

# M-NCPPC

## FY19 Resource Conservation Plan

## Annual Recycling Report (SORRT)

## Sustainability Program Update

Prepared By:



# Resource Conservation Plan

- Presented for approval to M-NCPPC Planning Board, the County Executive Committee, and County Council Transportation, Infrastructure, Energy and Environment Committee
- Summarizes the programs and projects implemented to improve operations and maintenance practices to efficiently use electricity, natural gas, propane, and water to fulfill the mission of the Commission.



Montgomery County

Resource Conservation Plan

Fiscal Year 2019

Department of Parks  
Department of Planning

Draft Report for Director Review  
January 10, 2018

# Utility Budget/Costs: Results, Fiscal Year 2017

	FY 2017 Budget	FY 2017 Cost	Difference
<b>Enterprise</b>	\$996,900	\$1,027,069	(\$30,169)
<b>Planning Department</b>	\$221,000	\$185,056	\$35,944
<b>Property Management</b>	\$12,000	\$16,192	(\$4,192)
<b>Parks Department</b>	\$2,190,345	\$1,880,771	\$309,574
<b>Total:</b>	<b>\$3,420,245</b>	<b>\$3,109,088</b>	<b>\$311,157</b>

Fiscal Year 2017: July 2016 through June 2017

# Accomplishments in 2017

## **Green Farm Maintenance Facility:**

Staff relocated from the Shady Grove Maintenance Facility to the newly opened Green Farm Facility, a LEED® Silver building



## **Meadowbrook Maintenance Yard:**

Replaced Hydronic circulator for the boiler system with a new Grundfos Magna 3 Variable Speed Circulator, reducing energy consumption

## **Skyview House at Rockwood Manor:**

Replaced tank style water heater with new Navien tankless 95% efficient water heater



# Accomplishments in 2017 continued

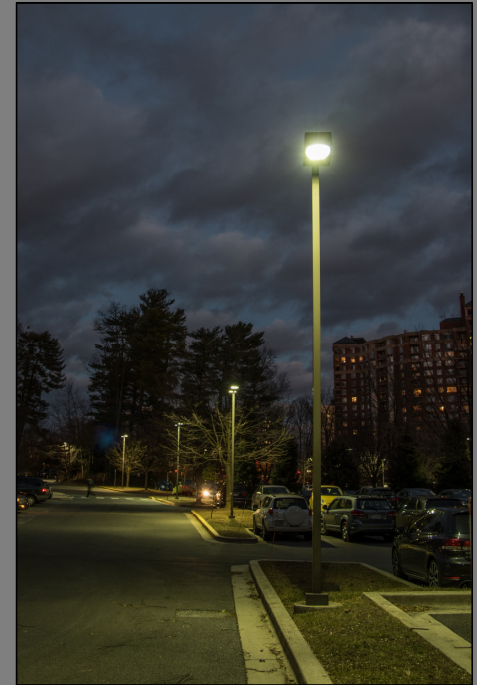
## Brookside Gardens:

As part of the adjacent greenhouse renovation, installed a 25,000 gallon capacity underground cistern to collect water from the new greenhouse roof for reuse in watering plants grown on site.



## Exterior Lighting:

6 parking lot locations were upgraded with LED lights



# Utility Budget/Costs (to date): Fiscal Year 2018

	FY 2018 Budget	Cost as of Dec. 2017	FY18 Annual Projection	Difference (FY2018 Budget – Projection)
<b>Enterprise</b>	\$1,050,600	\$492,574	\$992,040	\$58,560
<b>Planning Dept.</b>	\$200,300	\$95,075	\$184,730	\$15,570
<b>Property Management</b>	\$12,000	\$7,463	\$12,000	\$0
<b>Parks Dept.</b>	\$2,161,105	\$851,192	\$2,419,320	(\$258,215)
<b>Total:</b>	<b>\$3,424,005</b>	<b>\$1,446,304</b>	<b>\$3,608,090*</b>	<b>(\$184,085)</b>

\*Projection includes \$300,000 weather contingency

Fiscal Year 2018: July 2017 through June 2018

# Projects Underway, FY18

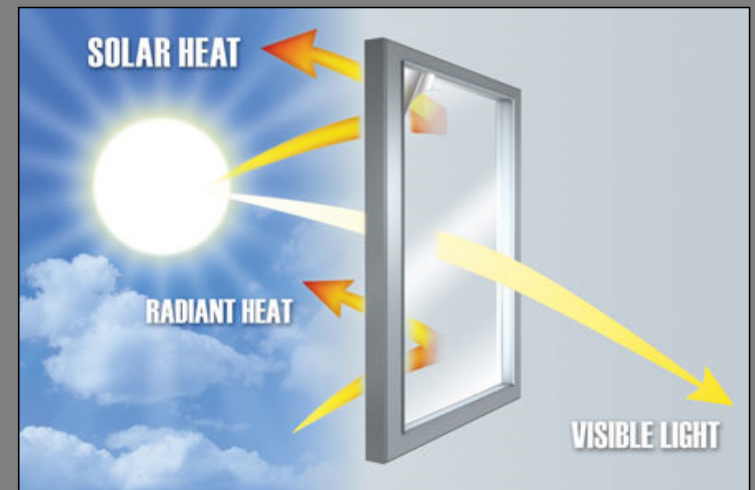
## Maughlin House:

Replacement of the heating system with a new Navien Combi Boiler. This system heats via two hydro air coils and acts as a tankless water heater for domestic hot water.



## Agricultural History Farm Park:

Installed window tinting film on south-facing windows in the hall/reception/lobby area to reduce solar heat gain in summer and radiant heat loss in winter





# Projects Underway FY18, continued

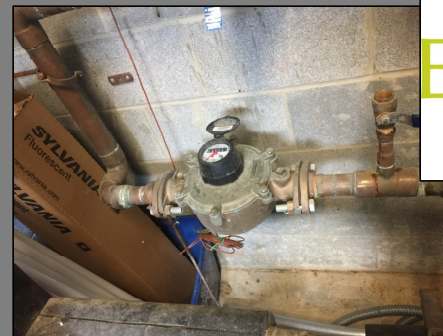
## Stormwater/Greywater Reuse Projects:

As part of the Rock Creek Maintenance Facility construction, a 1,700 gallon stormwater harvesting system was installed to supplement toilet flushing on the site.



## Energy (Utility) Audit – Action Item:

Conduct a comprehensive audit of all meters and utilities currently being tracked by EnergyCAP software



EnergyCAP®



# Projects Underway, FY18: Solar Fields Initiative

## Solar Photovoltaic Systems – Construction Nearing Completion



Construction of nearly 2.5 megawatts of ground-mounted solar arrays is nearing completion in South Germantown Recreational Park and Rock Creek Regional Park.

# Goals for Fiscal Year 2019

## **Energy Conservation/Efficiency:**

Continue making progress on retrofitting exterior lighting to LED technology



## **Renewable Energy:**

Identify and begin implementing smaller-scale solar PV projects



## **Water Conservation/Efficiency:**

Maintain existing and implement appropriate opportunities for gray water and harvested stormwater reuse.



## **Energy (Utility) Audit – Action Item:**

Conduct a comprehensive audit of meters and utilities currently being tracked by EnergyCAP software

# Proposed Utility Budget Fiscal Year 2019

	Proposed FY 2019 Budget
<b>Enterprise</b>	\$ 1,087,700
<b>Planning Dept.</b>	\$ 225,223
<b>Property Management</b>	\$ 12,000
<b>Parks Dept.</b>	\$ 2,177,915
<b>Total:</b>	<b>\$3,502,838</b>

**The Proposed budget for Fiscal Year 2019 assumes the following:**

Department of Parks Headquarters (Parkside) and the Department of Planning (MRO) will remain at their respective current locations in Silver Spring for FY 2019

Fiscal Year 2019: July 2018 through June 2019

# Recycling & Solid Waste Management

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





# Recycling & Solid Waste Management: Background

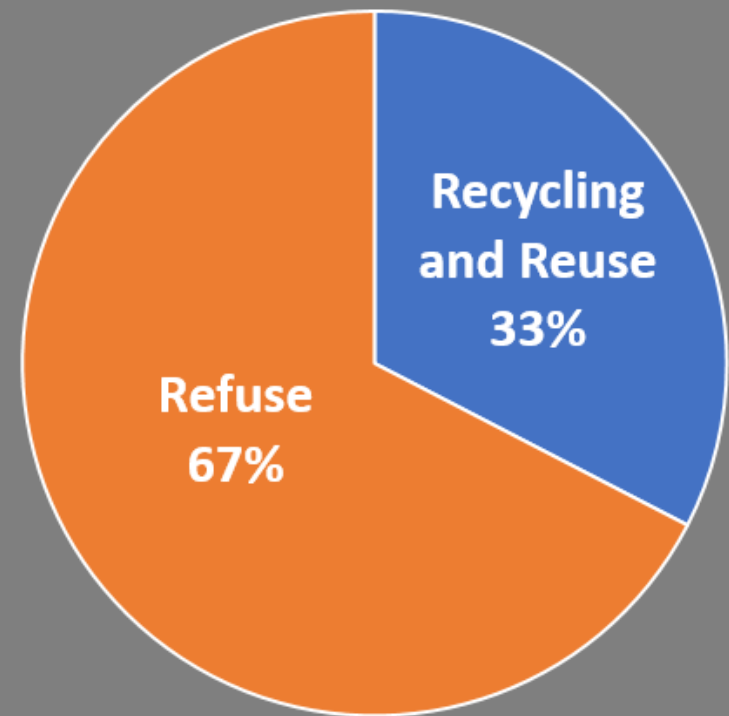
- Beginning in March 1993 Montgomery County established ER 109-92AM making business recycling mandatory
- In February 2005, ER 109-92AM added additional materials to be recycled, clarified roles and responsibilities of the businesses and added collector / hauler requirements
- Montgomery County established goal is to reduce waste and recycle 70% by 2020



# Program Progress

- Combined Recycling Rate: 68%
- Mandatory Recycling Rate at 64.2%
- Voluntary Material Recycling and Reuse Rate increased in 2017
- Increase in volume of material sent to 30 yard waste disposal containers
- Additional recycling totes and signage deployed to park locations

Recycling and  
Solid Waste Baseline Data, 2003

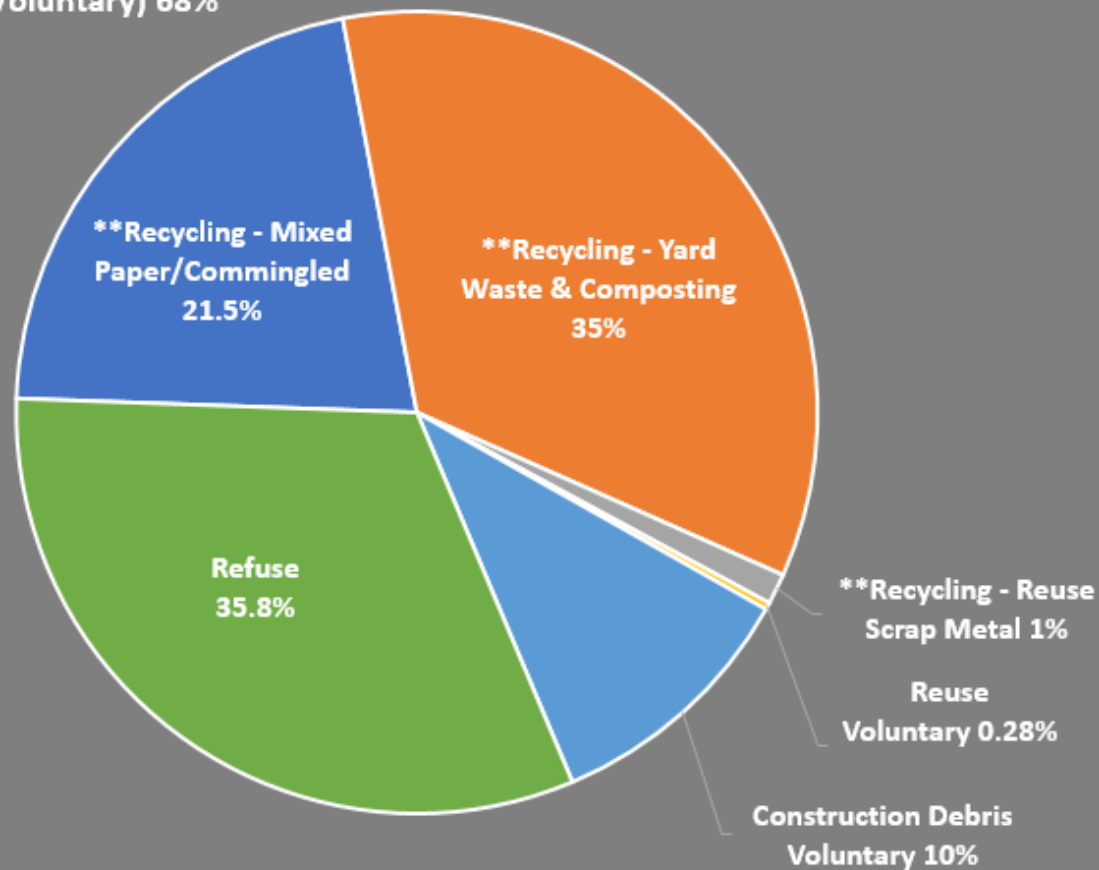




# 2017 Program Progress (Jan 1, 2017-Dec 31, 2017)

2017 Combined Recycling Rate:  
(Mandatory & Voluntary) 68%

\*\*Recycling Mandatory Total 64.2%



# Projects Underway in 2018

- The Department of Parks has brought the recycling program in-house and is providing service for pick-up of commingled and mixed paper/cardboard
- New dumpsters with updated signage have been provided and placed at each applicable site
- Interior recycling bins have been co-located with new signage for ease of access and a consistent appearance
- Recycling Captains working with locations with staff to educate them on recycling standards and best practices
- Focus for 2018 will shift to improving recycling opportunities for park patrons out in the parks



# Volunteer Stream and Park Cleanups

## 2017 AT A GLANCE

**Tires: 188**

**Bags of Trash: 2,860**

**Bags of Recycling: 1,316**

**Pounds Trash: 92,713**

**Pounds Recycling: 32,900**

**Pounds Tires: 4,136**

**Total Pounds: 129,749**

**Projects: 252**

**# of Volunteers: 4,847**

**Hours: 10,233**

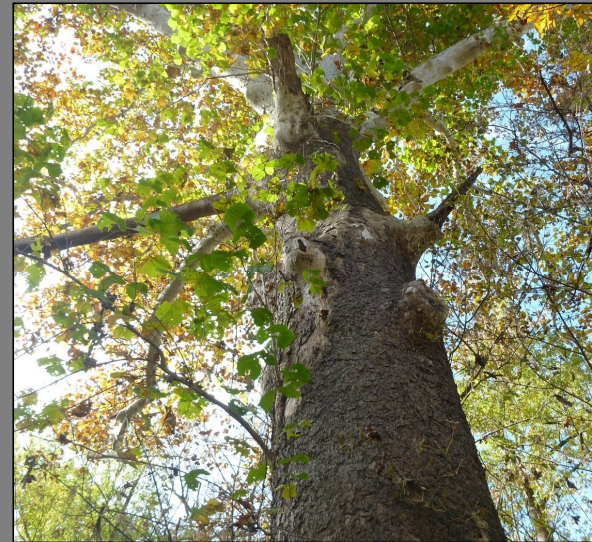
*The Volunteer Services Office, seeks to advance the mission of Montgomery Parks by supporting Park staff in their efforts to facilitate volunteer partnerships that enhance the park system*

*Volunteers donate more than 88,000 hours of volunteer service annually. Montgomery Parks is very fortunate to have such generous community support!*



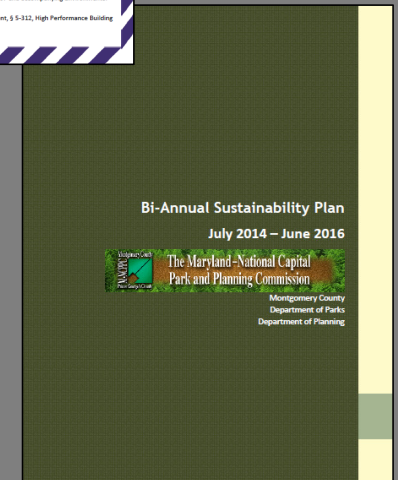
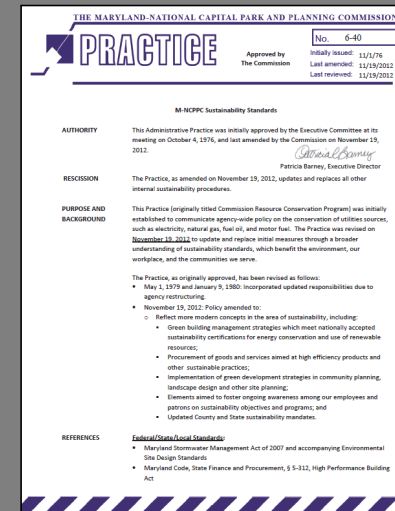


# Sustainability Program Update



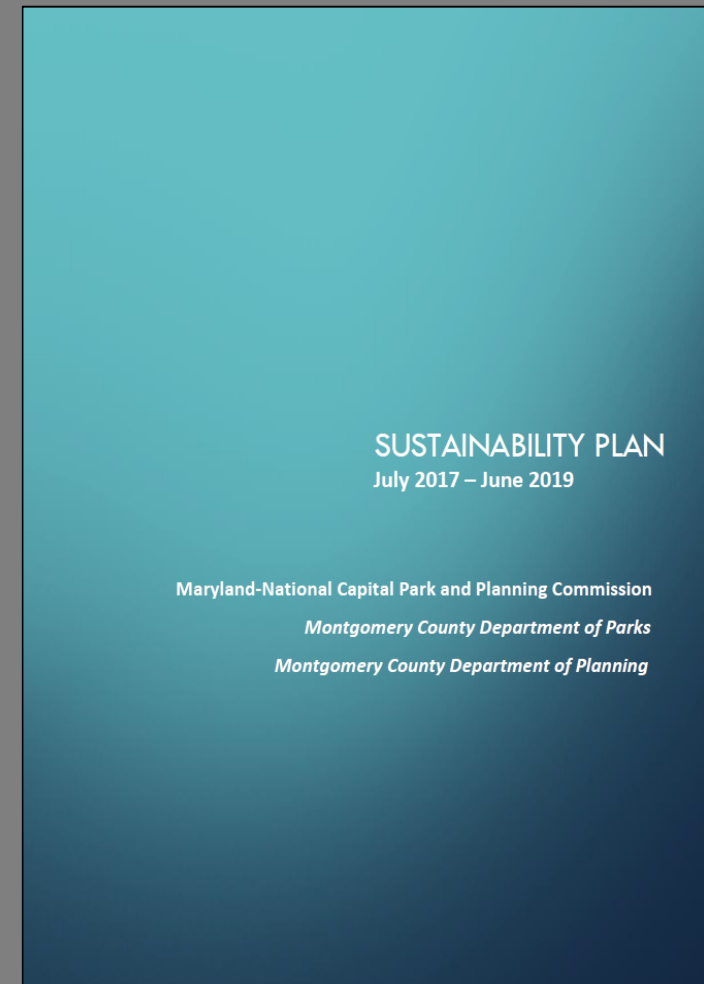
# Sustainability Program: Background

- In 1976 M-NCPPC created a Sustainability Practice that was used to communicate policy regarding conservation of energy resources
- In November 2012 M-NCPPC revised the Practice 6-40 to reflect more current concepts regarding sustainability
- The formation of the Sustainability Coordinating Committee, in 2013, was to develop the first Biennial Sustainability Plan for M-NCPPC



# Program Accomplishments

- Sustainability Plan for FY18-FY19 was submitted, presented to Executive Committee and Full Commission
  - Approved in September 2017
  - Refines and builds upon previous plan
  - Focused on identifying and tracking measurable goals, where available





# Sustainability Plan Elements

- Employee Education Training & Engagement
- Community/Patrons Education & Engagement
- Utility/Energy Conservation
- Water Conservation & Management
- Fleet Management
- Sustainable Acquisition & Use of Agency Supplies
- Recycling & Solid Waste Management
- Sustainable Infrastructure & Natural Areas
- Natural Resources & Habitat Preservation
- Health & Wellness

SUSTAINABILITY PLAN  
July 2017 – June 2019

Maryland-National Capital Park and Planning Commission  
*Montgomery County Department of Parks*  
*Montgomery County Department of Planning*

# Interagency Coordination: Council Resolution 18-974

- County Council Resolution 18-974, Emergency Climate Mobilization
  - Declares climate emergency, initiates a global mobilization to restore a safe climate and build a sustainable economy.
  - Transform the climate by reducing greenhouse gas emissions by 80% by 2027 and reaching 100% elimination by 2035, and initiate large-scale efforts to remove excess carbon from the atmosphere.

Resolution No.: 18-974  
Introduced: November 28, 2017  
Adopted: December 5, 2017

**COUNTY COUNCIL  
FOR MONTGOMERY COUNTY, MARYLAND**

Lead Sponsors: Councilmembers Elrich, Leventhal and Berliner  
Co-sponsors: Councilmembers Rice, Katz, Riemer, Navarro and Hucker

**SUBJECT:** Emergency Climate Mobilization

**Background**

1. Current global warming of approximately 1 degree Celsius has triggered cataclysmic changes to the Earth. These changes include an accelerating collapse of the West Antarctic Ice Sheet, the thawing of the Arctic permafrost, an increase in mega-droughts, heat waves, super-storms, flash flooding, the migration of mosquito-borne diseases, the melting of glaciers, polar ice-sheet collapse, coral bleaching, the mass extinction of species, ocean oxygen loss, and sea level rise.
2. Climate change will cause an increase in water and food shortages, civil unrest, state failure, civil war and terrorism throughout the world, with no region or nation being immune to these effects, including Montgomery County.
3. There is a strong consensus among scientists that greenhouse gas emissions must be eliminated in a decade at most -- with a simultaneous global effort to remove excess carbon from the atmosphere -- to stabilize at or near the 1.5 C (2.4 F) threshold believed to provide a reasonable chance for the survival of human civilization and other complex life forms on this planet.
4. The federal government, national media, and civil society, including most climate organizations, have drastically underestimated the urgency of the climate and ecological crises, failed to accept that we face an unprecedented global emergency, and relied on failed strategies of gradualism.
5. We must together implement a massive emergency global mobilization effort to successfully eliminate greenhouse gas emissions and remove excess carbon from the atmosphere.
6. Each of us has the moral duty to safeguard the planet for future generations.

# Questions?

Data Prepared By:

