abandon Lateral (EA)	N/A	0	1	1
New CCTV & Recommendations (LF)	N/A	0	1,100	1,100

Table 2: Sanitary Sewer Manhole Rehabilitation Summary

Rehabilitation Description	Hampshire Quantity	Ryon Woods Quantity	Total Quantity
Replace Existing Manhole Frame & Cover with Standard Frame & Cover (EA)	1	1	2
Reset Manhole Frame & Cover (EA)	3	4	7
Replaced Existing Manhole Chimney (EA)	1	0	1
Install Internal Frame Seal (EA)	47	19	66
Replace Inside Drip Connection (EA)	2	1	3
Apply Interior Coating - Portland-Based Cementitious (VF)	95	250	345
Repair Pipe Seal (EA)	9	27	36
Raise Manhole to Grade (VF)	8	0	8
Locate and Inspect Manhole (EA)	18	33	51
Rebuild Channel / Bench (EA)	0	6	6
Grout and Seal Manhole Wall (EA)	0	16	16
Heaving Cleaning (EA)	0	6	6
Root Treatment (EA)	0	6	6
Abandon Pipe Connection (EA)	0	1	1

# GOAL 2

## Resiliency & Sustainability

Develop plans, policies, and strategies to bolster adaptation, resilience, and mitigation to the impacts of climate change.

## OBJECTIVES:

- A. **EVALUATE** aging storm water and wastewater infrastructure while accounting for increased volumes and intensities of storms, accidents, and weather events.
- B. **DESIGN AND CONSTRUCT** the community storm water mitigation priority projects established by the Resilience Authority.
- C. **INCREASE** the use of renewable energy for County buildings and vehicles.

## GOAL 2 OBJECTIVE A

Evaluate aging storm water and wastewater infrastructure while accounting for increased volumes and intensities of storms, accidents, and weather events.

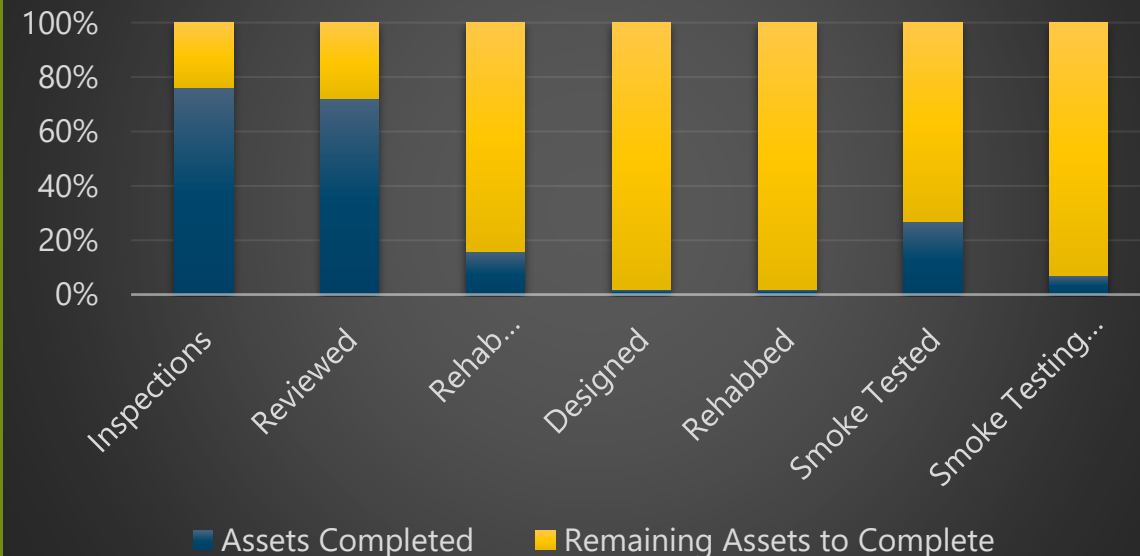
# Mattawoman Infiltration and Inflow (I/I)

- Aims to reduce amounts of groundwater infiltration and rainwater inflow into the Mattawoman sewer system.
- Includes inspection, reviewing, designing, and rehabilitating sewer manholes and pipes.
- Excessive I/I is the main cause of sanitary sewer overflows.
- This is an ongoing maintenance project.

## Mattawoman Infiltration and Inflow Sewer Manholes



## Mattawoman Infiltration and Inflow Pipe Segments





## GOAL 2 OBJECTIVE B

Design and construct the community storm water mitigation priority projects established by the Resilience Authority.

- 109 total projects have been identified
- 22 are in design phase
- 11 projects with permit approval pending easement obtainment
- Projects will be ongoing pending funding.



## GOAL 2 OBJECTIVE C

Increase the use of renewable energy for County buildings and vehicles.

- Pursuant to Climate Solutions Now Act of 2022, buildings 35,000 ft<sup>2</sup> or larger will be required to comply with Maryland Building Energy Performance Standards.
- Requirements to benchmark and incrementally reduce greenhouse gas emissions, with the goal of reaching net-zero emissions by 2040.
- Benchmarking of energy usage begins June 2025.
- 7 County Buildings fall in this category and 1 building is potentially exempt.
- County properties/facilities will continue to be assessed for renewable energy generation compatibility.
- Buildings and facilities will continually be assessed for potential energy efficiency retrofits to reduce energy consumption as well as greenhouse emissions.

### Building Related



## GOAL 2 OBJECTIVE C

Increase the use of renewable energy for County buildings and vehicles.

- County buildings will be assessed through the Technical Assistance Voucher we received from the Department of Energy's (DOE) Energy Efficiency and Conservation Block Grant (EECBG).
- This will determine where electrical capacity exists and where upgrades are required to retrofit buildings with Electric Vehicle (EV) charging stations.
- Currently, 8 EV charging stations are installed for County fleet.
- Under the Climate Action Plan for Government Operations a draft strategy has been **identified** for training staff on EV maintenance.

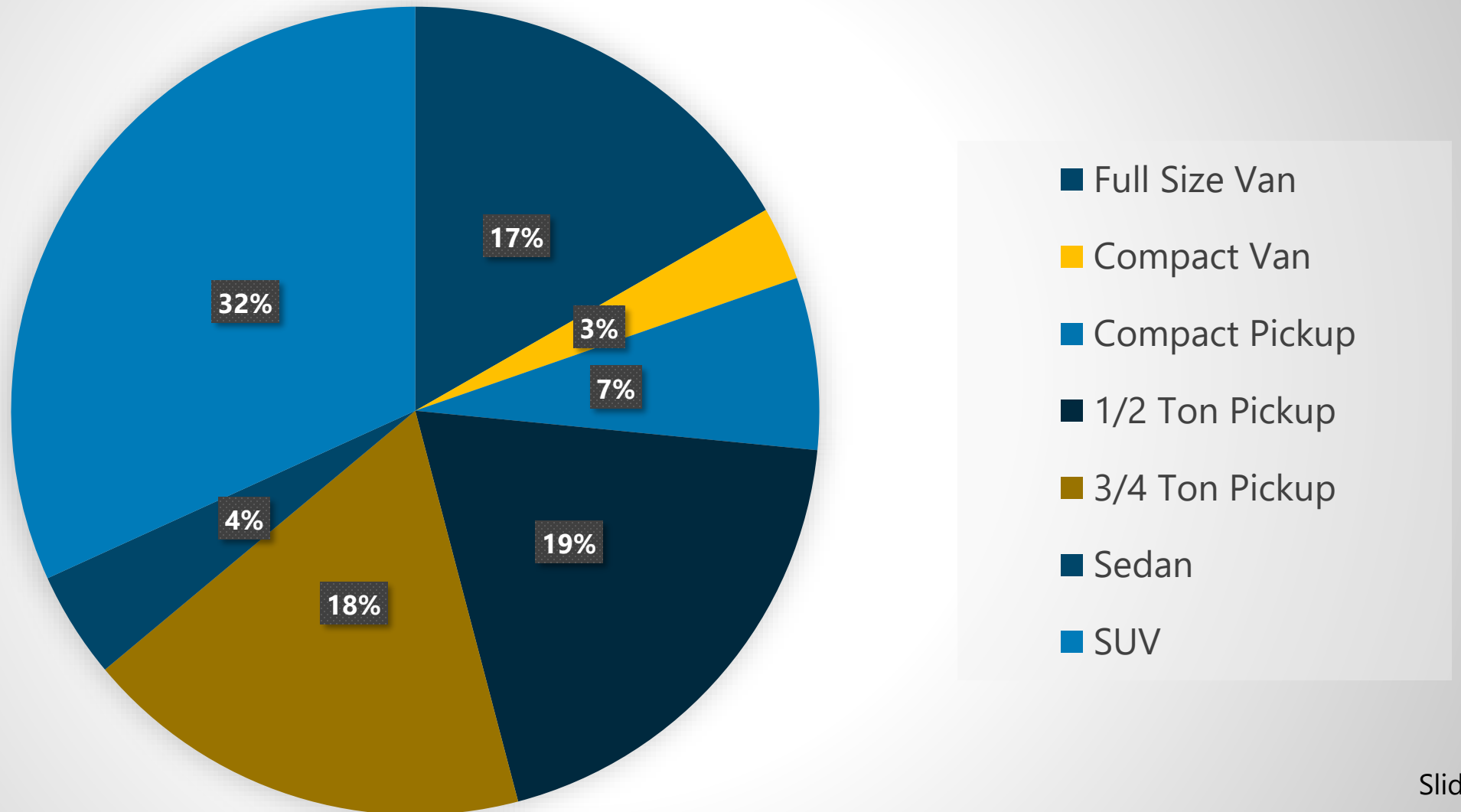
## Vehicle Related



**GOAL 2**  
**OBJECTIVE C**

Increase the use of renewable energy for County buildings and vehicles.

### Light Duty Vehicle Fleet by Vehicle Type

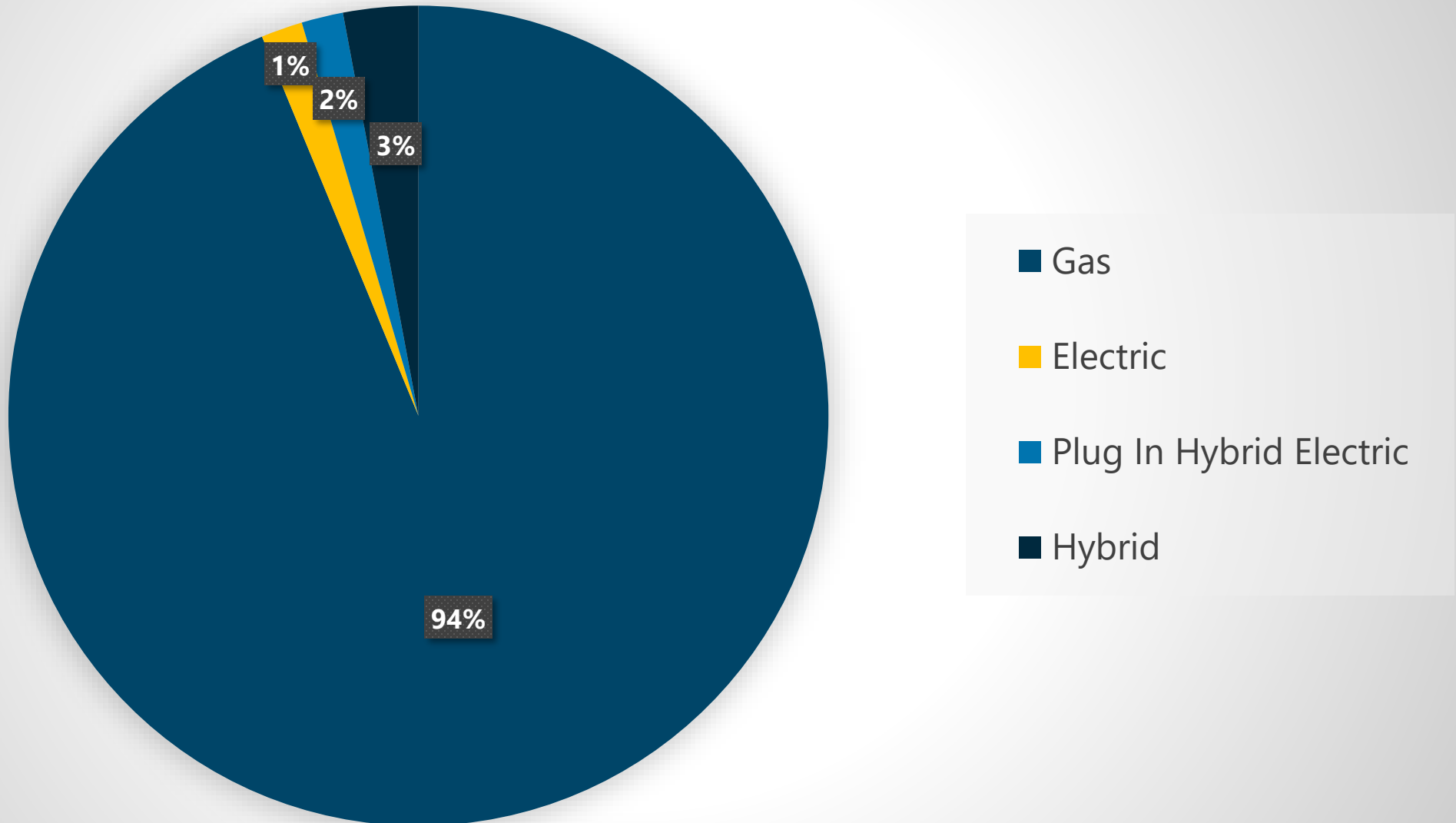




**GOAL 2**  
**OBJECTIVE C**

Increase the use of renewable energy for County buildings and vehicles.

### Light Duty Vehicle Fleet by Fuel Type





# GOAL 3

## Resiliency & Sustainability

Establish a sustainable, vibrant, urban and suburban environment while preserving rural landscapes and character.

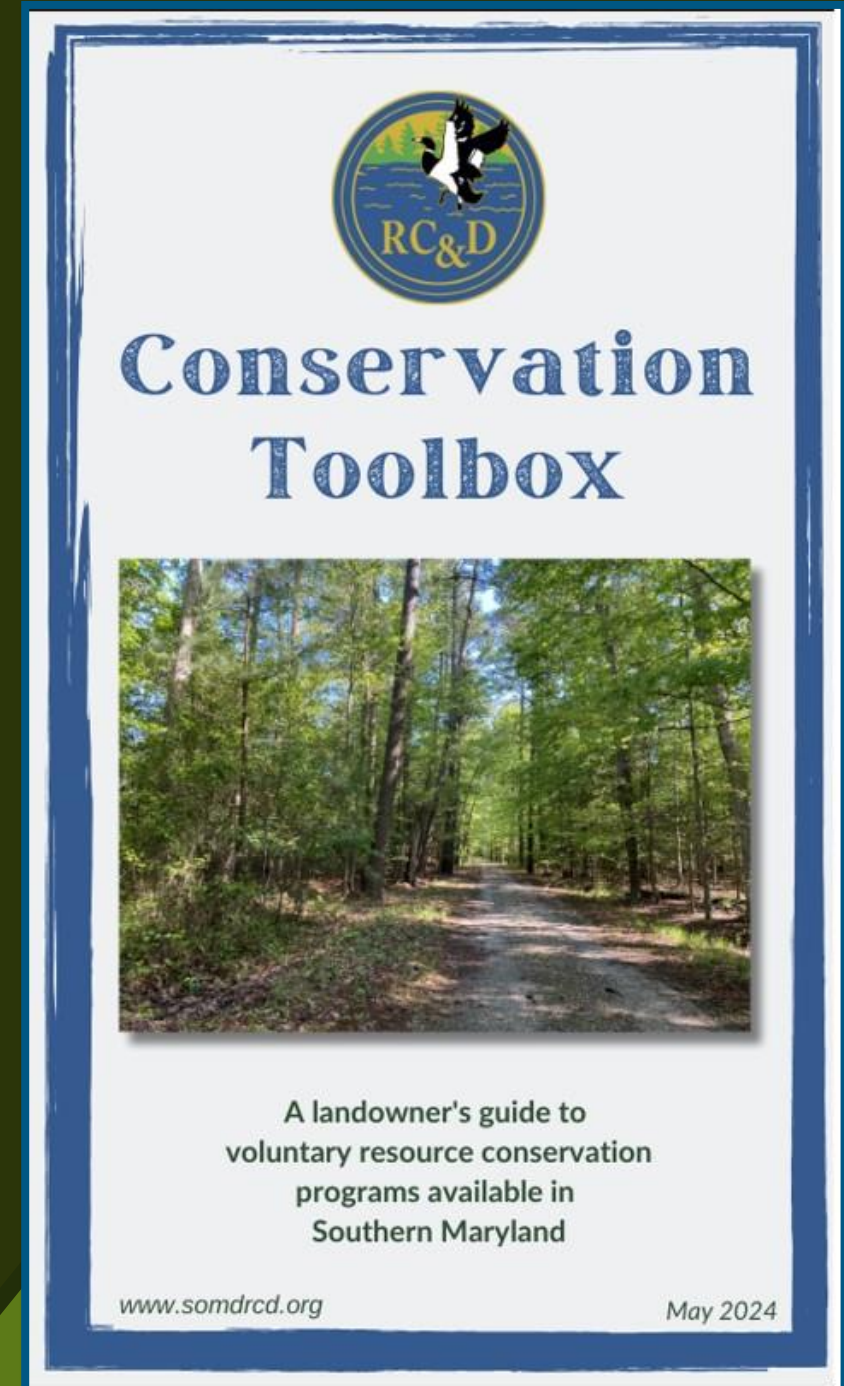
## OBJECTIVES:

- A. **INCREASE** outreach and education on land preservation programs.
- B. **IMPLEMENT** and promote sense of place, public amenities, and culture within the Waldorf Urban Redevelopment Corridor (WURC).
- C. **ADVANCE** the development of a multi-modal transportation network that supports a variety of mobility options, enhances pedestrian safety, and increases access to jobs and amenities.

**GOAL 3**  
**OBJECTIVE A**

INCREASE outreach and education on land preservation programs.

- April 2024- Released a "Your Charles County" segment to educate the public about Land Preservation programs
- Partnered with Southern Maryland RC&D and Chesapeake Bay Trust to create "Southern Maryland Conservation Toolbox" brochure. Highlights 25 federal, state, and local programs that offer resources for landowners
- Land Preservation Engage Page



**GOAL 3**  
**OBJECTIVE A**

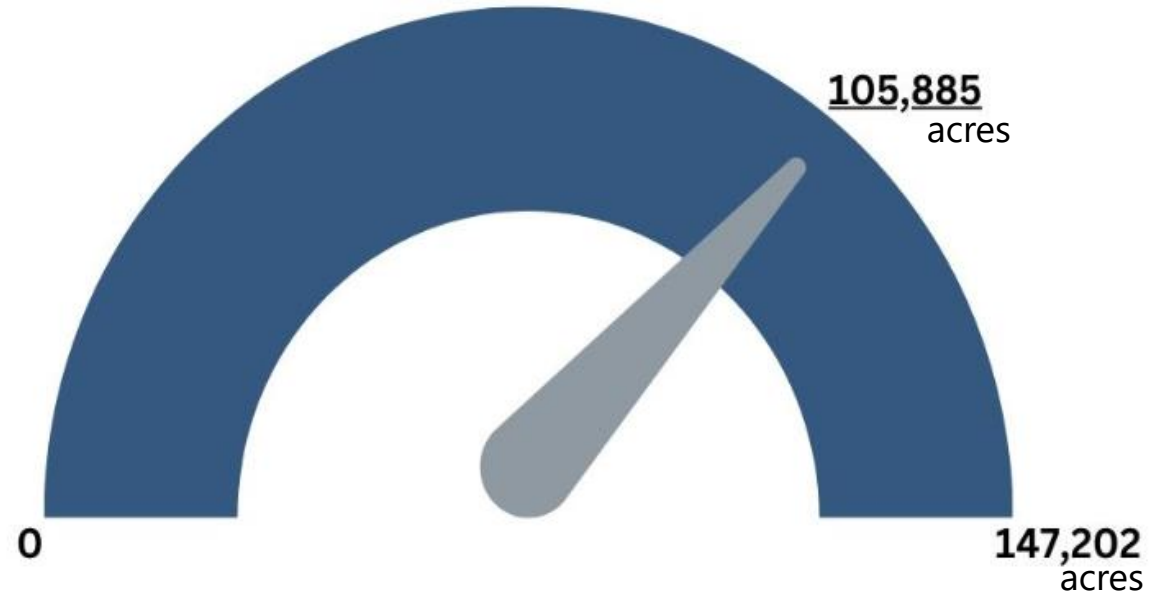
INCREASE outreach and education on land preservation programs.

Charles County has 294,404 total acres

Goal: 50% of the total land area to be protected = 147,202 acres

Current: 36% = 105,885 acres

**Charles County Total Protected Lands**



As of December 2023



### **GOAL 3 OBJECTIVE B**

Implement and promote sense of place, public amenities, and culture within the Waldorf Urban Redevelopment Corridor (WURC).

## **Projects & Anticipated Completion Dates**

- **Stormwater Pocket Park at Elite Gymnastics Building** (Resilience Authority)
  - January 2025 – Design Work
  - December 2025 – Construction Work
- **Bus shelter at Oak Manor**
  - June 2025
- **Streetscape Grant**
  - December 2025
- **Façade Improvement Program**
  - January 2025 – next grant notification



\* All completion dates are estimates and are subject to change.

**Southern Maryland Gas**

Slide 17

**GOAL 3**  
**OBJECTIVE B**

Implement and promote sense of place, public amenities, and culture within the Waldorf Urban Redevelopment Corridor (WURC).

**Elite  
Pocket  
Park**





**GOAL 3**  
**OBJECTIVE B**

Implement and promote sense of place, public amenities, and culture within the Waldorf Urban Redevelopment Corridor (WURC).



## Sunshine Park Landscaping

Project completed and funded by a donation.

## Sunshine Park Community Art Installation

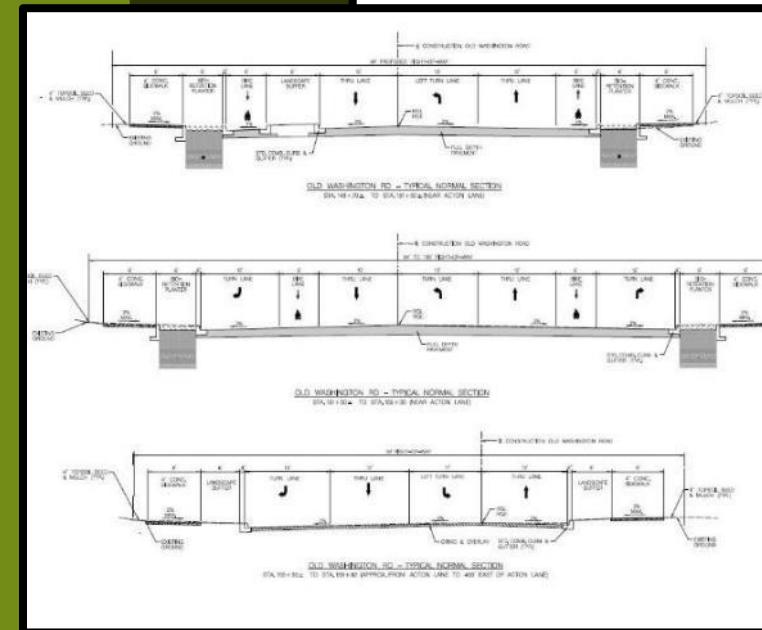
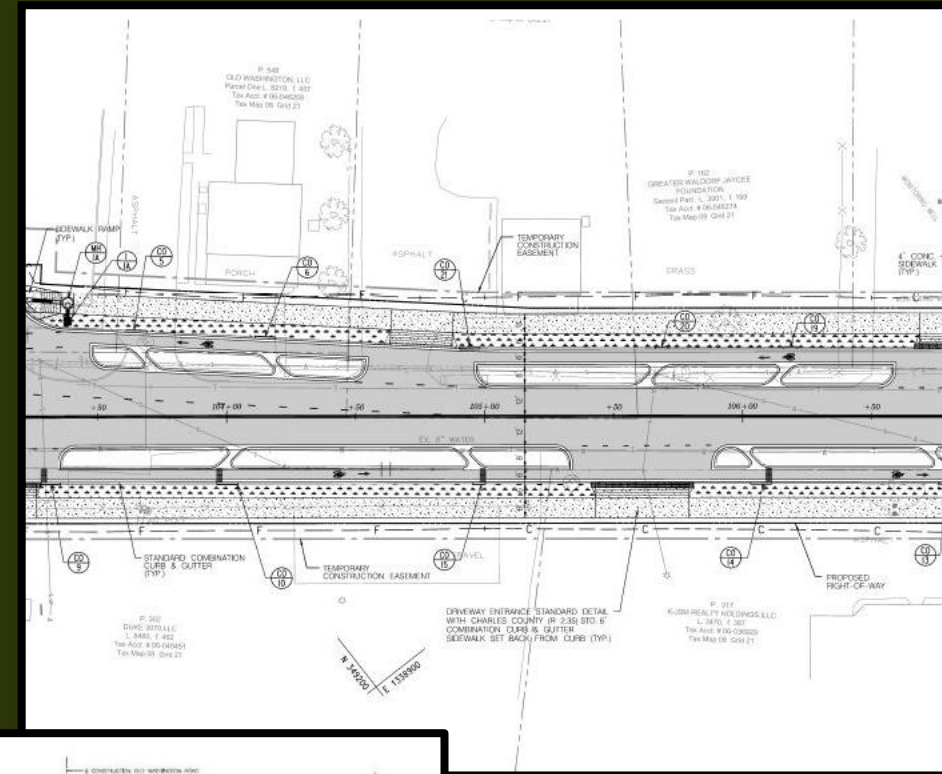
Pending funding

## GOAL 3 OBJECTIVE B

Implement and promote sense of place, public amenities, and culture within the Waldorf Urban Redevelopment Corridor(WURC).

# Old Washington Road Reconstruction Phase 1

- Phase 1: Leonardtown Rd to Central Avenue
- Concept Design Complete
- Stormwater Outfall Study Completed by PGM
- Next Steps: DPW to Hire Consultant to Complete Design





**GOAL 3**  
**OBJECTIVE C**

ADVANCE the development of a multi-modal transportation network that supports a variety of mobility options, enhances pedestrian safety, and increases access to jobs and amenities.

- Revisions to the Neighborhood Traffic Calming Program are underway
- US301 Pedestrian Crossing at Smallwood Drive Study – January 2025
- Fall 2024- \$250,000 Indian Head Rail Trail Study Grant awarded
- VanGo bus stop improvements (on going) and Annual Transportation Plan
- Sidewalk Program



Vivian Adams Sidewalk Repair



Smallwood Drive West Sidewalk



St. Patrick's Drive Sidewalk

# GOAL 4

## Resiliency & Sustainability

Beautify Charles County through efforts to reduce pollution, expand recycling, and implement community engagement initiatives.

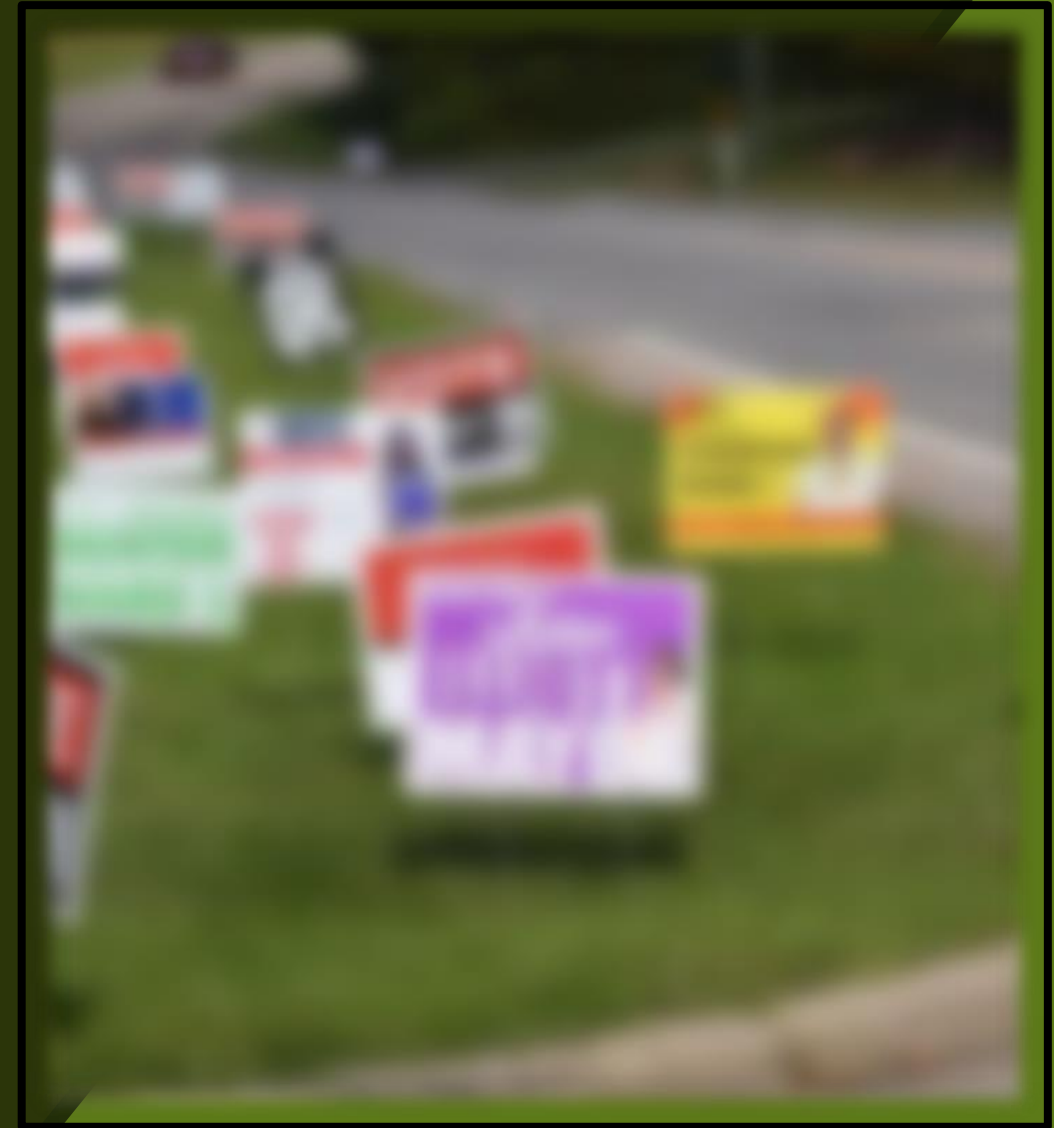
## OBJECTIVES:

- A. **EXPAND** the "Keep Charles County Beautiful" initiative through partnerships with the Maryland State Highway Administration and the Charles County Public Schools.
- B. **IMPROVE** countywide waste diversion rates through programs such as "iRecycle Smart," "Bikes for the World," mattress recycling, and food scrap drop off.

**GOAL 4**  
**OBJECTIVE A**

Expand the "Keep Charles County Beautiful" initiative through partnerships with the Maryland State Highway Administration and the Charles County Public Schools.

- We all have a vested interest in the beauty and environmental health of Charles County.
- DPW & SHA partnership removed 641 unauthorized signs from County roadways in one weekend.
- School presentations discussing the importance of keeping our community clean left lasting impressions with 1,000s of children.

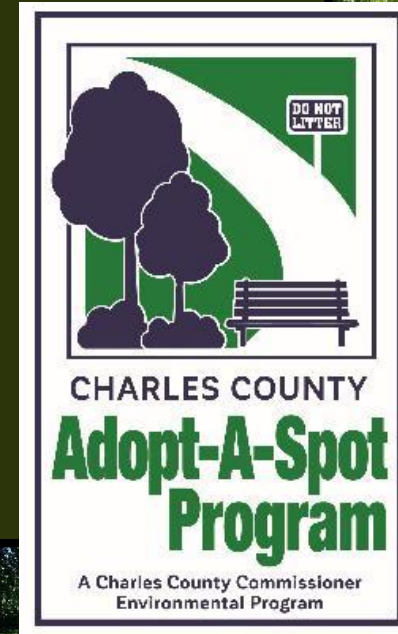




## GOAL 4 OBJECTIVE A

Expand the "Keep Charles County Beautiful" initiative through partnerships with the Maryland State Highway Administration and the Charles County Public Schools.

- Adopt-A-Spot is an opportunity for youth to participate in cleanup activities.
- Groups clean their adopted spot 3 times within a calendar year.
- Number of Adopt-a-Spot areas has increased from 3 to 8 in just one year.





**GOAL 4**  
**OBJECTIVE B**

Improve Countywide waste diversion rates through programs such as "iRecycle Smart," "Bikes for the World," mattress recycling, and food scrap drop off.

- Each school produces an estimated 2 tons of paper each year.
- DPW provided 1,200 recycling bins to aid in capturing school recyclables.
- Some contamination is still an issue, but DPW continues to work with BoE to educate and improve school recycling.



**GOAL 4**  
**OBJECTIVE B**

Improve Countywide waste diversion rates through programs such as "iRecycle Smart," "Bikes for the World," mattress recycling, and food scrap drop off.

- Mattresses and box springs consume utilize limited landfill space, create flammable air pockets, and damage equipment used at landfills.
- Maryland based processor collects and breaks down the mattresses to recyclable components.
- 3,003 mattresses recycled through November 1.





## GOAL 4 OBJECTIVE B

Improve Countywide waste diversion rates through programs such as "iRecycle Smart," "Bikes for the World," mattress recycling, and food scrap drop off.

- DPW partners with a nonprofit, Bikes for the World, who repairs and salvages parts from the bikes collected. After being refurbished, the bikes are redistributed to people in need locally and globally.
- Charles County is one of 33 collection sites in the Metro DC area.
- Since August 2023, 932 bicycles have been collected in the County.

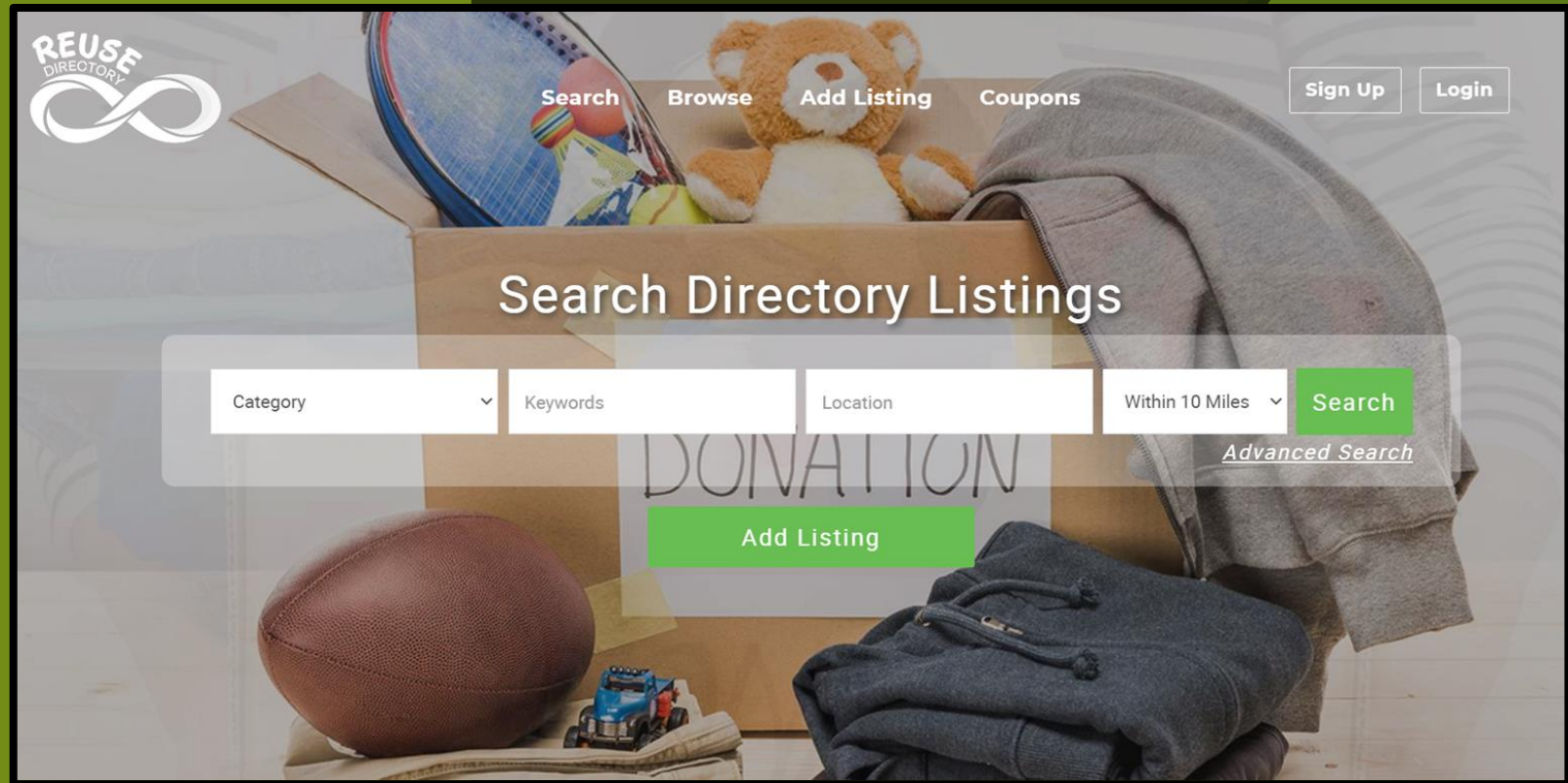


**GOAL 4**  
**OBJECTIVE B**

Improve Countywide waste diversion rates through programs such as "iRecycle Smart," "Bikes for the World," mattress recycling, and food scrap drop off.



- DPW launched a new digital Reuse Directory.
- The online format is designed to be easier for residents to find organizations or businesses that accept donations of their unwanted items.
- Outreach to local nonprofits and agencies is ongoing to increase the number of acceptance locations.



<https://reusedirectory.charlescountymd.gov/>



# Questions?





# Charles County Government

200 Baltimore Street, La Plata, MD  
MD Relay Service: 7-1-1

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