Lee County Mosquito Control District

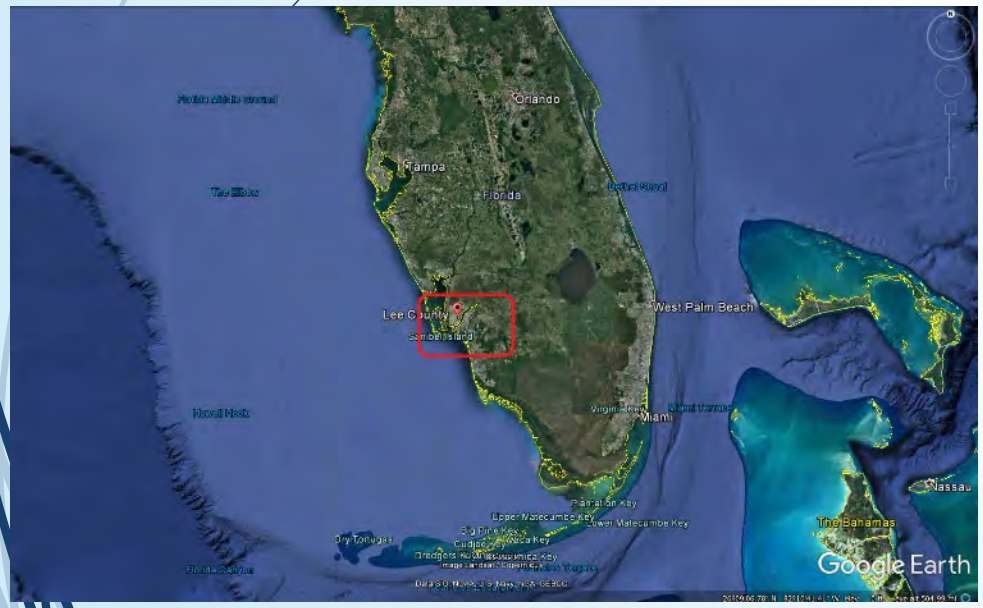
UAV program. Where we are and where we're going.

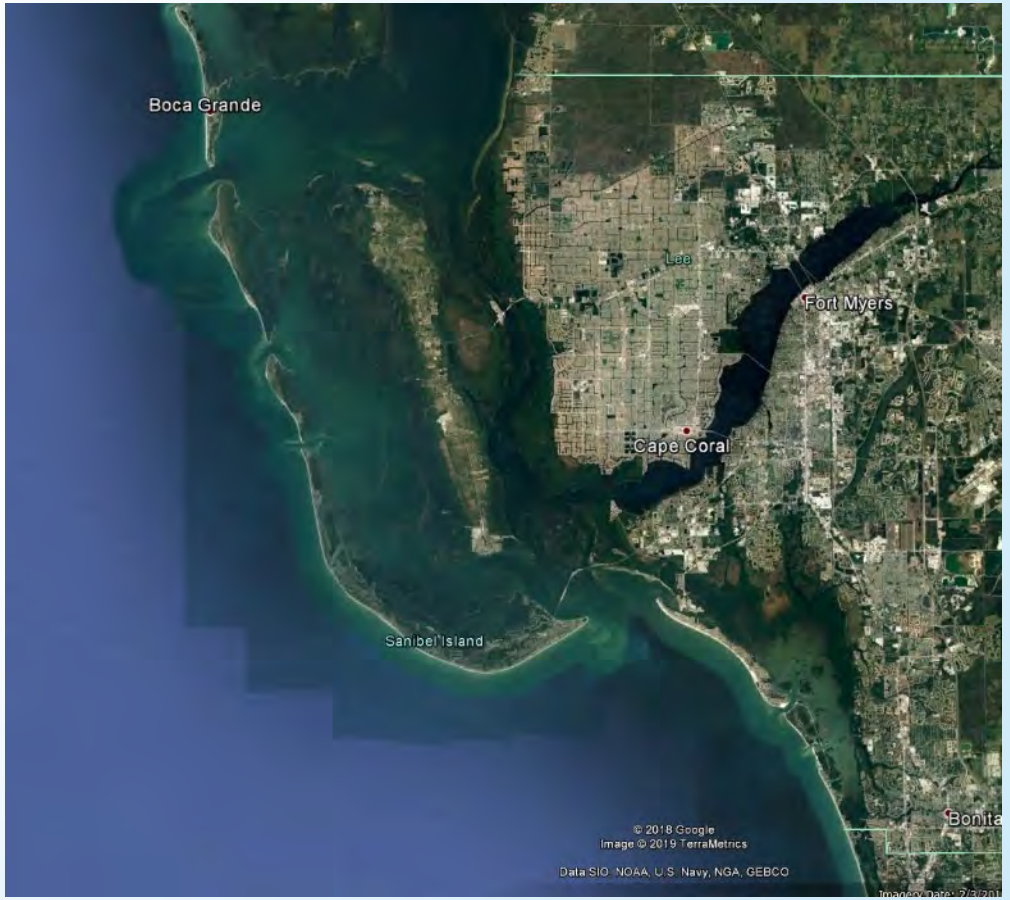
-Ed Foley

Manager, Mosquito Control

Where is Lee County, Florida?

- Lee County is located in southwest Florida
- Over 56,000 acres of salt marsh
- LCMCD established in 1958





Larviciding

Larviciding: The act of targeting mosquitoes in the aquatic juvenile lifestage

- Aerial Larviciding
  - 6 AirBus H125s
  - Liquid and Granular capabilities
  - Large and hard to hard to get to areas
- Ground larviciding
  - 6 ground larvicing trucks
  - Neighborhoods, roadways, ditches, etc.

Adulticing

Adulticiding: the act of wide area spraying targeting flying (biting) mosquitoes in the adult lifestage.

- Ground Adulticing
  - 13 ground adulticiding trucks
  - ~15,000 Acres per truck
  - Average 600,000 acres treated per year
  - ‘Neighborhoods’
- Aerial Adulticing
  - 2 Douglas DC3s, 2 King Air 90s, 4 King Air 200s, 1 AirBus H125 set up
  - ~23,000 Acres per plane
  - Average 1.2 Million acres treated per year
  - Wide scale issues

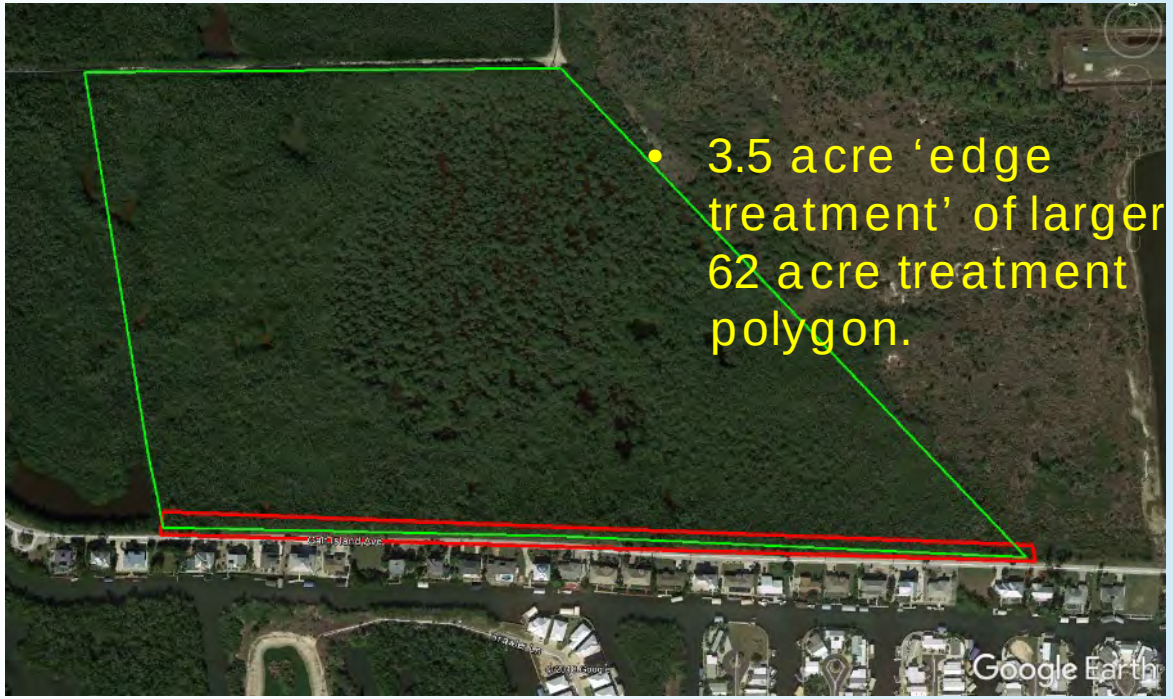
UAVs

- Current use of UAVs.
  - Inspections
  - Pictures
  - Training
- In the process of purchasing a UAV with spraying capabilities.
  - Currently larvicding only
  - ~35lb payload
  - Liquid and granular
  - Need flight and spray data recording

LCMCD Goals

- Short Term Goals:
  - Integrate UAVs camera capabilities into more daily operations
  - Augment larviciding treatments otherwise done by ground applications.
- Mid Term Goals:
  - Use UAVs to augment aerial larviciding applications
    - 'Edge spraying'
    - Smaller treatment areas
    - Sensitive treatment areas
- Long Term Goals:
  - ???
  - Sterile insect release capabilities
  - Use UAVs to augment aerial adulticiding treatments??
    - Outer Islands??

Possible treatment sites



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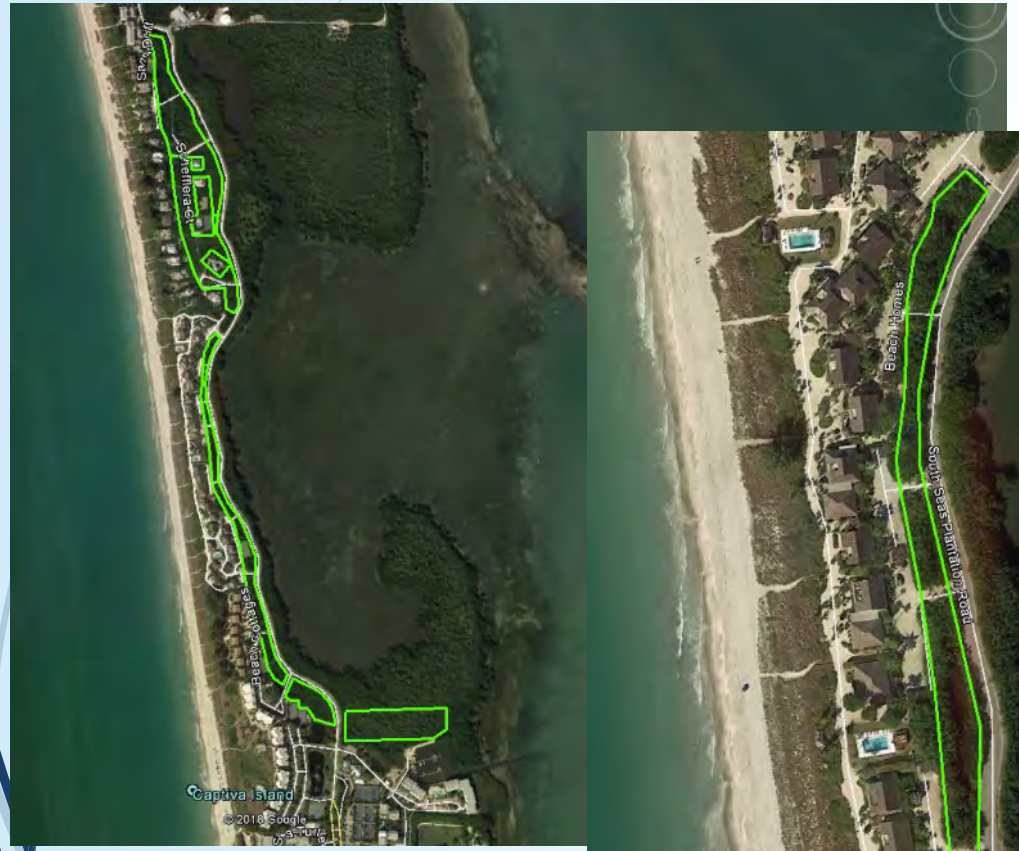
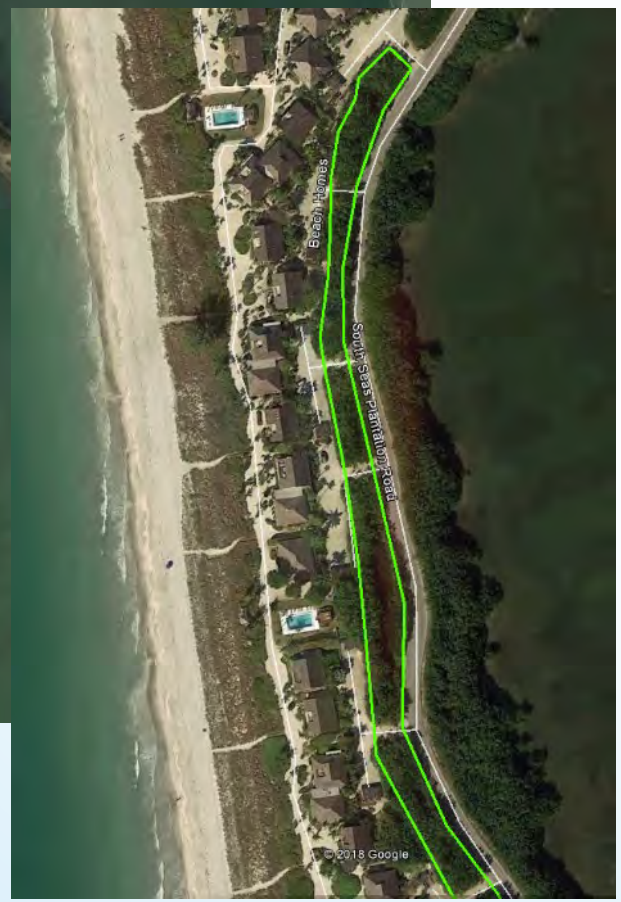
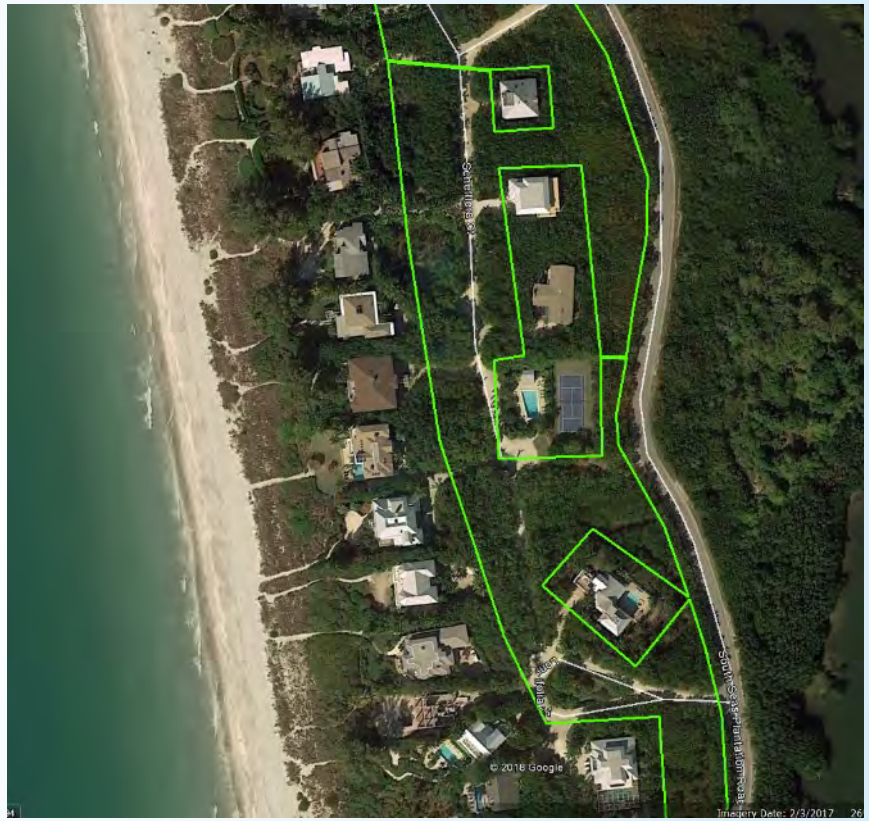




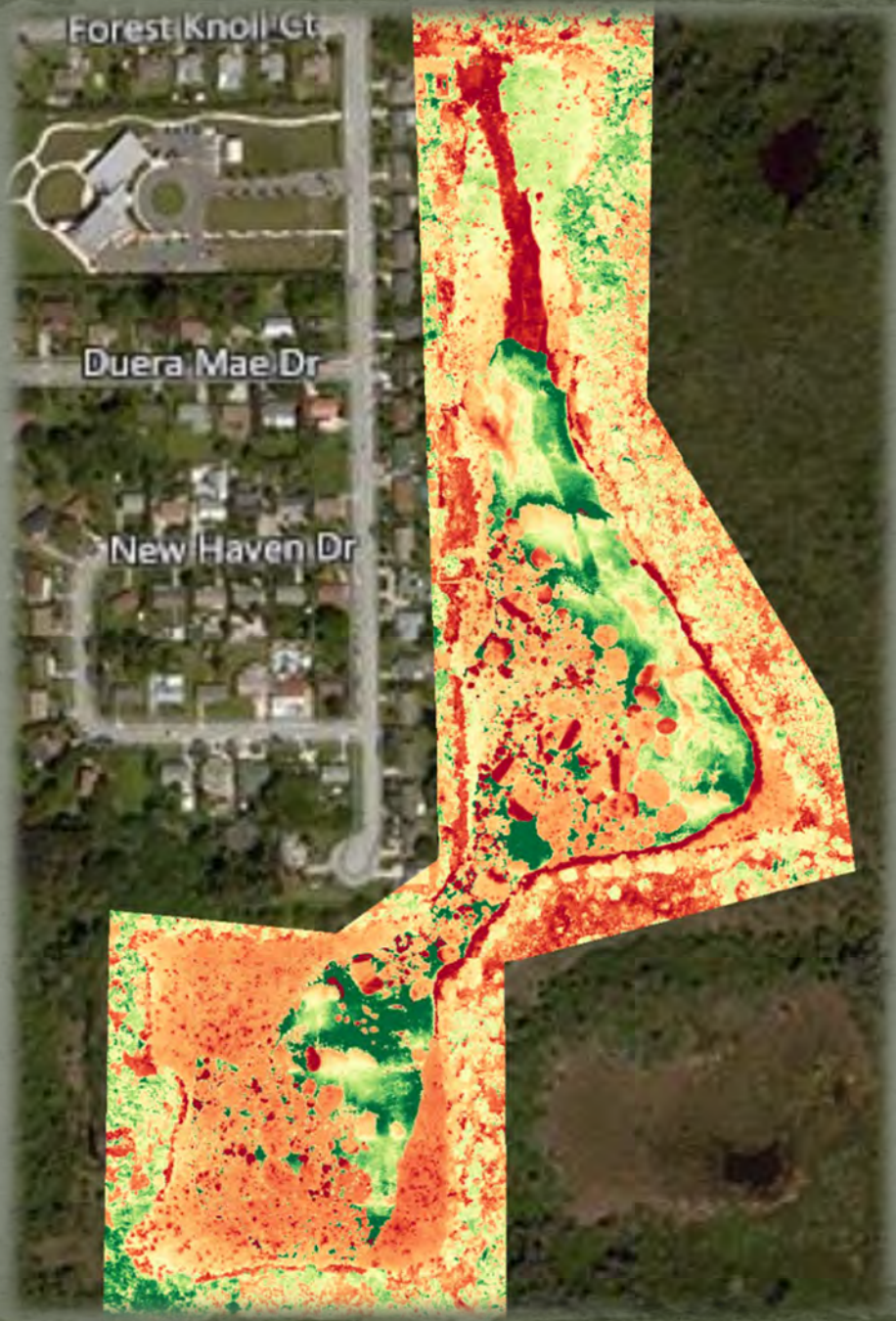



HYACINTH CONTROL DISTRICT
LEE COUNTY

Exploring the use of unmanned aerial vehicles (UAVs) with aquatic plant management practices

- Are (UAVs) the best method for control?
- Access to waterbody or site may determine which license is required Part 107 or COA?
- Measure and evaluate water conditions for pre/post applications per product label?
- Factors to consider when incorporating the use of (UAVs); maximum height restrictions for applications to reduce non target damage, type of application granular vs. liquid, plant species composition and density, size and orientation of waterbody, permit requirements or restrictions specific to site e.g. protected flora or fauna species?


Forest Knoll Ct
Duera Mae Dr
New Haven Dr


Forest Knoll Ct
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Challenges/Questions from LCMCD/LCHCD

- Regulations
  - Various agencies involved
    - FAA
    - EPA
    - FDACS
- Permits/licenses
  - Uncertainty on what rules to follow
- Labels
  - Aerial applicators vs UAV applicators?