

Montgomery County
Department of Parks
Department of Planning

Resource Conservation Plan

Fiscal Year 2020



January 15, 2019

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

1. INTRODUCTION

The Maryland-National Capital Park and Planning Commission (M-NCPPC) is responsible for the acquisition, development, and management of more than 36,895 acres of parkland, providing residents and visitors with outstanding recreational opportunities; clean, safe and accessible facilities; educational opportunities; and dedication to open space for natural resources conservation and stewardship.

The goal of the comprehensive Resource Conservation Plan is to establish programs and projects that will efficiently use energy and water resources to fulfill the mission of the Commission to serve the citizens and visitors of Montgomery County. The Resource Conservation Plan is designed in conjunction with the M-NCPPC Sustainability Plan, approved and implemented in July 2017 – June 2019.

The Resource Conservation Plan report presents the accomplishments of the implemented energy and water projects as of December 31, 2018 and the projected plans for the balance FY19. The report establishes strategies for FY20 to conserve energy and water resources as part of a comprehensive M-NCPPC approach to resource management.

2. UTILITY COSTS AND PROJECTIONS – FY16 TO FY20

The Department of Parks and Department of Planning established a comprehensive utilities management program in July 2003. Utility resources consumption has been reduced as a result of the projects and programs implemented by the Commission staff. The actual utility energy cost for FY16, FY17, FY18, and projected utility energy cost for FY19 and the budgeted utility energy cost for FY20 are noted here:

	FY16 Actual	FY17 Actual	FY18 Actual	FY19 Budget	FY20 Budget
PARKS DEPARTMENT	\$1,719,843	\$1,880,681	\$1,989,338	\$2,157,115	\$2,240,733
PLANNING DEPARTMENT	\$205,566	\$185,092	\$184,368	\$225,223	\$211,590
ENTERPRISE & PROPERTY MANAGEMENT	\$1,159,513	\$1,043,263	\$978,789	\$1,094,200	\$936,500
BI-COUNTY	\$80,777	\$73,761	\$71,996	\$99,968	\$91,605
TOTAL:	\$3,165,699	\$3,182,797	\$3,224,491	\$3,576,506	\$3,480,428

3. UTILITY COSTS AND PROJECTIONS – FY19

The current estimate for utility costs, as of January 8, 2019, for the following Funds within the Department of Parks, Department of Planning, and the shared Bi-County utility costs are depicted below. A projection for the fiscal year and approved FY19 budget are also included.

	Cost as of 1/8/2019	Projection	Budget FY19
PARKS DEPARTMENT	\$1,243,389	\$2,455,611	\$2,157,115
PLANNING DEPARTMENT	\$89,097	\$196,123	\$225,223
ENTERPRISE	\$425,903	\$936,548	\$1,082,200
PROPERTY MANAGEMENT	\$2,943	\$12,885	\$12,000
BI-COUNTY	\$35,266	\$80,096	\$99,968
TOTAL:	\$1,796,598	\$3,681,263	\$3,576,506

The budget data for the utility cost and projections are derived from data obtained from the M-NCPPC General Ledger.

The following chart shows, per commodity, utility consumption and cost as of January 8, 2019. The cost projection depicted is for FY19.

Consumption as of 1/8/2019	Units	Utility	Cost as of 1/8/2019	Projection	Budget FY19
9,037,015	KWH	Electric*	\$1,070,796	\$2,146,441	\$2,296,314
84,030	THERM	Natural Gas	\$81,049	\$434,210	\$412,813
19,771	GAL	Propane	\$37,522	\$165,023	\$152,500
36,065	KGAL	Water**	\$603,396	\$924,005	\$711,779
54	KGAL	Sewer	\$1,321	\$5,284	\$0
235	KGAL	Oil 2	\$1,022	\$3,100	\$3,100
95		WaterSewer	\$1,491	\$3,200	\$0

* Includes Solar PPA Payments

** Adjustments pending for reimbursement

Consumption data and cost data for each commodity is obtained from the M-NCPPC EnergyCAP (ECAP) system.

4. UTILITY COST AND CONSUMPTION CHANGES – FY19

Facility renovations, upgrades and improvements of existing park locations included in the FY19 approved budget that will increase utility costs are shown on the chart below for the following park locations:

OBI – M-NCPPC Montgomery Parks - Utility Cost Changes				
FY19 Approved Budget				
Utility	Blair Local Park	Kensington Cabin Local Park	Pinecrest Local Park Phase 1	South Germantown Recreational Park
Electric	\$0	\$500	\$0	\$0
Gas	\$0	\$300	\$0	\$0
Water	\$5,410	\$300	\$200	\$5,410

5. UTILITY COST AND CONSUMPTION CHANGES – FY20

Facility renovations, upgrades and improvements of existing park locations included in the FY20 proposed budget that will increase utility costs are shown on the chart below for the following park locations.

OBI – M-NCPPC Montgomery Parks - Utility Cost Changes					
FY20 Proposed Budget					
Utility	Josiah Henson Historic Park	North Four Corners Local Park	Pinecrest Local Park Phase 2	Wheaton Regional Park	Wheaton Headquarters
Electric	\$1,417	\$0	\$0	\$0	TBD
Gas	\$0	\$0	\$0	\$0	TBD
Water	\$0	\$3,179	\$3,179	\$32,460	TBD
Water/Sewer	\$583	\$0	\$0	\$0	TBD

6. RENEWABLE ENERGY PURCHASING POLICY IMPLEMENTATION

M-NCPPC has committed to a clean energy purchase policy and for FY19, M-NCPPC purchased wind based renewable energy credits equal to 100% of the total electricity consumption. M-NCPPC will participate in the next County-wide procurement for wind based renewable energy credits for 100% of electricity consumption for FY20 as well.

A major accomplishment in FY18 toward increased use of renewable energy resources was the completion of the **South Germantown Recreational Park** and **Rock Creek Regional Park Solar Photovoltaic Systems** in February 2018. The completion of the solar systems is part of a long-term commitment to utilization of renewable energy to power M-NCPPC operations and will offset approximately 18% of the projected FY19 annual electricity consumption.

Final construction, commissioning and activation of the Solar Photovoltaic systems based on the FY15 Request for Proposals for Power Purchase Agreement occurred in 2018. The combined 2.5 megawatts of ground-mounted solar arrays will produce approximately 3,500,000 kWh of solar electricity annually – offsetting 2,877 tons of greenhouse gases yearly.

7. ENERGY UTILIZATION & CONSUMPTION ALLOCATIONS

The total square footage of conditioned buildings/facilities that consume electricity and natural gas are as follows:

TOTAL CONDITIONED BUILDING SQ.FT.				
Energy	FY16	FY17	FY18	FY19
Electric	1,145,150	1,145,150	1,145,150	1,145,150
Natural Gas	482,170	482,170	482,170	482,170

The energy consumption for FY17 and FY18 and estimated figures for FY19 and FY20 are as follows:

TOTAL ENERGY CONSUMPTION				
Energy	FY17	FY18	FY19 PROJECTION	FY20 RECOMMENDATION
Electric - kWh	14,240,045	14,916,755	15,960,930	16,264,190
Natural Gas - therm	306,052	293,530	296,466	302,098

ENERGY CONSUMPTION - FACILITIES				
Energy	FY17	FY18	FY19 PROJECTION	FY20 RECOMMENDATION
Electric - kWh	10,140,045	10,529,775	11,084,930	11,902,870
Natural Gas - therm	306,052	293,530	296,466	302,098

ENERGY CONSUMPTION - ATHLETIC FIELDS & EXTERIOR POLE LIGHTS				
Energy	FY17	FY18	FY19 PROJECTION	FY20 RECOMMENDATION
Electric - kWh	4,100,000	4,387,000	4,076,000	4,361,320

Data FY17 and FY18 and FY19 to date are obtained from the M-NCPPC EnergyCAP (ECAP) system.

8. ENERGY PROCUREMENT, CONTRACT STATUS & PURCHASING POLICY

M-NCPPC has implemented a procurement program that has contracted for fixed cost energy supply of electricity and natural gas service to provide long-term budget stability. Upcoming renewals are anticipated to be renegotiated six months prior to the current contract expiration dates. The current contracts status is:

Electricity Supply contracts start June 2017 and end on the June 2019 meter read dates:

- PEPCO rate is \$0.06714/kWh
- Potomac Edison rate is \$0.06214/kWh
- BGE rate is \$0.07010/kWh

Natural Gas Supply contract begins in June 2018 and ends on the July 31, 2021 meter read dates, at a rate of \$0.4210/therm.

9. FISCAL YEAR RESULTS – FY18

July 2017 to June 2018

Goals Achieved:

- Implemented projects focused on heating and air conditioning system replacements for equipment in operation for over 20 years.
- Continued expansion of the building automation controls and energy management systems capabilities in primary staff office, support, and maintenance buildings.
- Persisted in expanding the exterior lighting retrofit program to use LED technology.
- Made progress on programs and initiatives included in the FY18/FY19 Sustainability Plan.
- Finalized the construction of three solar renewable energy projects.
- Continued the comprehensive audit of the utility bills being tracked by E-CAP to validate data entered and reported for primary locations.

Projects and Programs Completed Fiscal Year 2018

- **South Germantown Recreational Park and Rock Creek Regional Park** - Final construction, commissioning, and activation of the Solar Photovoltaic systems based on the FY 2015 Request for Proposals for Power Purchase Agreement. The combined 2.5 megawatts of ground-mounted solar arrays will produce approximately 3,500,000 kWh of solar electricity annually – offsetting 2,877 tons of greenhouse gases yearly.
- **Black Hill Maintenance Facility** - Upgraded the furnace and air conditioning equipment. Replaced with a 95% efficiency gas furnace and an 18 SEER split system A/C unit.
- **Woodlawn Helicopter Hanger** - Replaced the existing HVAC system with two new high efficiency heat pumps. One is a 5-ton capacity unit, and one is a 3-ton capacity unit. Both new heat pumps are 18 SEER.
- **Maughlin House** - Replaced the heating system, during renovation of the building by Property Management, with a new Navien Combi Boiler. The new boiler heats via two hydro air coils and also acts as a tankless water heater to provide domestic hot water. The new boiler is a 95% efficient propane system.
- **Cabin John Maintenance Yard - Staff Fitness Room** - Upgraded the existing ductless heat pump with a new higher efficiency Mitsubishi Heat Pump.
- **Brookside Gardens Visitor's Center** - Upgraded the rooftop unit controls to allow the provided heat to work in concert with the damper system in the ducts to conserve energy usage.
- **Wheaton Ice Arena** - Replaced the existing ice rink dehumidifier with a new high efficiency dehumidifier, providing the duct work for the project.
- **Rock Creek Maintenance Yard** – As part of the maintenance yard replacement, contractors installed a 1,700 gallon rainwater harvesting system to collect the roof water to be used for flushing toilets.

- **Green Farm Maintenance Facility** - Installed two 800-gallon cisterns to collect and store rooftop runoff that can be later utilized in a variety of applications.
- **Exterior Parking Lot Lighting replacements with LED fixtures:**
 - Sundown Local Park – Four Fixtures
 - Olney Mill Neighborhood Park – Five Fixtures
 - Olney Family Neighborhood Park – One Fixture
 - Ken-Gar Palisades Park – Eleven Fixtures
 - Owens Local Park – Four Fixtures
 - Tilden Woods Local Park – Four Fixtures
 - Kensington Cabin Local Park – Five Fixtures
 - Glen Hills Local Park – Ten Fixtures
 - Sligo Creek Stream Valley Unit 3 495 Underpass – Five Fixtures

Budget Results for Fiscal Year 2018:

	FY18 Cost	FY18 Budget	Difference
PARKS DEPARTMENT	\$1,989,338	\$2,161,105	\$171,767
PLANNING DEPARTMENT	\$184,368	\$200,300	\$15,932
ENTERPRISE	\$948,832	\$1,050,600	\$101,768
PROPERTY MANAGEMENT	\$29,957	\$12,000	(\$17,957)
BI-COUNTY	\$71,996	\$99,968	\$27,972
TOTAL:	\$3,224,491	\$3,523,973	\$299,482

Expenditures for Fiscal Year 2018:

Programs Energy Management:	\$46,900
Projects Local:	\$37,000
Projects Non-local:	\$40,000
Water Projects Non-local:	\$25,000
<u>Water Projects Local:</u>	<u>\$25,000</u>
Total in FY 2018:	\$173,900

10. RESULTS TO DATE – FY19

July 2018 to June 2019

The results of the current program year as of December 2018 are as follows:

Goals:

- Continue to expand the exterior lighting retrofit program to use LED technology.
- Continue integrating programs as part of newly updated and approved Sustainability Plan (Fiscal Year 2018-2019).
- Continue implementation of small scale solar opportunities.
- Explore additional opportunities for stormwater and graywater harvesting for reuse (e.g. operations, irrigation, toilet flushing, other identified uses).
- Continue directing a comprehensive audit of the utility bills being tracked by E-CAP to validate data entered and reported for primary locations.

Status to Date: Completed Projects and Programs for Fiscal Year 2019

- **Black Hill Maintenance Yard** – Exterior wall packs and exterior lighting upgrades to LED have been completed.
- **Rockwood Manor** – Skyview House - Upgraded water heater to Navien tankless water heater to conserve energy.
- **Wheaton Maintenance Yard** – Upgraded the HVAC furnace and air conditioning system to a 95% efficient furnace and 19 SEER split system with condensing unit; reconfigured exhaust systems to draw in fresh air to the building.
- **Wheaton Sports Pavilion** – Installed blown-in insulation in ceiling plenum above entire main building providing substantial monthly savings.
- **Black Hill Visitors Center** – Utilized Ecobee technology to monitor the temperature in the central education room in the afternoon with the blinds raised and blinds lowered to determine the need to install window tinting film to lower the energy usage. Determined blinds lowered provided energy usage reduction when managed consistently.
- **Brookside Visitors Center Atrium**- Installed N-1050 solar control window film on atrium upper window line to reduce energy consumption.
- **Olney Mill Neighborhood Park** - Completed installation of 1.8 kW rooftop solar array.
- **Exterior Parking Lot Lighting replacements:**
 - Black Hill Maintenance Yard – LED Parking Lot Lighting Retrofit
 - Saddlebrook Facility – LED Parking Lot Lighting Retrofit
 - Meadowside Nature Center – LED Parking Lot Lighting Retrofit
 - Sligo Avenue Neighborhood Park – LED Parking Lot Lighting Retrofit
 - Stoneybrook Local Park – LED Parking Lot Lighting Retrofit
 - Fleming Local Park – LED Basketball Court Lighting Retrofit in combination with ADA and Energy funding
 - Good Hope Local Park – LED Basketball Court Lighting Retrofit in combination with Grant and Energy funding

- **Exterior Plumbing Projects:**

- **Black Hill Regional Park - Dog Park** – Replaced and up-graded water fountain to frost free system
- **Olney Family Neighborhood Park** - Replaced and upgraded 3 water fountains to frost free system
- **Leland Neighborhood Park** - Replaced and up-graded water fountain to frost free system
- **Cloverly Local Park** - Replaced and up-graded water fountain to frost free system
- **Cherry Wood Local Park** - Replaced and up-graded water fountain to frost free system
- **General Getty Neighborhood Park** - Replaced and upgraded water fountain to frost free system

Budget Projection for FY19:

	FY19 Budget	Cost as of 1/8/2019	FY19 Annual Projection*	Difference (FY19 Budget-Projection)
PARKS DEPARTMENT	\$2,157,115	\$1,243,389	\$2,455,611	(\$298,496)
PLANNING DEPARTMENT	\$225,223	\$89,097	\$196,123	\$29,100
ENTERPRISE	\$1,082,200	\$425,903	\$936,548	\$145,652
PROPERTY MANAGEMENT	\$12,000	\$2,943	\$12,885	(\$885)
BI-COUNTY	\$99,968	\$35,266	\$80,096	\$19,872
TOTAL:	\$3,576,506	\$1,796,598	\$3,681,263	(\$104,757)

*Projection includes \$300,000 weather contingency

Budgeted expenditures for FY19:

Programs Energy Management:	\$54,000
Projects Local:	\$37,000
Projects Non-local:	\$40,000
Water Projects Non-local:	\$25,000
<u>Water Projects Local:</u>	<u>\$25,000</u>
Total in FY19:	\$181,000

11. PLANNED MEASURES – FY20

July 2019 to June 2020

The proposed program for FY20 is as follows:

Goals:

- Continue the exterior lighting retrofit program to use LED technology.
- Maintain existing and implement appropriate new opportunities stormwater and graywater harvesting for reuse (e.g. operations, irrigation, toilet flushing, other identified uses).
- Determine additional potential small-scale solar applications.
- Utilize ArcGIS collector to gather locational data for all utility meters on parkland. Address meter and account issues as appropriate with the utility.
- Continue to implement the comprehensive audit of the utility bills being tracked by E-CAP to validate data entered and reported for primary locations.

Projects and Programs for Fiscal Year 2020

- **Park Facilities**
 - Continue HVAC replacements and energy efficiency upgrades
 - Replace water heaters as needed utilizing high-efficiency models
 - Utilize geo-thermal technology where applicable for heating and cooling
 - Install low-flow, low consumption hand wash units
 - Install storm water cisterns for variety of uses
- **Park Activity Buildings**
 - Install LED interior lighting and exterior wall lighting
 - Install low-flow, low consumption hand wash units
 - Install low-flow urinals and toilets
- **Exterior Lighting**
 - Install additional LED fixtures in parking lots and for area lighting

Budget Proposal for FY20:

	Proposed Budget FY20
PARKS DEPARTMENT	\$2,240,733
PLANNING DEPARTMENT	\$211,590
ENTERPRISE	\$922,000
PROPERTY MANAGEMENT	\$14,500
BI-COUNTY	\$91,605
TOTAL:	\$3,480,428

Proposed budget expenditures for FY20:

Programs Energy Management:	\$54,000
Projects Local:	\$37,000
Projects Non-local:	\$40,000
Water Projects Local:	\$25,000
<u>Water Projects Non-Local:</u>	<u>\$25,000</u>
Total in FY20:	\$181,000

**RESOURCE CONSERVATION PLAN
SUMMARY**

Agency	Maryland-National Capital Park and Planning Commission		
Number of Facilities	399 Facilities that have utilities	Change in number of facilities	0
Total square feet	1,207,570	Change in total ft ²	0
Average operating hrs./year	Varies	Change in avg. operating hrs./year	None
Other changes effecting energy consumption	<p>The implementation of a comprehensive energy management and water conservation program for the Department of Parks by the three operating Divisions: North Parks Region, South Parks Region, and Enterprise Operations contributed to additional consumption reductions at the following park facilities.</p> <p>See the attached Montgomery Parks, MNCPPC Park Facility Highlights</p>		

RESOURCE CONSERVATION PLAN MONTGOMERY PARKS GREEN TREE SUMMARY



MONTGOMERY PARKS, M-NCPPC

Parks Information Line – 301-495-2595

www.MontgomeryParks.org

OUR MISSION

Protect and interpret our valuable natural and cultural resources; balance the demand for recreation with the need for conservation; offer a variety of enjoyable recreational activities that encourage healthy lifestyles; and provide clean, safe, and accessible places for leisure-time activities.

PARK SYSTEM HIGHLIGHTS

Total number of parks:	421
Total owned or managed acres of parkland:	36,895
Total developed acreage:	7,189
Open and environmental preservation acreage:	29,706
Stream Length (miles)	490

TYPES OF PARKS

Local	151	Regional	5	Neighborhood Conservation Areas	41
Neighborhood	95	Recreational	11	Miscellaneous Recreation/ Non-Recreation Facilities	6
Urban	30	Special	24		
Stream Valley	36	Conservation	22		

PARK FACILITIES

Archery: 2	Driving Range (Stand Alone): 1	Picnic Shelters - Non-Permitted: 48
Athletic fields: 302	Golf Courses: 4	Picnic Shelters - Permitted: 88
Cricket Field: 8	Gymnasiums: 1	Large Group Picnic Areas: 2
Overlay football/soccer fields: 41	Historic Sites: 43	Playgrounds: 290
Basketball Courts: 221	Historic Structures: 117	Skate Park: 3
Campgrounds – Full Service: 1	Ice Rinks: 2	Splash Playground: 1
Campgrounds – Primitive: 2	Lakes: 4	Sports Center: 1
Campsites: 102	Boating Facility - Rentals: 2	Sports Pavilion: 1
Carousel: 1	Boating Landing Ramps: 3	Tai Chi Court: 1
Dog Parks: 6	Miniature Golf: 1	Bike Park: 1
Equestrian centers: 6	Miniature Trains: 2	Tennis Centers - Indoor: 3 (20 courts)
Event Centers: 4	Nature Centers: 4	Tennis Courts - Outdoor: 302
Exercise Courses: 18	Outdoor Ropes Course: 1	Trails - Canoe: 5.4 miles
Formal Botanical Gardens: 2	Park Activity Buildings: 28	Trails - Natural Surface: 170 miles
Community Gardens: 12	Volleyball Courts: 25	Trails - Paved: 79.4 miles

PARK BUDGET

Park Fund, Adopted Operating Budget FY2019	\$103.9 million
Capital Improvements Program FY2019-2024	\$56.37 million for acquisition
Capital Improvements Program FY2019-2024	\$163.61 million for development

As of 06/2018
Source: EAM, GIS, and the Parks Acquisition Ledger

Existing Measures FY00 TO FY18
Programs and Projects Completed

Measures - Existing: (implemented from FY 2000 to FY 2018)	Dates implemented	Initial cost (\$)	Annual net impact on maintenance cost (\$)	Fuel type(s) effected and units	Units saved per year	Annual cost savings (\$)
Capital Improvement Projects:						
Equipment Replacement Project	FY 2000 to FY 2018	\$595,930 est.	\$123,000 on Annual Service Costs	Electricity, Natural Gas, and Propane	834,000 kWh, 49,600 therm & 6,100 Pounds	\$158,000 est. Annual Cost Avoidance
<u>Equipment Retrofit Projects</u> Includes MEA Grant in 2010 and DOE Grant in 2012	FY 2000 to FY 2018	\$136,482 est.	\$10,000 on Annual Service Costs	Electricity, Natural Gas, and Propane	190,200 kWh, 11,500 therm & 600 Pounds	\$47,600 est. Annual Cost Avoidance
Controls Improvements	FY 2000 to FY 2018	\$140,000 est.	NA	Electricity and Natural Gas	284,000 kWh & 21,000 therm	\$85,000 est. Annual Cost Avoidance
<u>Lighting Projects</u> Includes MEA Grant in 2010 and DOE Grant in 2012	FY 2000 to FY 2018	\$501,000 est.	NA	Electricity	489,800 kWh	\$208,000 est. Annual Cost Avoidance
CIP Projects Sub-total		\$1,373,412 est.			1,798,000 kWh, 82,100 therm & 6,700 Pounds	\$498,600 est. Annual Cost Avoidance
Operations and Maintenance:						
Operations and Maintenance Best Management Practice and Programs	FY 2000 to FY 2018	\$551,400	\$5,000 annual	Electricity, Natural Gas, and Propane	764,000 kWh, 39,500 therm & 6,800 Pounds	\$155,000 est. Annual Cost Avoidance
Totals		\$1,924,812			2,562,000 kWh, 121,600 therm & 13,500 pounds	\$653,600 est. Annual Cost Avoidance 2.7 yrs. ROI

NEW MEASURES – FY19
July 1, 2018 through June 30, 2019

<u>Measures - Planned:</u>	<u>Projected completion date</u>	<u>Projected initial cost (\$)</u>	<u>Projected maintenance cost (\$)</u>	<u>Fuel type(s) effected and units</u>	<u>Estimated units saved per year</u>	<u>Projected annual cost savings (\$)</u>
Capital Improvement Projects:						
Equipment Replacement Projects Local & Non-Local	Entire Year	\$61,580 est.	\$5,000 on Annual Service Costs	Electricity, Natural Gas, and Propane	79,000 kWh, 11,600 therm	\$10,800 est. Annual Cost Avoidance
Control Improvements	Entire Year	\$20,000 est.	NA	Electricity	30,000 kWh	\$4,200 est. Annual Cost Avoidance
Lighting Projects Local & Non-Local	Entire Year	\$28,000 est.	NA	Electricity	39,000 kWh	\$5,300 est. Annual Cost Avoidance
CIP Projects Sub-total		\$109,580	\$5,000			\$20,300
Operations and Maintenance:						
Best Management Practices & Sustainability Programs	Entire Year	\$29,500	NA	Electricity, Natural Gas, and Propane	21,000 kWh, 400 therm	\$3,000 est. Annual Cost Avoidance
Operations and Maintenance Improvement Programs	Entire Year	\$24,500	NA	Electricity, Natural Gas, and Propane	9,000 kWh, 300 therm & 100 Pounds	\$3,000 est. Annual Cost Avoidance
O&M Total		\$54,000	NA			\$6,000
Totals		\$163,580	\$5,000			\$26,300 5.0 yr. ROI

PLANNED MEASURES – FY20
July 1, 2019 through June 30, 2020

<u>Measures - Planned:</u>	<u>Projected completion date</u>	<u>Projected initial cost (\$)</u>	<u>Projected maintenance cost (\$)</u>	<u>Fuel type(s) effected and units</u>	<u>Estimated units saved per year</u>	<u>Projected annual cost savings (\$)</u>
Capital Improvement Projects						
Equipment Replacement Project - Local & Non-Local	Entire Year	\$50,000 est.	\$2,000 on Annual Service Costs	Electricity, Natural Gas, and Propane	10,300 kWh, 5,000 therm	\$7,500 est. Annual Cost Avoidance
Control Improvements	Entire Year	\$20,000 est.	NA	Electricity	30,000 kWh	\$4,200 est. Annual Cost Avoidance
Lighting Projects- Local & Non-Local	Entire Year	\$27,000 est.	NA	Electricity	47,000 kWh	\$7,000 est. Annual Cost Avoidance
CIP Projects Sub-total		\$97,000	\$2,000			\$18,700
Operations and Maintenance						
Best Management Practices and Sustainability Programs	Entire Year	\$29,500	NA	Electricity, Natural Gas, and Propane	21,000 kWh, 500 therm & 100 Pounds	\$3,300 est. Annual Cost Avoidance
Operations and Maintenance Improvement Programs	Entire Year	\$24,500	NA	Electricity, Natural Gas, and Propane	14,000 kWh, 400 therm	\$2,200 est. Annual Cost Avoidance
O&M Total		\$54,000	NA			\$5,500
Totals		\$151,000	\$2,000			\$24,200 6.2 yrs. ROI

PROPOSED BUDGET – FY20
Utility Budget Projection by Fund /Cost

DEPARTMENT OF PARKS	
Electricity	\$1,161,162
Natural Gas	\$225,300
Water and Sewer	\$672,871
Oil	\$5,400
Propane	\$176,000
Sub Total	\$2,240,733
DEPARTMENT OF PLANNING	
Electricity	\$187,649
Natural Gas	\$14,513
Water and Sewer	\$9,428
Propane	\$0
Sub Total	\$211,590
DEPARTMENT OF PARKS - ENTERPRISE	
Electricity	\$713,000
Natural Gas	\$134,800
Water and Sewer	\$57,200
Propane	\$17,000
Sub Total	\$922,000
DEPARTMENT OF PARKS - PROPERTY MANAGEMENT	
Electricity	\$9,800
Natural Gas	\$3,700
Water and Sewer	\$1,000
Propane	\$0
Sub Total	\$14,500
BI-COUNTY	
Electricity	\$87,521
Natural Gas	\$0
Water and Sewer	\$4,048
Propane	\$0
Sub Total	\$91,605
Overall Total	\$3,480,428