



# Environmental Stewardship in Carroll County

2021  
Quick Reference

August 12, 2021

## Commissioners' Environmental Principles

1. Maintain and improve environmental quality and encourage economic prosperity while preserving the county's rural character.
2. Promote land use, planning, and development concepts and practices that support citizens' health, safety, well-being, individual rights and the economic viability of Carroll County.
3. Maintain safe and adequate drinking water and other water supplies including efforts to protect and restore the Chesapeake Bay.
4. Strive to protect our natural resources for future generations.

## Solar Energy

### An Overview of Renewable Energy Choice Options for Consumers

Renewable energy is energy that is derived from natural resources that are replenished at a faster rate than they are consumed. Renewable energy sources include solar, wind, hydro, geothermal, and biomass. Renewable energy is a clean, safe, and sustainable source of energy that can help reduce greenhouse gas emissions and combat climate change.



### About This Document

This document provides an overview of the various renewable energy options available to consumers in Carroll County. It is intended to be a helpful resource for consumers who are considering renewable energy options for their homes or businesses.

### A Guide to Residential Solar Installation in Carroll County

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Dear Carroll County Residents,

The Environmental Advisory Council (EAC) created this document to help start you on your way to considering installing solar power on your residential property. Solar panels are appearing in neighborhoods all over the county, and technology is improving every year. Now, more options are available than ever.

### A Guide to Becoming a Community Solar Subscriber in Carroll County

Subscribing to a community solar project is an exciting new opportunity to go green and save on energy bills without needing to install solar equipment at your home.

Learn more about it on the page below.

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### What is Community Solar?

Community solar allows you to share in the benefits of solar energy without having to install solar panels on your own property. You can subscribe to a community solar project and receive a credit on your utility bill for the amount of electricity generated by the project.

### Carroll County, Maryland Community Solar Zoning Text Amendment

**Overview of Carroll County Community Solar (CSEGS) Requirements**

**Definition:** Definition given in Maryland Annotated Code, Public Utilities Article, § 5-206.2 as of July 1, 2020.

**Location:** Projects located on remaining portions of five acres or greater in "A" Agricultural zoning district.

**Size:** 25-acre minimum for solar arrays.

**Only existing remaining portions with prior recorded as of July 1, 2020, are eligible.**

**Environment:** Projects must meet environmental standards and are subject to review and approval by the County's Environmental Advisory Council.

**Site Plan:** Requires Planning & Zoning Commission review and approval.

**Environmental Resources:**

- No clearing of forested areas.
- No erosion control or riparian zone buffer, floodplain, or wetland.

**Ag Co-Location:** Projects must be located in designated agricultural co-location areas.

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In May 2021, the Commissioners amended the County Zoning Code to allow community solar energy generating systems (CSEGSs) on remaining portions in the Agricultural Zone. The Code requires a permanent easement on the rest of the property, co-location with agricultural uses or pollinator friendly plantings, and landscaped screening. An outreach booklet provides information on the amendment.

The County installed solar arrays on 3 different County properties – Carroll Community College, Hoods Mill Landfill, and Hampstead WWTP – to conserve energy and realize cost savings. These facilities came online in 2018.

In 2018, Carroll County received a Silver Designation by the national SolSmart program.



Lot Size	Solar Panel Surface Area Maximum Square Footage for Ground-Mounted Systems in Residential Zones
<= ½ acre	120 square feet
>½ acre	240 square feet
>1 acre to 3 acres	480 square feet
>3 acres	Aggregate square footage of the roof, or roofs of structures, situated on the subject property

### Permits Issued in Carroll County for Solar Energy Conversion Facilities FY 2015 – FY 2020

Fiscal Year	# of Permits
2015	383
2016	606
2017	463
2018	312
2019	194
2020	157



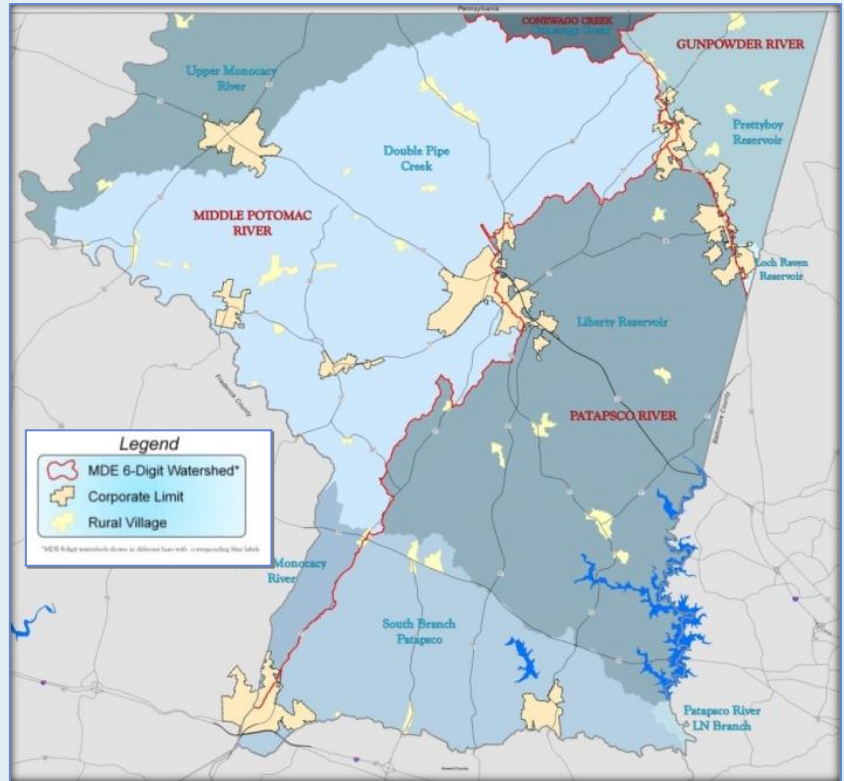


# Watersheds

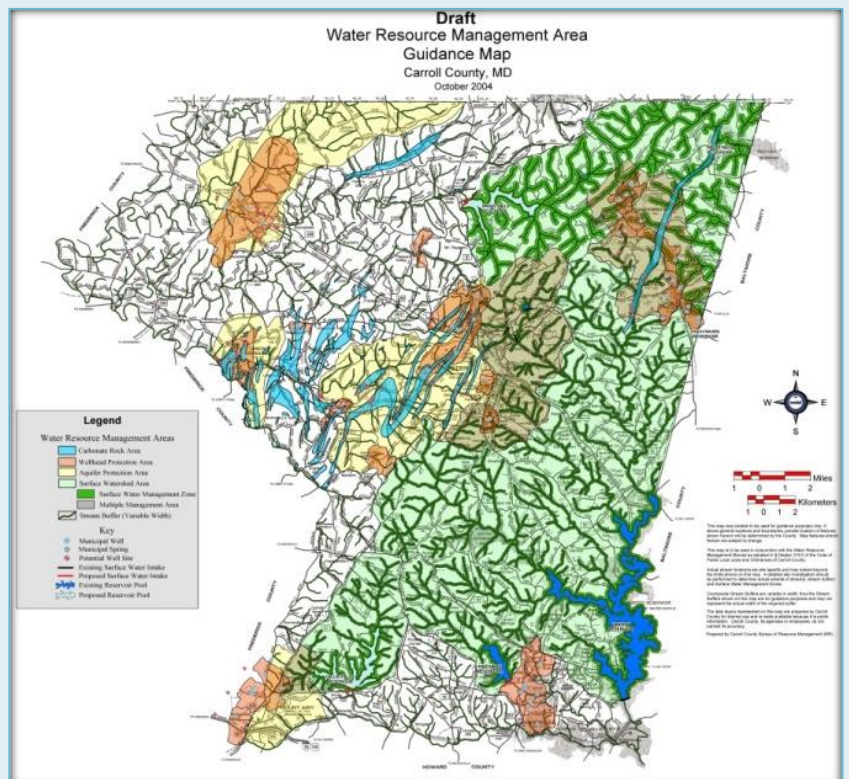
- Carroll protected 102 miles of buffered streams under easements.
- As of December 2020, water recharge areas were protected on 3,599 acres incorporated into 27 easements.
- Little Pipe Creek and Upper Patapsco Rural Legacy Areas encompass 58,575 and 40,170 ACs of land, respectively.
- For every 1,000 residents, Carroll provides 48 AC of parks & recreation lands + 36 AC of natural resource lands

## Carroll County drains to 9 different watersheds:

- Upper Monocacy River
- Conewago Creek
- Prettyboy Reservoir
- Double Pipe Creek
- Liberty Reservoir
- Loch Raven Reservoir
- Lower Monocacy River
- South Branch Patapsco River
- Lower North Branch Patapsco River



Easement Type	Acres Preserved	# of Easements
Water Resource Protection	2,023	410
Floodplain Protection	746	225
Forest Conservation	4,428	1,619
<i>Totals</i>	<b>7,197</b>	<b>2,254</b>



## Carroll County Forest Conservation Acres Banked

Element	Acres
Total bank acres	595
Other acreage	
On-site retention	3,386
On-site planting	1,493
Off-site planting	316

# Urban Stormwater Mitigation

Citizens throughout the county can call the non-emergency Stormwater Pollution Prevention Hotline to report suspected illicit discharges, illegal dumping, and spills.

**410-386-2210**

Under the MOA, the Carroll County Commissioners pay 80% of the municipalities' capital costs to meet their restoration requirement.

As of December 29, 2019, the end of the County's and municipalities' fourth generation permit, 2,317.5 impervious acres had been restored.

Annual operating expenditures for the stormwater program more than doubled since 2008, from ~\$334,000/yr to >\$2.7M/yr.

From July 2005 to June 2021, the County invested almost \$36M in capital outlays, not including >\$17.7M in grants from outside sources.

For the 6-year period 2022 to 2027, Carroll will invest about \$16.5M in operating and >\$23.5M in capital expenses, assuming no additional grants are received. This equates to an annual expenditure of >\$6.6M over that period.

Since spring 2013, 208.8 acres of trees have been planted in Carroll County on both private landowner properties as well as municipality-owned land. Plantings by watershed include:

- 55.64 acres in Double Pipe Creek
- 52.74 acres in Liberty
- 5.77 acres in Loch Raven
- 12.22 acres in Lower Monocacy
- 11.17 acres in Prettyboy
- 43.06 acres in South Branch
- 28.20 acres in Upper Monocacy



Impervious Area	Acres	Percent
Untreated County	8,070	2.8% of County area
Restoration Requirement	1,614	20% of Total Urban Impervious
Progress to Date for This Permit Term	1,629	~101%

FY 2022-2027	Capital	Operating
Total Budget	\$23,544,861	\$16,500,000
Average Annual Budget	\$3,890,810	\$2,770,000

Capital Expenditures: Actual & Budgeted\*  
2008 - 2027



Actual Operating Costs  
2008-2021



## Protecting Carroll County Waters

<https://www.carrollcountymd.gov/government/directory/land-resource-management/protecting-carroll-county-waters-npdes/>



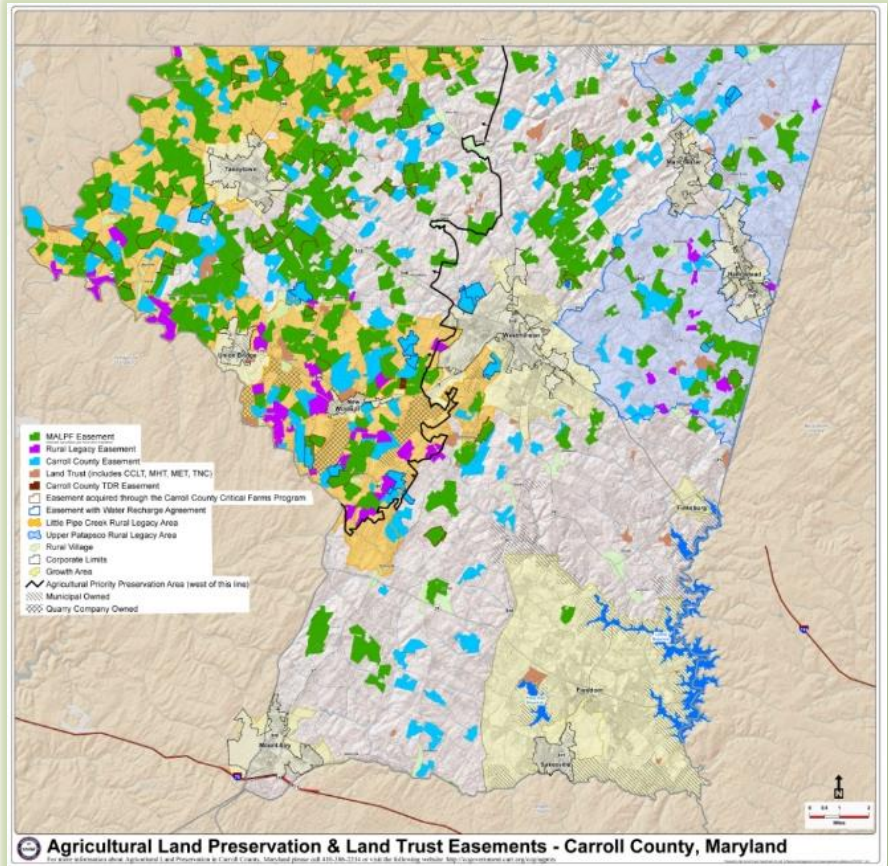
# Agriculture



**Celebrating 75,000 Acres  
Preserved & Growing**  
**CelebratingAgPres.**  
**CarrollCountyMD.gov**

**Carroll County achieved a major milestone  
in 2020 by reaching 75,000 acres preserved  
in October 2020, three-quarters of the way  
toward the County's 100,000-acre goal.**

- 🚗 Since FY 1980, Carroll spent over \$244M in State & County funds toward achieving the goal of 100,000 ACs of farmland preserved.
- 🚗 Carroll ranks among the top county programs in the U.S. with the number of acres preserved through conservation easements.
- 🚗 From FY 1980 through FY 2021, 76,595 acres were permanently preserved through easement programs, which is roughly 1/4 of the total county land area.



- 🚗 In FY 2019 and FY 2020, the Cover Crop Program in Carroll County saw another successful enrollment of 44,657 acres.

Program	Acres Preserved
MALPF	45,146
Carroll County	23,706
Rural Legacy	5,181
Land Trusts & Conservancies	2,562
<b>Total</b>	<b>76,595</b>

## Recycling



- ♻️ Carroll achieved a 38.33% recycling/waste diversion rate, including a 5% source reduction credit in 2018, over the State-mandated 35% rate.

**For more information...**  
Contact Brenda Dinne,  
EAC Secretary/Staff Liaison:  
[bdinne@CarrollCountyMD.gov](mailto:bdinne@CarrollCountyMD.gov)  
or 410-386-2140 or visit  
[CarrollCountyMD.gov/EAC](http://CarrollCountyMD.gov/EAC).

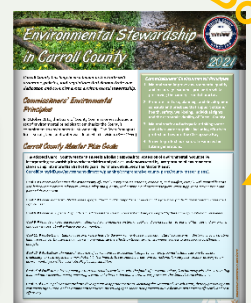
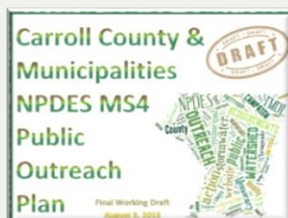


## Septics



Conventional Septic System Action	# of Septics
Replaced with BAT: 2009-2020	238
Converted to Public Sewer Service: 2006-2020	26

## Public Outreach



**Full Booklet**