

MOSQUITO CONTROL DEPARTMENT SUMMARY

MISSION STATEMENT:

To protect public health and improve the quality of life for Brevard County citizens by controlling mosquito and aquatic plant populations.

PROGRAMS AND SERVICES:

ACCOMPLISHMENTS, INITIATIVES, TRENDS AND ISSUES AND SERVICE LEVEL IMPACTS:

Countywide Mosquito Control

Accomplishments:

- Treatment of more than 1.3 million acres (2,065 square miles) by Mosquito Control this past year, including both night adulticiding and day-time larviciding missions
- Treatment of 379 acres (0.6 square miles) by the Aquatic Weed Control section in the past year, which drastically reduces mosquito breeding habitat Countywide
- Completed over 75% of the repairs to the mosquito impoundments that were damaged by Hurricanes Matthew and Irma
- Expanded the mission of the educational outreach program after conducting a dozen outreach events in 2018 and doubling to 25 events in 2019 at various Touch-a-Truck, School, Camp, Park, Public Safety, Halloween, and Cub Scout events; our new Outreach Committee, comprised of employees with background and interest in community education, has ensured the program's continued success
- Improved the Department's organizational structure to both widen and focus our span of control, specifically in the Ground Operations, Environmental Section, and Administration areas, to improve customer service, efficiency, and employee development; this enhanced structure continues to prove successful during the COVID-19 pandemic as the department's core missions have not been substantially affected
- Successfully converted fixed truck pesticide tanks to a removable design in order to decrease the spill risk and degradation of night-time adulticide pesticides during daytime activities
- Outfitted the Aquatic Weed Control airboats with mosquito larviciding units and navigational software to support Aircraft and Ground Operations by increasing coverage in inaccessible mosquito breeding habitats
- Initiated in-house arbovirus testing of mosquito pools and sentinel chicken blood, for the first time, due to the unexpected Health Department lab shutdown during the COVID-19 response; two new chicken coops have also been constructed to expand arbovirus monitoring for improved coverage Countywide
- Successfully filled the new Environmental Specialist position and proceeded with Indian River Lagoon conservation initiatives, such as permitting for living shoreline projects, developing a water quality monitoring program, and GIS mapping of mosquito impoundments
- Completed the initial phase of the mosquitofish (*Gambusia*) hatchery construction at our north office as well as the fabrication of the large fish transport tank to successfully launch the new stocking program in 2020; the hatchery and stocking program is up and running, but still growing

- Implemented budget changes associated with Citizens Budget Review Committee recommendations related to tracking expenditures in the Ground and Air Operations cost centers

Initiatives:

- Continue to enhance the function and operations of impoundments through the replacement of poor performing and inadequate equipment that has reached the end of its useful life
- Utilize the new Environmental Specialist position as a catalyst to increase partnerships with local, state and federal agencies on Indian River Lagoon protection initiatives in the County
- Enable environmental staff to use recently procured water quality equipment (multiparameter meter) to assess Lagoon health at mosquito impoundments and other treatment and fish stocking sites
- Continue to develop the in-house arbovirus testing program which was initiated during the COVID-19 pandemic to enhance laboratory capabilities and ensure future emergency preparedness
- Construct and test a new larvicide delivery system to control mosquitoes in the larval stage of development. Ground crews will use the new system, which uses the more environmentally friendly “bio-rational” larvicides and reduces hydrocarbon output into the surface waters; the new system will enable crews to select up to three different liquid larvicides to treat mosquito larvae at various stages of development
- Continue to enhance, repair, and replace facilities that date back to the 1950’s, including completing the design phase of the approved aircraft hangar/ biology laboratory building
- Complete the construction of mosquitofish (Gambusia) hatcheries at our north and south offices to increase biological control opportunities, an important aspect of an Integrated Pest Management (IPM) program; aside from benefits to the Indian River Lagoon and local environment, the mosquitofish stocking program is expected to help alleviate the chemical budget as a substitute for pesticides whenever feasible
- Complete the upgrade of the newly procured concession trailer into a mobile classroom for future educational outreach activities; the trailer will include counterspace for a microscope, fish tank and educational materials to teach schoolchildren and families about mosquitoes, mosquitofish, ecology, public health, and the mission of the Mosquito Control Department; a mosquito education-themed vehicle wrap will be added so the trailer will serve as a mobile billboard in public places
- In response to the growing potential of exotic viruses coming to Florida, Mosquito Control is researching and evaluating specialized surveillance devices and equipment
- As a result of long-term pesticide usage to battle mosquito populations and associated diseases, Mosquito Control is partnering with the University of Florida and expanding its in-house resistance testing program to ensure the efficacy and proper rotation of the products

Trends and Issues:

- In response to COVID-19, Mosquito Control has implemented several measures designed to ensure worker and workplace safety; these include following a strict cleaning schedule utilizing a

daily checklist; staff working from home when appropriate; and maintaining social distancing throughout our offices and among all employees

- Regarding customer service amid the COVID-19 pandemic, mosquito inspections are still being conducted at residents' properties, but appropriate social distancing is being upheld; community outreach education at parks, schools and other public venues is temporarily suspended until further notice; large-scale construction projects, such as major mosquito impoundment repairs, are being conducted if the benefit of completion is greater than the risk of an inadvertent shut-down due to COVID-19 related staff or resource limitations
- Should housing values decrease as a result of a COVID-19 related economic downturn, there may be a reduction in Ad Valorem revenue collected; as this is our main source of revenue, a decrease will have a direct impact on operations and would potentially impact fiscal year 2021-2022 and beyond; Mosquito Control is moving forward cautiously into the next budget year without compromising our core public health mission; grant acquisition opportunities are currently being pursued to help offset potential financial impacts to the department

Service Level Impacts:

Not Applicable

MOSQUITO CONTROL DEPARTMENT: SUMMARY

Mosquito Control Department Revenue & Expense Category	Actual F Y 2018- 2019	Final Budget F Y 2019- 2020	Adopted Budget F Y 2020- 2021	Difference	% Change
Taxes Revenue	\$6,877,000	\$7,428,869	\$7,622,392	\$193,523	2.61%
Permits, Fees & Special Assessment Revenue	\$0	\$0	\$0	\$0	0.00%
Intergovernmental Revenue	\$6,902	\$0	\$0	\$0	0.00%
Charges for Services Revenue	\$12,975	\$60,000	\$35,000	-\$25,000	-41.67%
Fines and Forfeits Revenue	\$0	\$0	\$0	\$0	0.00%
Miscellaneous Revenue	\$187,851	\$121,500	\$121,500	\$0	0.00%
Statutory Reduction	\$0	-\$380,518	-\$388,945	-\$8,427	2.21%
Total Operating Revenues	\$7,084,729	\$7,229,851	\$7,389,947	\$160,096	2.21%
Balance Forward Revenue	\$3,099,579	\$3,149,079	\$3,210,000	\$60,921	1.93%
Transfers - General Revenue	\$0	\$0	\$0	\$0	0.00%
Transfers - Other Revenue	\$134,043	\$143,963	\$143,538	-\$425	-0.30%
Other Finance Source Revenue	\$0	\$0	\$0	\$0	0.00%
Total Non-Operating Revenues	\$3,233,622	\$3,293,042	\$3,353,538	\$60,496	1.84%
TOTAL REVENUES	\$10,318,351	\$10,522,893	\$10,743,485	\$220,592	2.10%
Compensation and Benefits Expense	\$2,931,816	\$3,360,874	\$3,479,932	\$119,058	3.54%
Operating Expense	\$3,239,070	\$3,496,623	\$3,347,469	-\$149,154	-4.27%
Capital Outlay Expense	\$257,120	\$367,500	\$318,400	-\$49,100	-13.36%
Operating Expenditures	\$6,428,006	\$7,224,997	\$7,145,801	-\$79,196	-1.10%
C I P Expense	\$99,752	\$500,000	\$800,000	\$300,000	60.00%
Debt Service Expense	\$0	\$0	\$0	\$0	0.00%
Reserves-Operating Expense	\$0	\$737,551	\$737,551	\$0	0.00%
Reserves - Capital Expense	\$0	\$1,400,325	\$1,400,325	\$0	0.00%
Reserves - Restricted Expense	\$0	\$0	\$0	\$0	0.00%
Grants and Aid Expense	\$0	\$0	\$0	\$0	0.00%
Transfers Expense	\$641,514	\$660,020	\$659,808	-\$212	-0.03%

Mosquito Control Department Revenue & Expense Category	Actual F Y 2018-2019	Final Budget F Y 2019-2020	Adopted Budget F Y 2020-2021	Difference	% Change
<i>Total Non-Operating Expenses</i>	\$741,266	\$3,297,896	\$3,597,684	\$299,788	9.09%
TOTAL EXPENDITURES	\$7,169,272	\$10,522,893	\$10,743,485	\$220,592	2.10%

MOSQUITO CONTROL DEPARTMENT: BUDGET VARIANCES

Mosquito Control Department Revenue and Expense Category	Variance	% Variance	Explanation
Taxes Revenue	\$193,523	2.61%	Associated with increase in Ad Valorem tax revenue due to increased property values and new construction
Permits, Fees & Special Assessments Revenue	\$0	0.00%	
Intergovernmental Revenue	\$0	0.00%	
Charges for Services Revenue	-\$25,000	-41.67%	Due to a decrease in aquatic vegetation control requisition work for State and County Departments based on historical data
Fines and Forfeits Revenue	\$0	0.00%	
Miscellaneous Revenue	\$0	0.00%	
Statutory Reduction	-\$8,427	2.21%	Corresponds with changes in operating revenues
Balance Forward Revenue	\$60,921	1.93%	Due primarily to decrease in operating costs to repair mosquito impoundments that sustained hurricane damage as well as unspent funds associated with vacant positions
Transfers - General Revenue	\$0	0.00%	
Transfers - Other Revenue	-\$425	-0.30%	Attributable to a decrease in Payment in Lieu of Taxes revenue
Other Finance Source Revenue	\$0	0.00%	
Compensation and Benefits Expense	\$119,058	3.54%	Attributable to cost of living adjustments, FRS rate increases, career ladder increases, and personnel reorganizations

Mosquito Control Department Revenue and Expense Category	Variance	% Variance	Explanation
Operating Expense	\$149,154	-4.27%	Due primarily to a decrease in non-recurring expenses related to rentals of heavy equipment and road materials for repairing hurricane damaged mosquito impoundments
Capital Outlay Expense	-\$49,100	-13.36%	Due to a decrease in the capital equipment requirements for Fiscal Year 2020-2021
Grants and Aid Expense	\$0	0.00%	
C I P Expense	\$300,000	60.00%	Due to the start of construction of the replacement aircraft hangar and biology lab in Fiscal Year 2020-2021
Debt Service Expense	\$0	0.00%	
Reserves-Operating Expense	\$0	0.00%	
Reserves - Capital Expense	\$0	0.00%	
Reserves - Restricted Expense	\$0	0.00%	
Transfers Expense	-\$212	-0.03%	Attributable to a decrease in debt transfers associated with energy performance based on amortization schedules

**MOSQUITO CONTROL DEPARTMENT
PERFORMANCE MEASURES**

PROGRAM	OBJECTIVE	MEASURE	ACTUAL FY 2018- 2019	ESTIMATE D FY 2019-2020	PROJECTE D FY 2020-2021
Countywide Mosquito Control	Safeguard Life, Safety, and Property; Maintaining Levels of Service	Total number of acres treated by Mosquito Control (640 acres equals one square mile)	1,321,419	1,600,000	1,600,000
Countywide Mosquito Control	Effective and Efficient Operations	Percentage of scheduled mosquito adulticiding missions completed in 3 days or less	81%	90%	90%

**MOSQUITO CONTROL DEPARTMENT
FISCAL YEAR 2020-2021 TRAVEL A&B SUMMARY**

Program Name	Description	Position	Destination	Funding Source	Total Cost
Countywide Mosquito Control	Airbus A-Star Helicopter Pilot Recurrent Training for Day and Night Emergencies	2 Aircraft Pilots	Grand Prairie, Texas	Ad Valorem	\$39,854
Countywide Mosquito Control	Aircraft Maintenance Training Course - Safran Helicopter Engines	1 Aircraft Mechanic	Grand Prairie, Texas	Ad Valorem	\$6,900
Countywide Mosquito Control	Aircraft Maintenance Training Course - Inspection Authorization Certification	1 Aircraft Mechanic	Clearwater, Florida	Ad Valorem	\$1,600
Countywide Mosquito Control	Aerial Pesticide Chemical Applicator Training for Helicopter Pilots and Ground Crew	2 Aircraft Pilots 2 Aircraft Mechanic	Lee County, Florida	Ad Valorem	\$1,850
Countywide Mosquito Control	Florida Mosquito Control Association Fall Meeting	Director, Biologist	T B D, Florida	Ad Valorem	\$1,600
Countywide Mosquito Control	Arbovirus Surveillance & Mosquito Control Workshop	2 Biologists	St. Augustine, Florida	Ad Valorem	\$650
Countywide Mosquito Control	Florida Mosquito Control Association Mosquito Control Training Courses	14 Staff	Gainesville, Florida	Ad Valorem	\$7,500
Total Funded For Department					\$59,954

**MOSQUITO CONTROL DEPARTMENT
FISCAL YEAR 2020-2021 CAPITAL OUTLAY SUMMARY**

Program Name	Description	Quantity	Unit Cost	Funding Source	Total Cost
Countywide Mosquito Control	RAM 1500 Pickup Regular Cab 4-Wheel Drive	3	\$27,400	Ad Valorem	\$82,200
Countywide Mosquito Control	36" Stainless Steel Pump 50 H P (Dummit Impoundment - Titusville)	1	\$117,000	Ad Valorem	\$117,000
Countywide Mosquito Control	18" Stainless Steel Portable Pump (Mosquito Impoundments)	1	\$97,000	Ad Valorem	\$97,000
Countywide Mosquito Control	Liquid Larvicide Spray Units (Truck Mounted)	2	\$3,000	Ad Valorem	\$6,000
Countywide Mosquito Control	Front Bucket Attachment - J D Tractor	1	\$6,200	Ad Valorem	\$6,200
Countywide Mosquito Control	Automated External Defibrillator	3	\$2,400	Ad Valorem	\$7,200
Countywide Mosquito Control	Ice Maker - Titusville Office	1	\$2,800	Ad Valorem	\$2,800
Total Funded For Department					\$318,400

Special Note:

In accordance with Brevard County Board of County Commissioners' Policy BCC-24, Procurement, this form satisfies Directive III. E. 4., requiring a detailed list of approved capital outlay items and equipment to be reviewed and approved by the Board during the Budget process.

**MOSQUITO CONTROL DEPARTMENT
 FISCAL YEAR 2020-2021 CAPITAL IMPROVEMENTS PROGRAM**

Program Name	Description	Funding Source	Total Cost
Countywide Mosquito Control	Mosquito Impoundment Land Purchase	Ad Valorem Taxes	\$100,000
Countywide Mosquito Control	Design and Construction - Aircraft Hangar and Biology Lab	Ad Valorem Taxes	\$700,000
Total Funded For Department			\$800,000