



M-NCPPC, Montgomery County

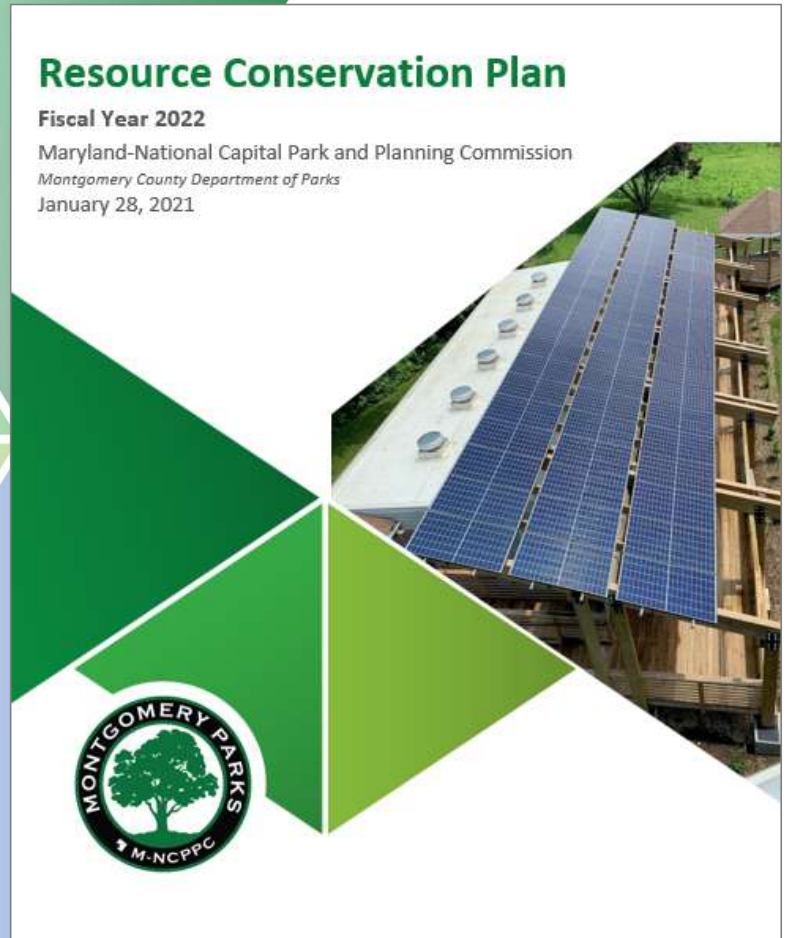
FY22 Resource Conservation Plan (RCP)

2020 Business Recycling & Waste Reduction Report

***Planning Board Item 3
January 28, 2021***

The Resource Conservation Plan

- Summarizes the programs and projects implemented to improve the efficient use of water resources and energy-related utilities on Commission property.
- Report is presented the M-NCPPC Planning Board, the County Executive Committee, and the County Council Transportation and Environment Committee.



Achieving Sustainability and Tackling the Climate Crisis

Resource Conservation Plan

Fiscal Year 2022

Maryland-National Capital Park and Planning Commission

Montgomery County Department of Parks

January 28, 2021



Maryland National Capital Park and Planning Commission



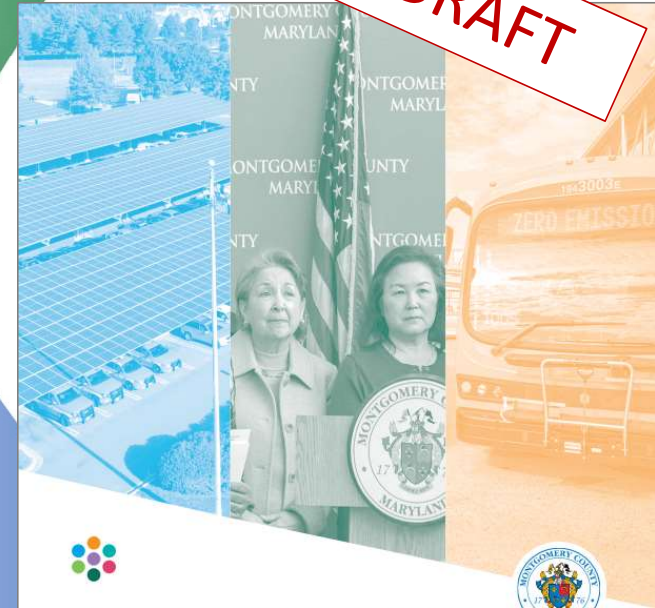
Sustainability Plan

FY20 - FY21

Montgomery County Department of Parks
Montgomery County Department of Planning



DRAFT



MONTGOMERY COUNTY CLIMATE ACTION PLAN

Building a Healthy, Equitable, Resilient Community

PUBLIC DRAFT



FY20 Utility Expenditures

	FY20 Cost	FY20 Budget	Difference
Parks Department	\$1,857,023	\$2,249,533	\$392,510
Planning Department	\$146,595	\$211,590	\$64,995
Enterprise	\$781,438	\$934,000	\$152,562
Property Management	\$35,636	\$20,864	(\$14,772)
Bi-County	\$64,120	\$92,072	\$27,952
TOTAL:	\$2,884,811	\$3,508,059	\$623,248

Data obtained from M-NCPPC General Ledger

FY20 Projects at a Glance

Project Type/Category	Completed
Energy Efficient Appliance/Unit	13
Energy Efficiency via Automation	4
EV Charging Station	1
LED Light Fixtures	11
Solar Panels	2
Maintenance Efficiency/Infrastructure Improvement	6
Water Efficiency/Advanced Water Management	11



Maydale Nature Classroom

- 17.4 kW roof-mounted solar pv system designed to for net-zero building operations.
- The 60-panel system was installed by in-house electricians.
- Calculated return on investment (ROI): 6.4 years



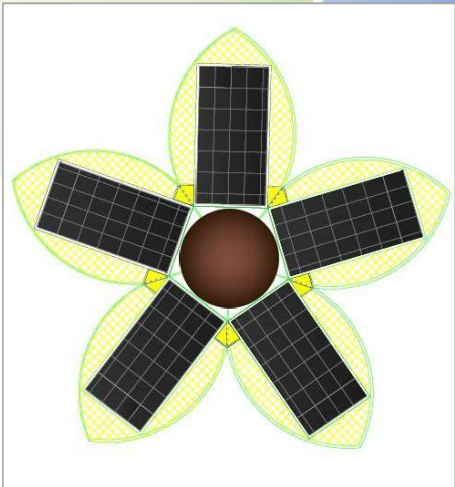
FY21 Utilities: Budget, Cost-to-Date & Projections

	FY21 Budget	Cost as of 1/4/2021	FY21 Projection	Difference
Parks Department	\$2,284,322	\$763,021	\$1,995,254	\$289,068
Planning Department	\$52,897	\$51,341	\$56,924	(\$4,027)
Enterprise	\$965,900	\$379,625	\$825,886	\$140,014
Property Management	\$35,700	\$21,103	\$39,032	(\$3,332)
Bi-County	\$82,464	\$28,272	\$73,100	\$9,364
Wheaton HQ	\$764,659	\$108,162	\$660,000	\$104,659
TOTAL:	\$4,185,942	\$1,351,523	\$3,650,195	\$535,746

Data obtained from M-NCPPC General Ledger

FY21 Projects at a Glance

Project Type/Category	Completed	In Process	Planned
Energy Efficient Appliance/Unit	1	1	1
Energy Efficiency via Automation	1		
EV Charging Station	1		
LED Light Fixtures	1	7	3
Solar Panels	2	1	
Maintenance Efficiency/Infrastructure Improvement	2	2	1
Water Efficiency/Advanced Water Management	3	8	



Wheaton Headquarters

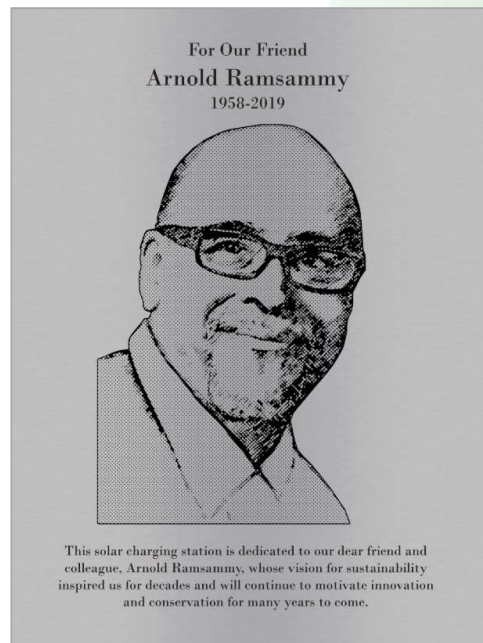
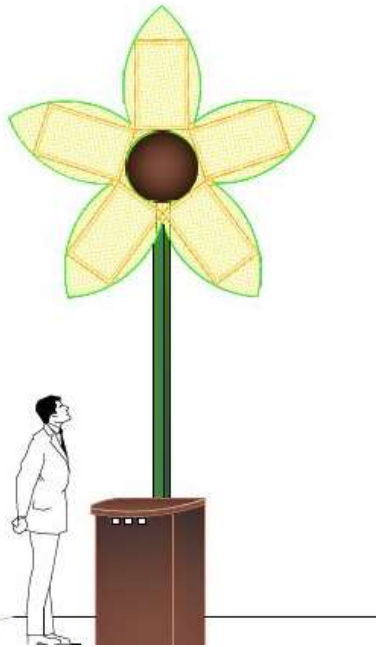


***The first government-owned
office building to be certified
LEED Platinum in Maryland***

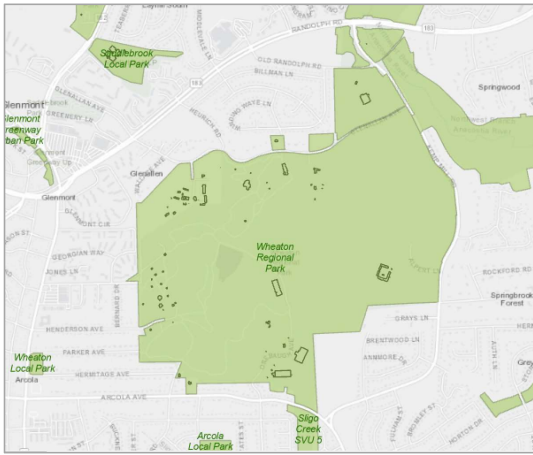
Centerway Local Park: Solar Flower

Installed adjacent to picnic shelter and playground.
Able to charge cell phones and other mobile devices.

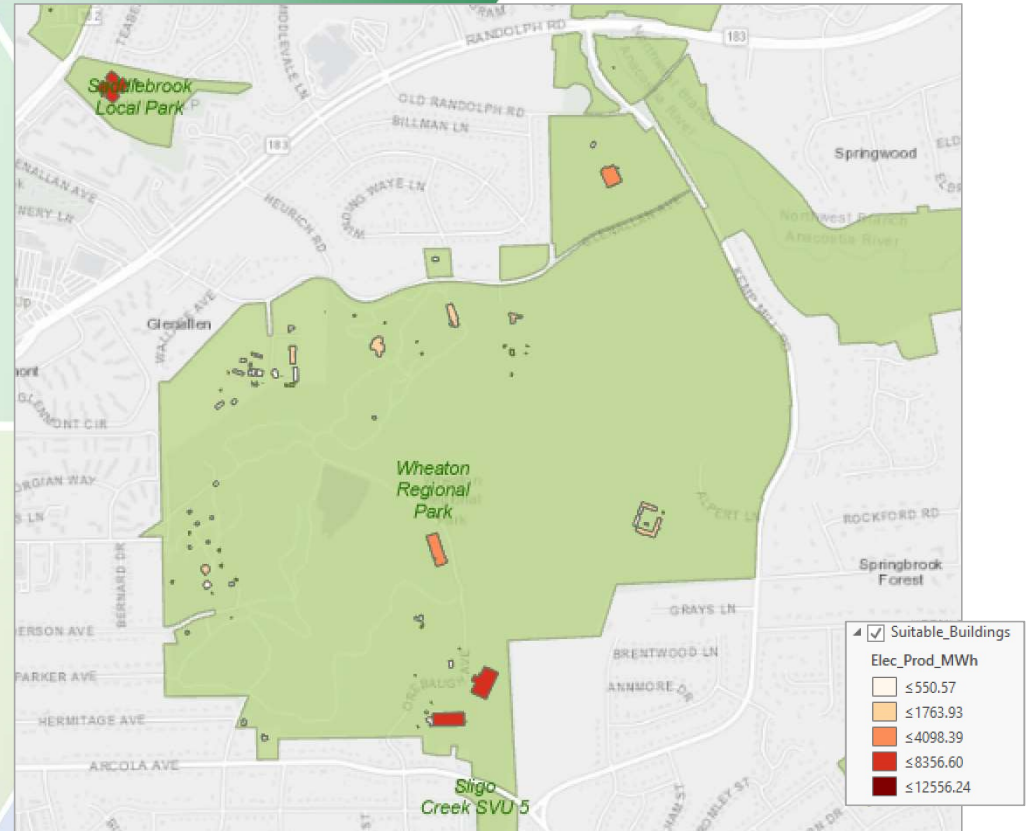
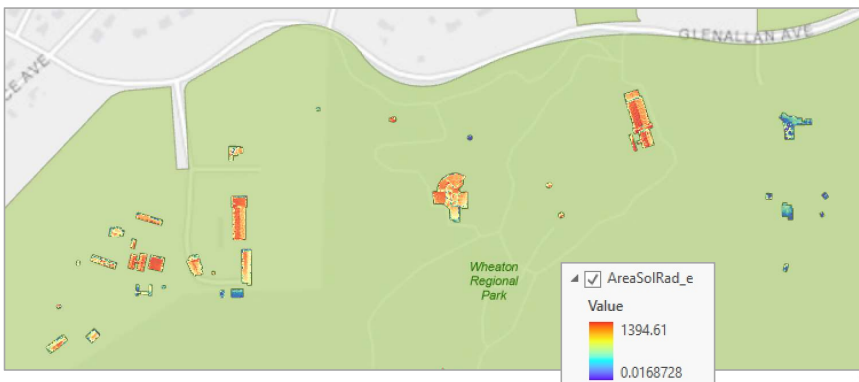
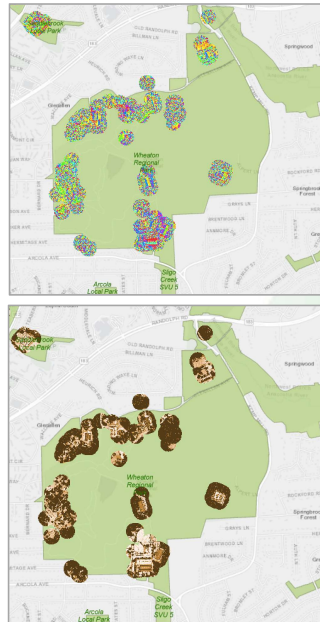
Dedicated to the memory of dear friend, colleague,
and man behind the solar flower project, Arnold
Ramsammy.



Assessing Rooftop Solar Potential Utilizing ArcGIS Pro Analysis Tools



Utilize building footprints, LiDAR data, rooftop orientation, and roof slope to establish solar potential



Identify suitable rooftops through analysis by specific criteria and apply calculations to determine annual solar radiation/power production per suitable building.

FY22 Planned Projects and Goals

Project Type/Category	Planned
Energy Efficient Appliance/Unit	4
LED Light Fixtures	3
Solar Panels	3
Maintenance Efficiency/Infrastructure Improvement	2
Water Efficiency/Advanced Water Management	6



Energy Conservation/Efficiency:

- Support initiatives internally and county-wide to reduce greenhouse gas emissions.
- Improve building envelope assessments at start of projects.
- Continue making progress retrofitting interior and exterior lighting to LED technology.
- Continue upgrading to high-efficiency appliances and equipment.
- Begin prioritizing projects to eliminate on-site fossil fuel burning (natural gas, propane, heating oil) with the ultimate goal of electrifying these functions with renewable energy resources.


Renewable Energy:

- Continue to identify and implement small-scale solar PV projects and seek opportunities for larger-scale installs.


Water Conservation/Efficiency:

- Continue upgrading to low-flow and advanced water management technology.
- Implement appropriate opportunities for stormwater and/or graywater harvesting reuse projects.

FY22 Proposed Utility Budget

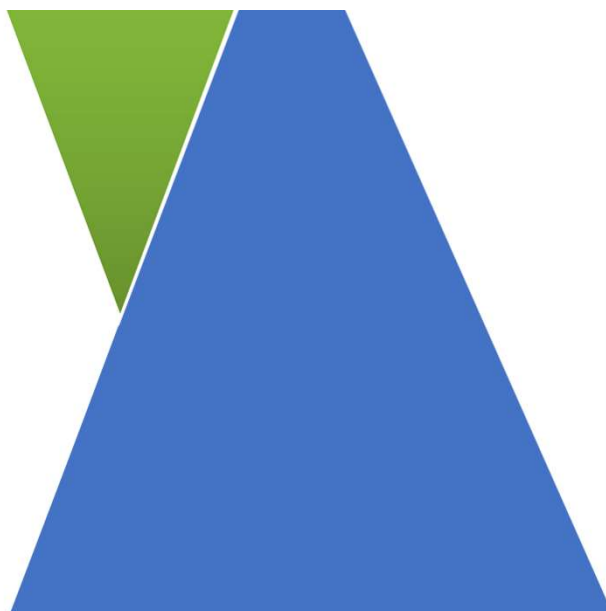


Proposed Budget FY22	
Parks Department	\$2,263,077
Planning Department	N/A
Enterprise	\$910,186
Property Management	\$35,700
Bi-County	\$84,776
Wheaton HQ	\$764,659
TOTAL:	\$4,058,398





M-NCPPC Annual Recycling & Solid Waste Management Report to Montgomery County Recycling & Resource Management Division



M-NCPPC Recycling and Solid Waste Management Program

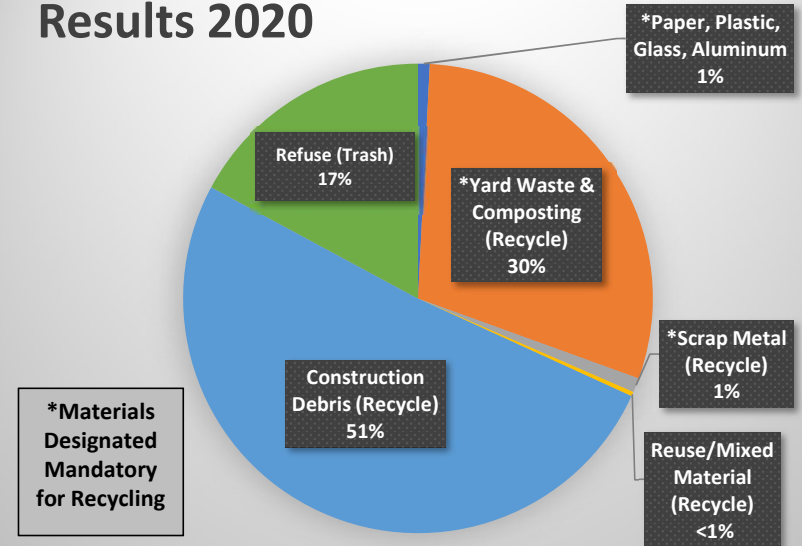
- Business recycling became mandatory county-wide in 1993.
- Changes to requirements have been made over time: adding additional mandatory recycled materials, further clarification of roles and responsibilities of the businesses, and added collector/ hauler requirements – including reporting.
- M-NCPPC disposes of trash and recycling through a mix of self-hauling and use of vendors.
- Montgomery County established goal to reduce waste and recycle 70% by 2020



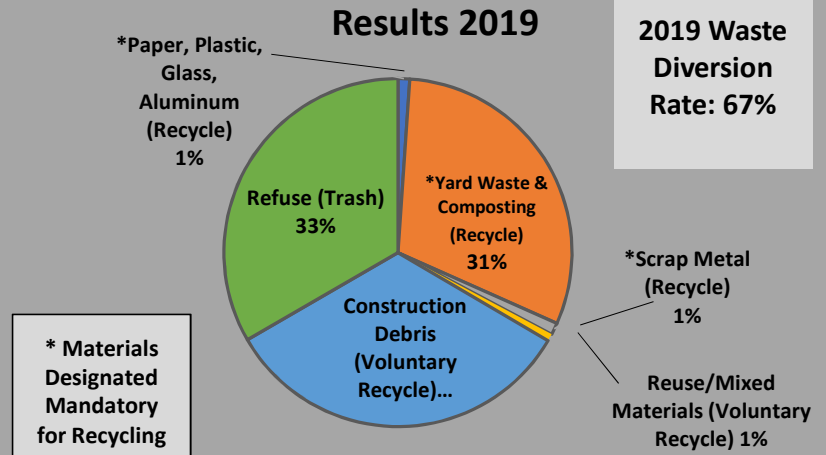
Program Progress: 2020 Results

- **Total Waste Diversion Rate: 83%**
- Less commingled recycling in 2020.
- Reduction in 'voluntary' recycling materials (reuse).
- More green waste recycling (compost, mulch etc.).
- Significant increase in construction debris recycling.
- Reduction in material sent to trash.

Results 2020



Results 2019



2019 Waste Diversion Rate: 67%

Recycling and Waste Reduction Award

- M-NCPPC recognized by Montgomery County Department of Environmental Protection in 2020 for the Business – Outstanding Recycling and Waste Reduction Program.
- Award presented to businesses and organizations that “excel in their efforts to provide a higher level of education and training to their employees, customers, or staff in an engaging manner to increase awareness and participation in their programs.”



New!

Waste Audit Program

- **Program Goal:** Assess waste sorting practices and identify missed opportunities to recycle more.
- Unannounced assessment of trash dumpsters at staffed locations began in 2020.
- Assessments are conducted, characterization of waste is recorded, and solution-oriented report is provided to management.



Volunteer Stream & Park Cleanups

2020 AT A GLANCE

Tires: 227

Bags of Trash: 752

Bags of Recycling: 204

Pounds Trash: 22,967

Pounds Recycling: 5,100

Pounds Tires: 4,994

Total Pounds: 33,061

Projects: 92

of Volunteers: 975

Hours: 1,930





Questions?