



# Everglades Cooperative Invasive Species Management Area

2018 EVERGLADES INVASIVE SPECIES SUMMIT

## Python Removal Programs

FWC –Melissa Miller

NPS - Jenny Ketterlin

SFWMD – Mike Kirkland



# SFWMD Python Elimination Program



- Began March 25, 2017
- Over 14,000 survey hours completed
- Over 18,100 lbs
- Over 8,230 linear feet












# SFWMD Python Elimination Program



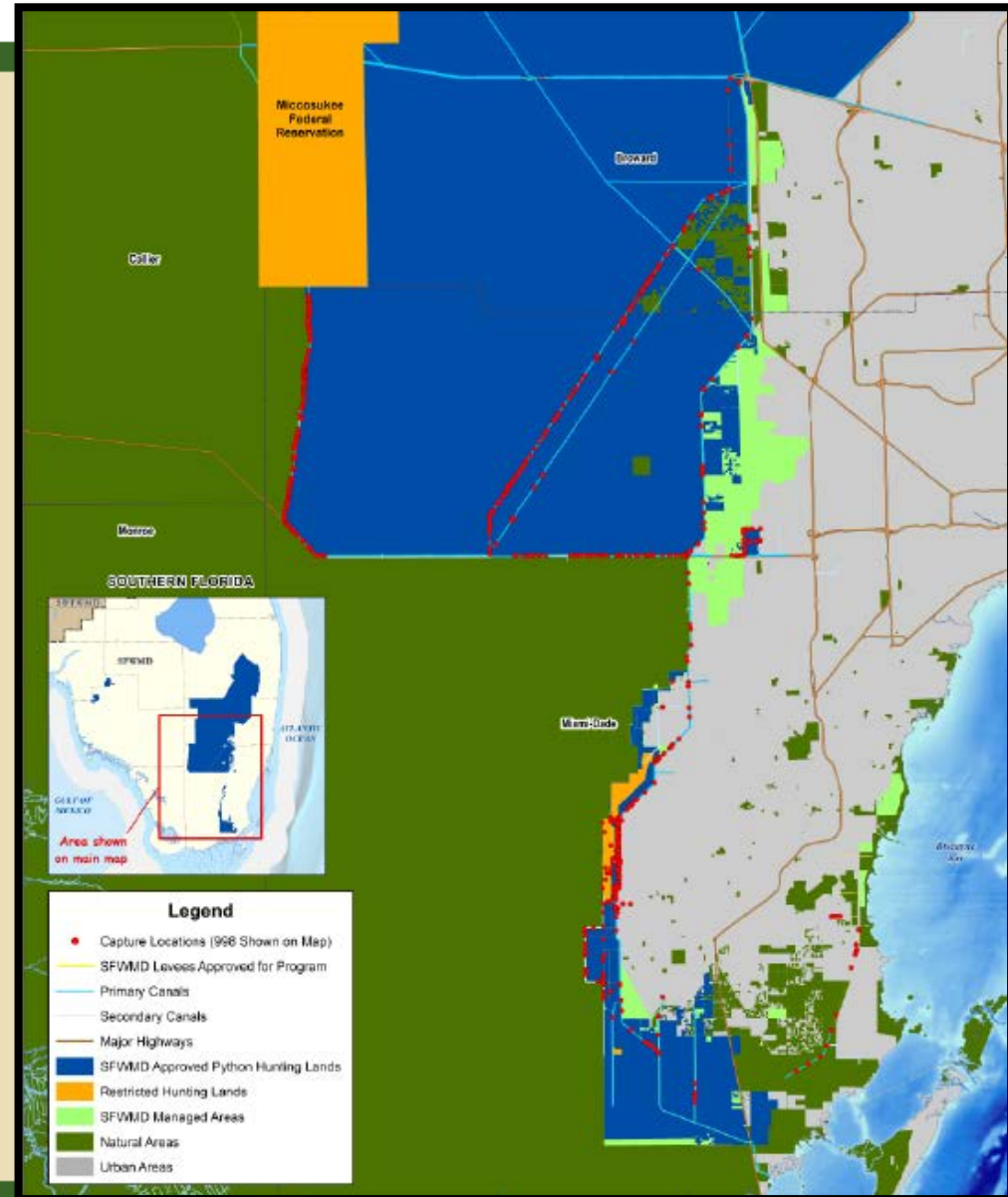
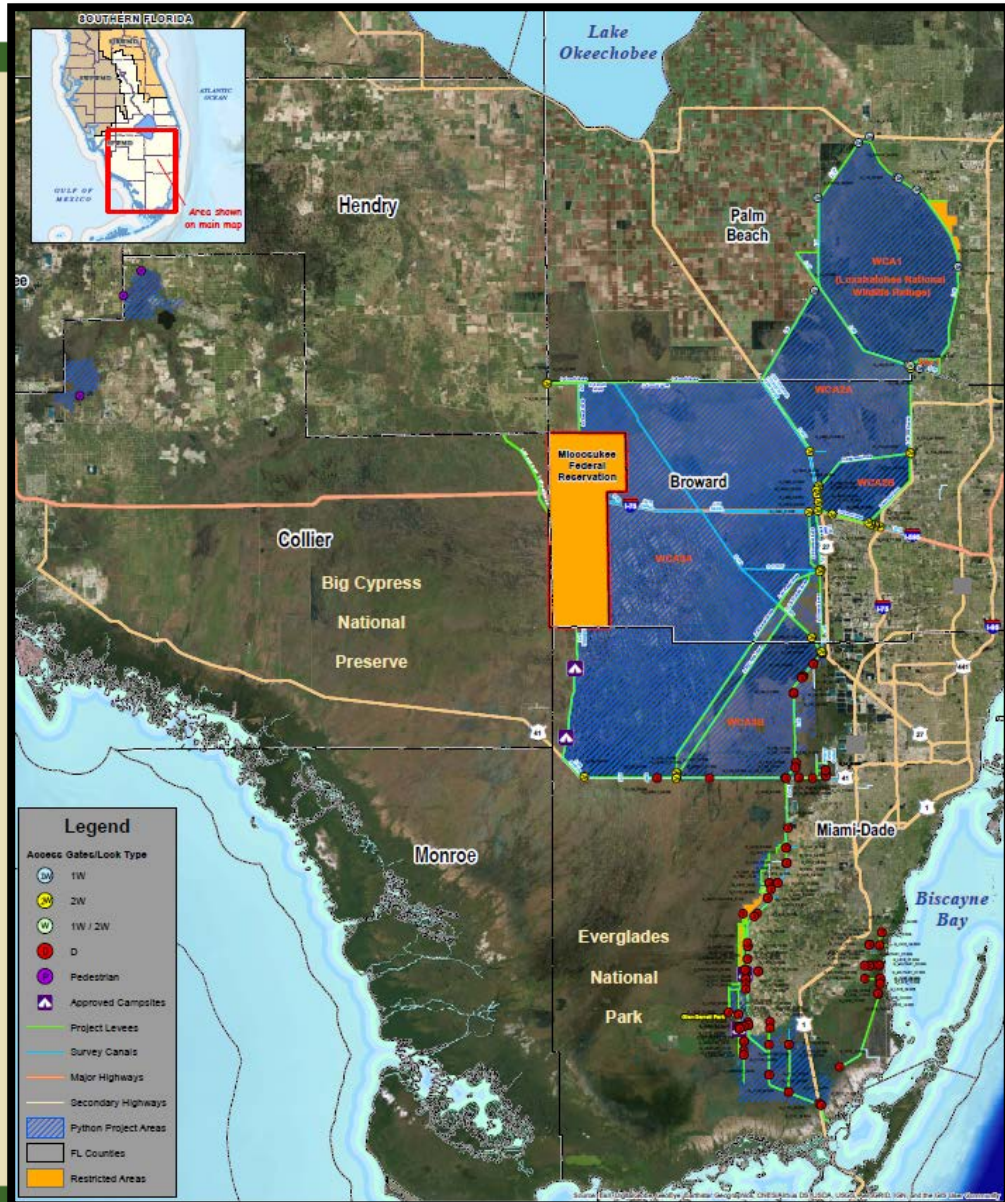
### The effects of stress on the body

-  Mood issues including anger, depression, irritability. Lack of energy, concentration problems, sleeping issues, headaches. Mental issues including anxiety disorders and panic attacks.
-  Increased blood pressure, increased heart rate, higher cholesterol and risk of heart attack
-  In the immune system, there is reduced ability to fight and recover from illness
-  Stomach cramps, reflux, and nausea
-  Loss of libido, lower sperm production for men, and increased period pain for women
-  Aches and pains in the joint and muscles
-  Lower bone density

**Over 10 years removed  
from Kirkland's  
expected life span!**



# SFWMD Python Elimination Program





# SFWMD Python Elimination Program



## Added Target Species:

- Burmese Python (*Python bivittatus*)
- Northern African Python (*Python sebae sebae*)
- Reticulated Python (*Python reticulatus*)
- Southern African Python (*Python sebae natalensis*)
- Amethystine/Scrub Python (*Morelia amethystina*)
- Boa Constrictor (*Boa constrictor*)
- Yellow Anaconda (*Eunectes notaeus*)
- Green Anaconda (*Eunectes murinus*)
- Beni Anaconda (*Eunectes beniensis*)
- DeSchauensee's Anaconda (*Eunectes deschauenseei*)



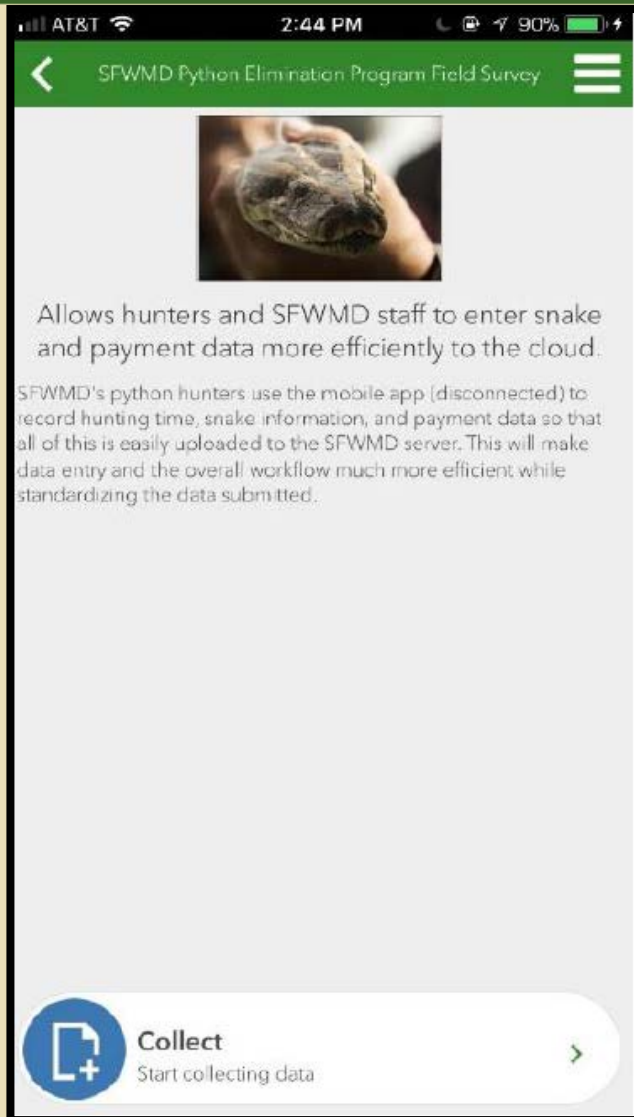
# SFWMD Python Elimination Program



**Through an app on their smart device, contractors can see where they are in real-time in relation to the designated project area.**



# SFWMD Python Elimination Program

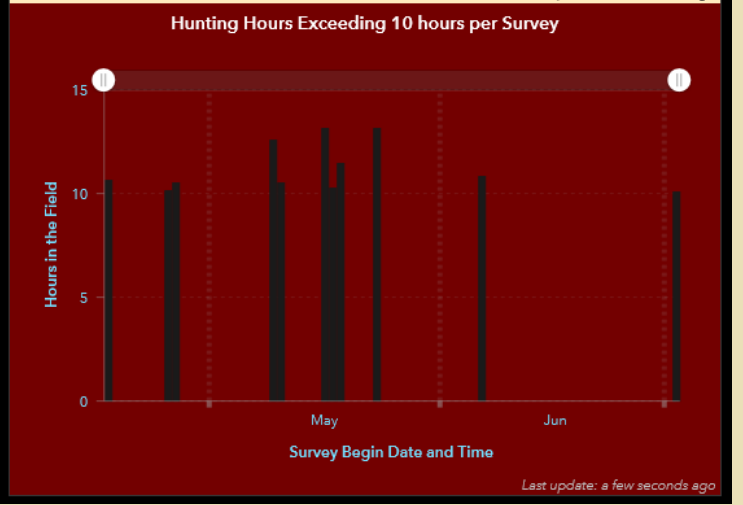
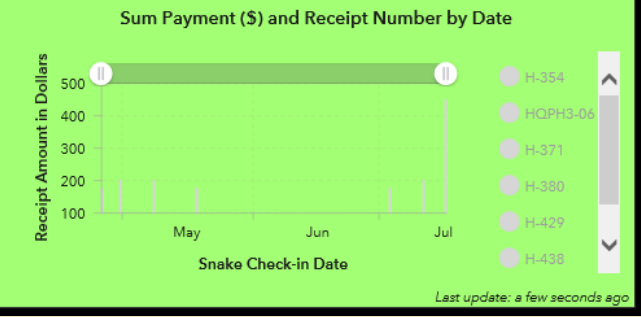
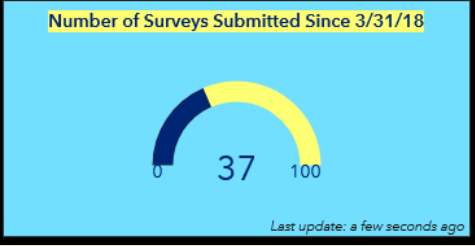
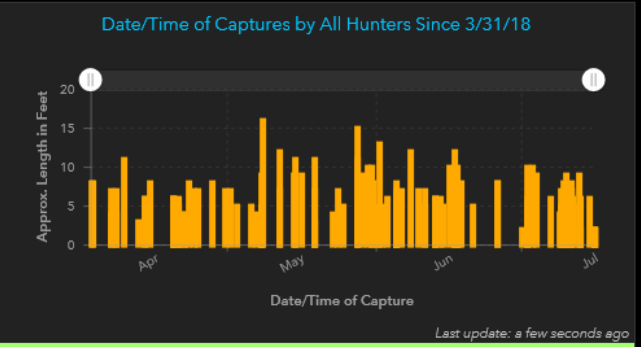
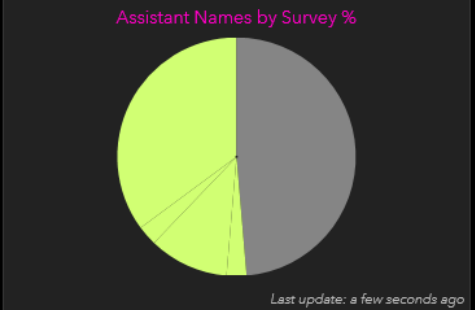
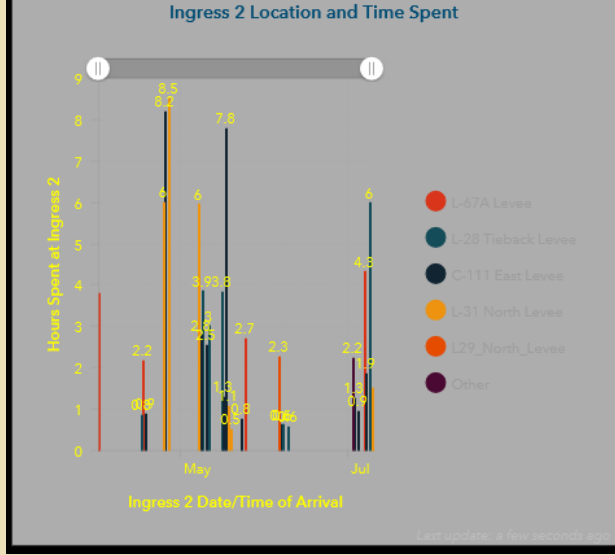
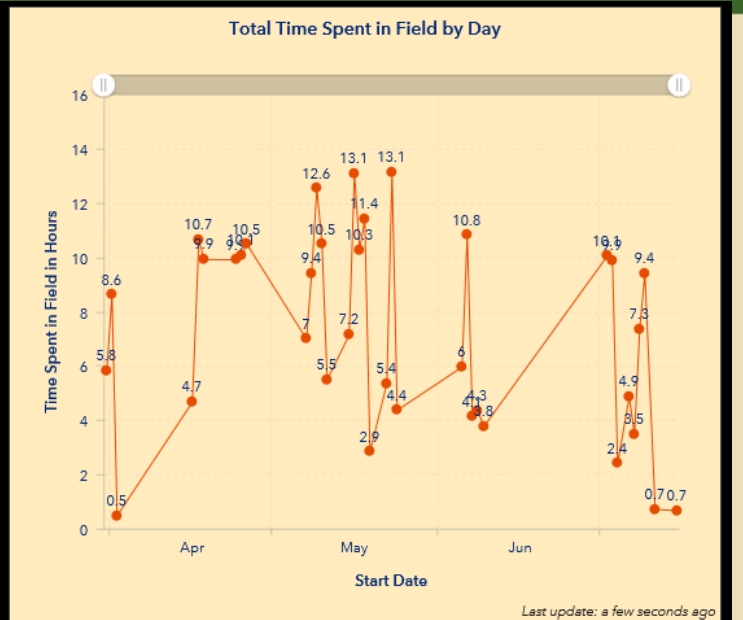
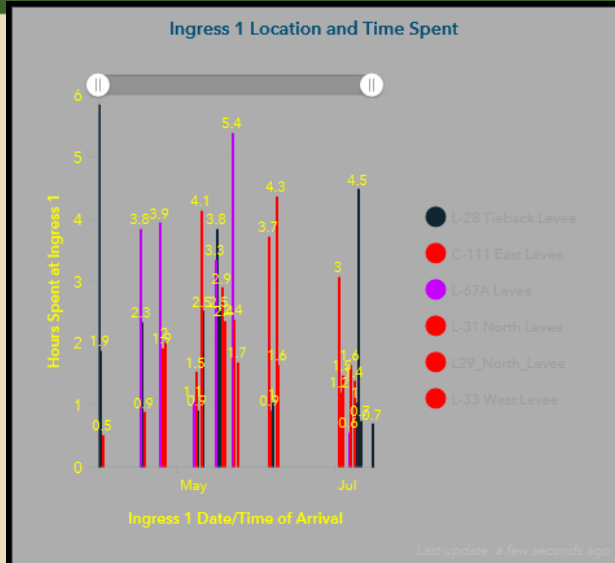


## Survey123

- **Electronic data collection and submission**
- **Records all field data to include ingress/egress time and location, capture information, photos, GPS points, and more**
- **No more datasheets except for emergency backup**
- **Improves field data quality and consistency**
- **Provides for program efficiencies**



# SFWMD Python Elimination Program



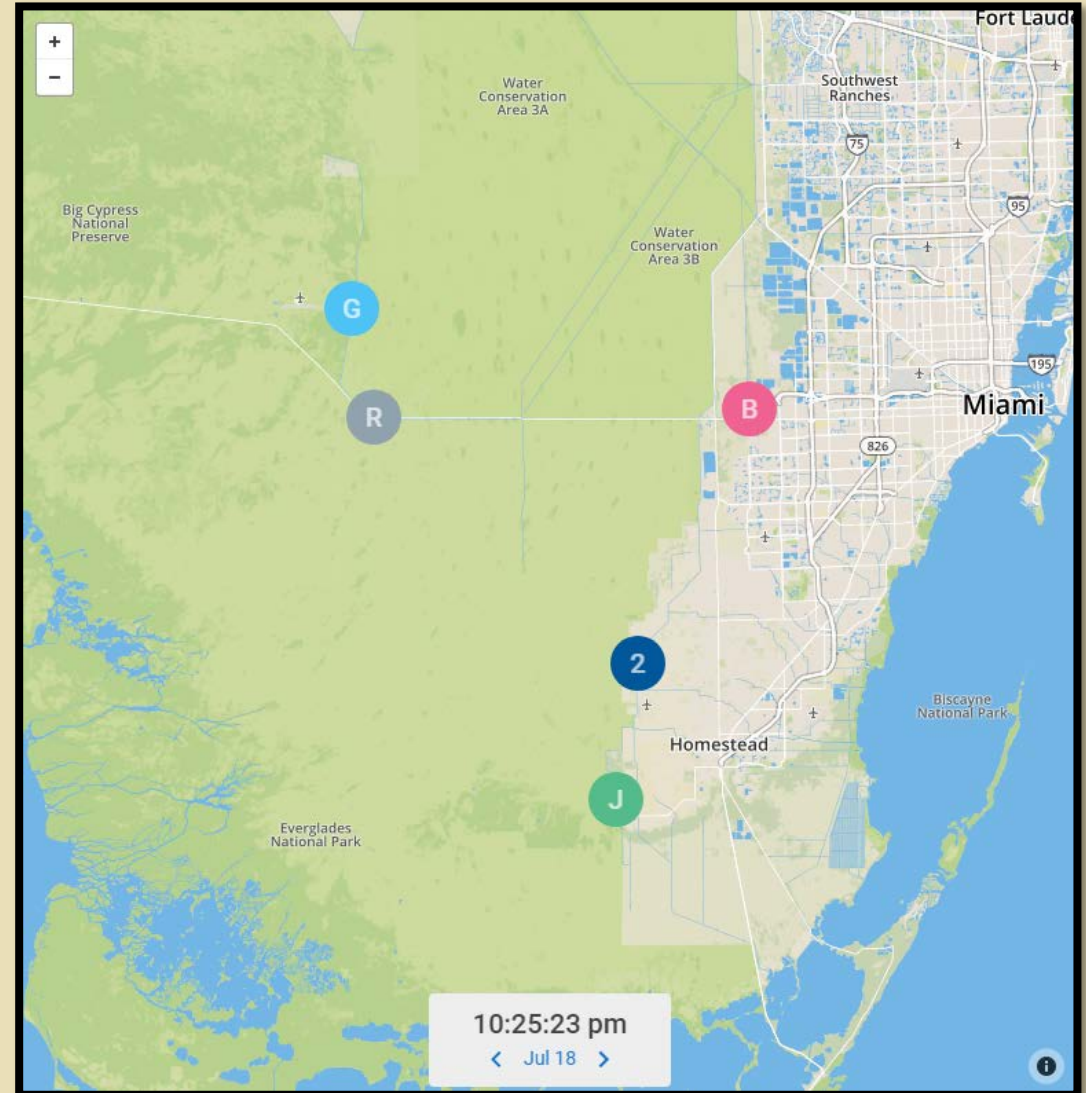


# SFWMD Python Elimination Program



## Tracking Software “Labor Sync” for contractor smart phones:

- Useful management tool
- Accountability
- Optimize coverage of the project area
- Safety



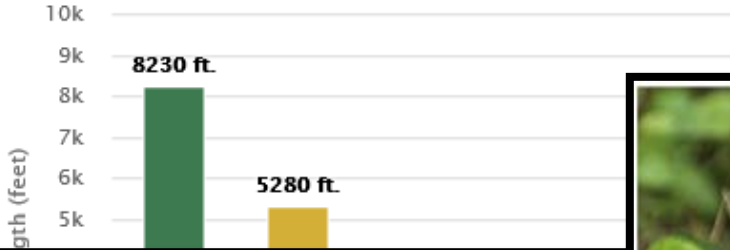


# SFWMD Python Elimination Program



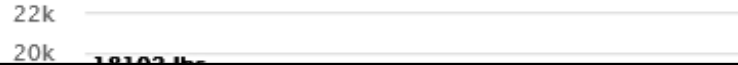
## Total Length of Pythons Eliminated

SFWMD Python Elimination Program



## Total Weight of Pythons Eliminated

SFWMD Python Elimination Program

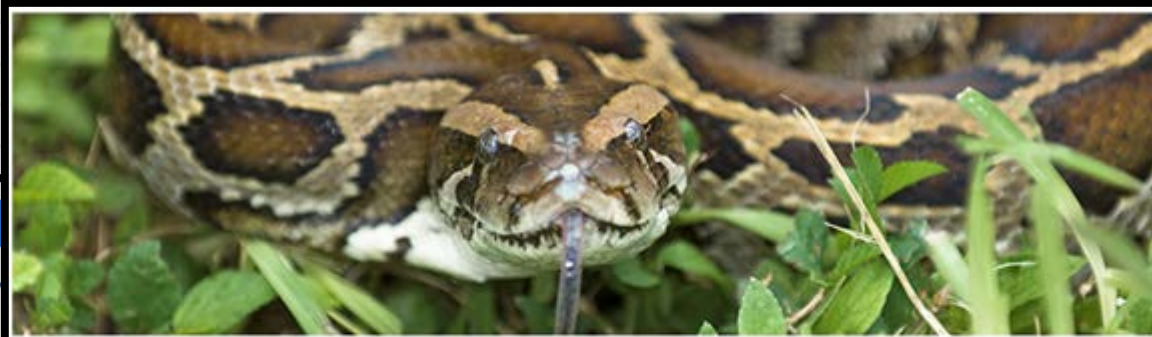
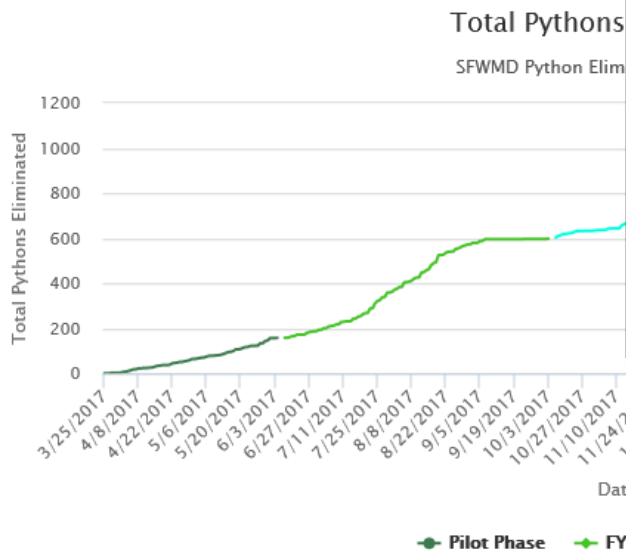


### News, Presentations and More

- [News Release: Hisssssssssssstory Made in the Everglades! SFWMD Python Hunters Eliminate 1,000th Snake - May 23, 2018](#)
- [News Release: SFWMD Python Elimination Program Grows Bigger And More Aggressive With Broward and Collier Counties Expansion - June 16, 2017](#)
- [SFWMD Governing Board: Python Pilot Program Updates - June 8, 2017 \[PDF\]](#)
- [Python Elimination Program Update - March 9, 2017](#)
- [SFWMD Governing Board: Python Pilot Program - March 9, 2017 \[PDF\]](#)
- [SFWMD Governing Board Takes Action to Protect the Everglades - March 9, 2017](#)

## Python Tracker

The charts below track the ongoing progress of program participants in turning in pythons to SFWMD staff for measurement.



## Python Elimination Program

The South Florida Water Management District Governing Board is taking aggressive action to protect the Everglades and eliminate invasive pythons from its public lands.

The Governing Board renewed the Python Elimination Program after the pilot phase eliminated 158 pythons in little over two months. The monetary compensation program incentivizes a limited number of public-spirited individuals to kill these destructive snakes, which have become an apex predator in the Everglades. The next phase of the program also expands access to participants to include SFWMD lands in Miami-Dade, Broward, Collier and Palm Beach counties.

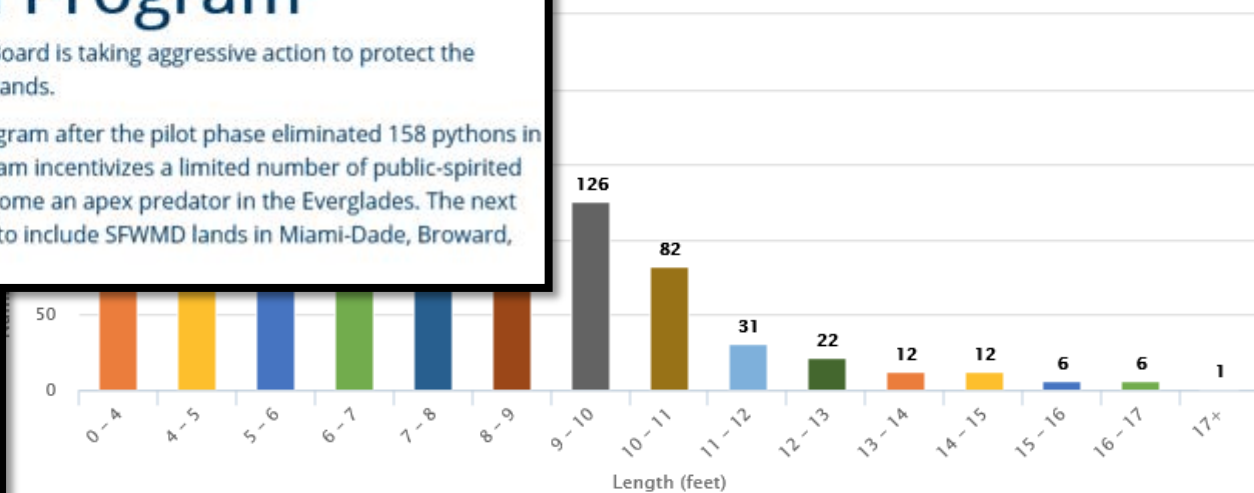
## Check-in of 1,000th Python



After less than 14 months, the SFWMD Python Elimination Program reached 1,000 Burmese pythons eliminated. Joined by

## Total Pythons Eliminated

SFWMD Python Elimination Program





# SFWMD Python Elimination Program



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# Florida Fish and Wildlife Conservation Commission Python Removal Contractor Program

## 4 state managed survey areas

- Holey Land WMA
- Rotenberger WMA
- Everglades & Francis S Taylor WMA
- Picayune Strand WMA

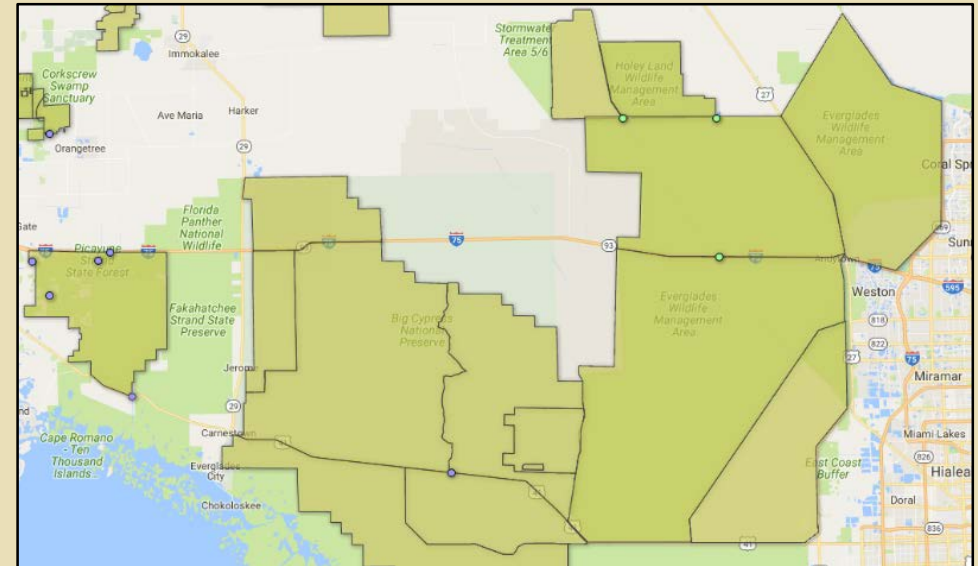
## 2 survey areas on federal lands

- BICY
- ENP (July 1st)

## Payment increase \$8.25/hr to \$15/hr

- Promote surveys in areas searched less frequently
- Valuable data

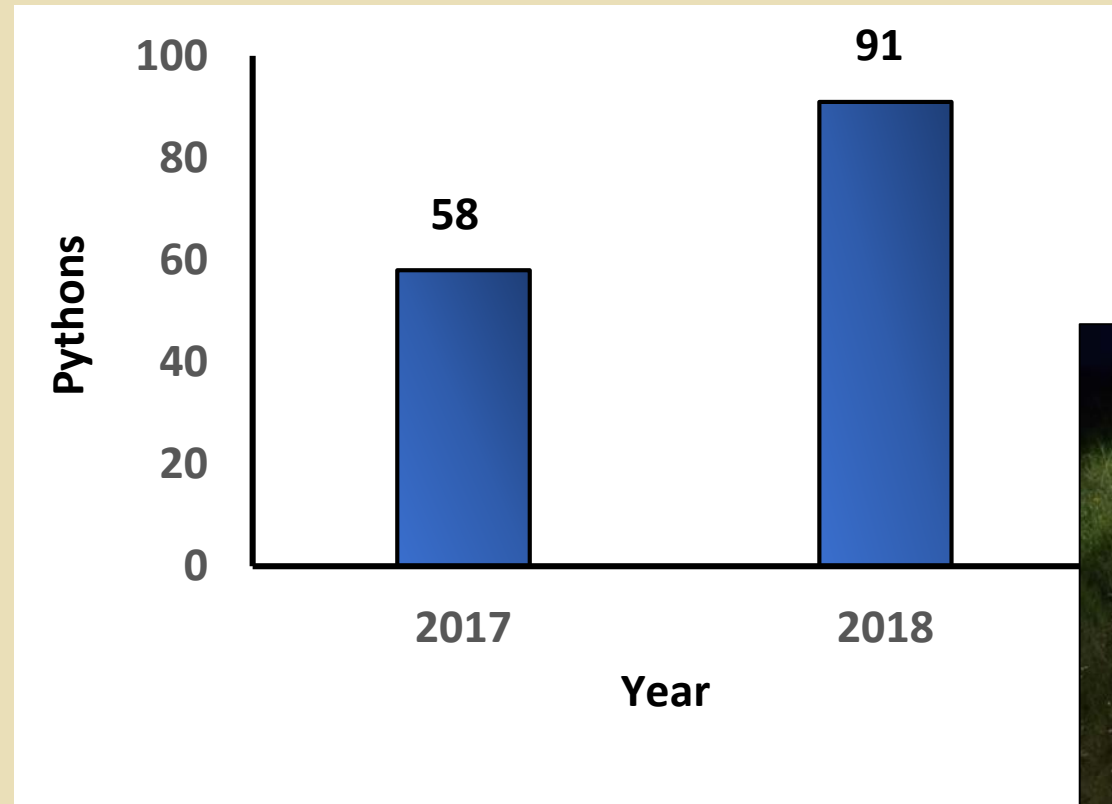
**Payment per python, \$50 for 4ft, \$25 each additional ft**





# Florida Fish and Wildlife Conservation Commission Python Removal Contractor Program

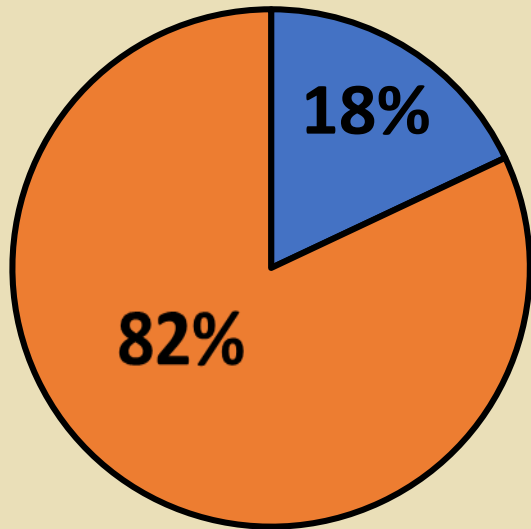
- 149 pythons removed
  - 4 from ENP
- > 1600 survey hrs
- Average total length: 244 cm (8 ft)
- Average mass: 6 kg (13 lbs)





# Florida Fish and Wildlife Conservation Commission Python Removal Contractor Program

- 1 nest, 39 eggs, 32 viable





# Florida Fish and Wildlife Conservation Commission Python Removal Contractor Program

Create a passive responder network

- Respond to 1 of 3 requests for EDRR
- Paid for effort

Remove barriers to python removal

- Access to public lands
- Empowers public to remove pythons
- EO 17-11





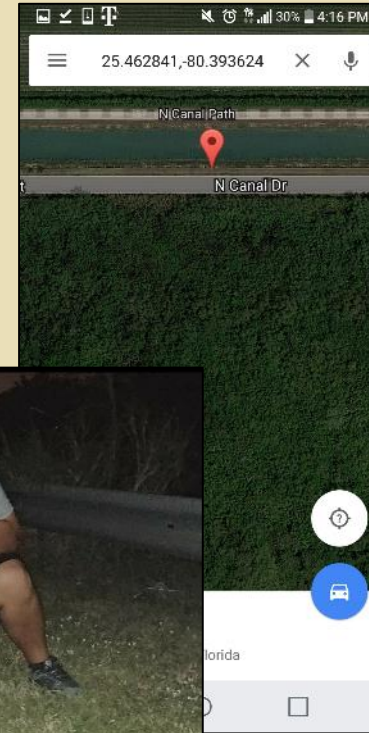
# Florida Fish and Wildlife Conservation Commission Python Removal Contractor Program

- Python Pick Up

- Incentives program
- Report pythons
- FL lifetime sportsman license!

- Python Patrol

- Rules/permits/species ID
- Network of trained individuals





# Everglades National Park Python Removal Authorized Agent Program Expansion

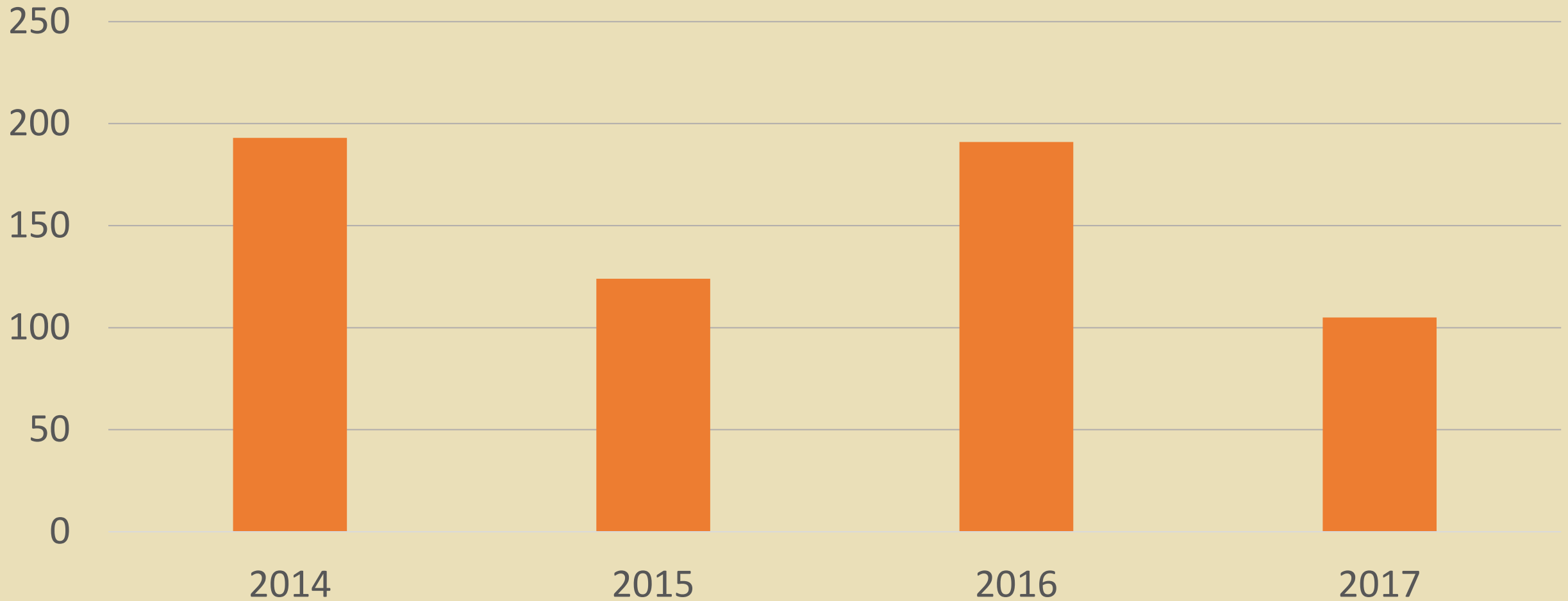


- Everglades National Park's (EVER) authorized agent program is a volunteer citizen science program that has been operating for >10 years
- Participants include members of the public, partners, and EVER staff
- USGS has been a partner in managing program and collecting scientific data since 2013
- Pythons collected have provided a wealth of information on diet, life history, habitat use, and more





# Everglades National Park Python Removal Authorized Agent Program Expansion

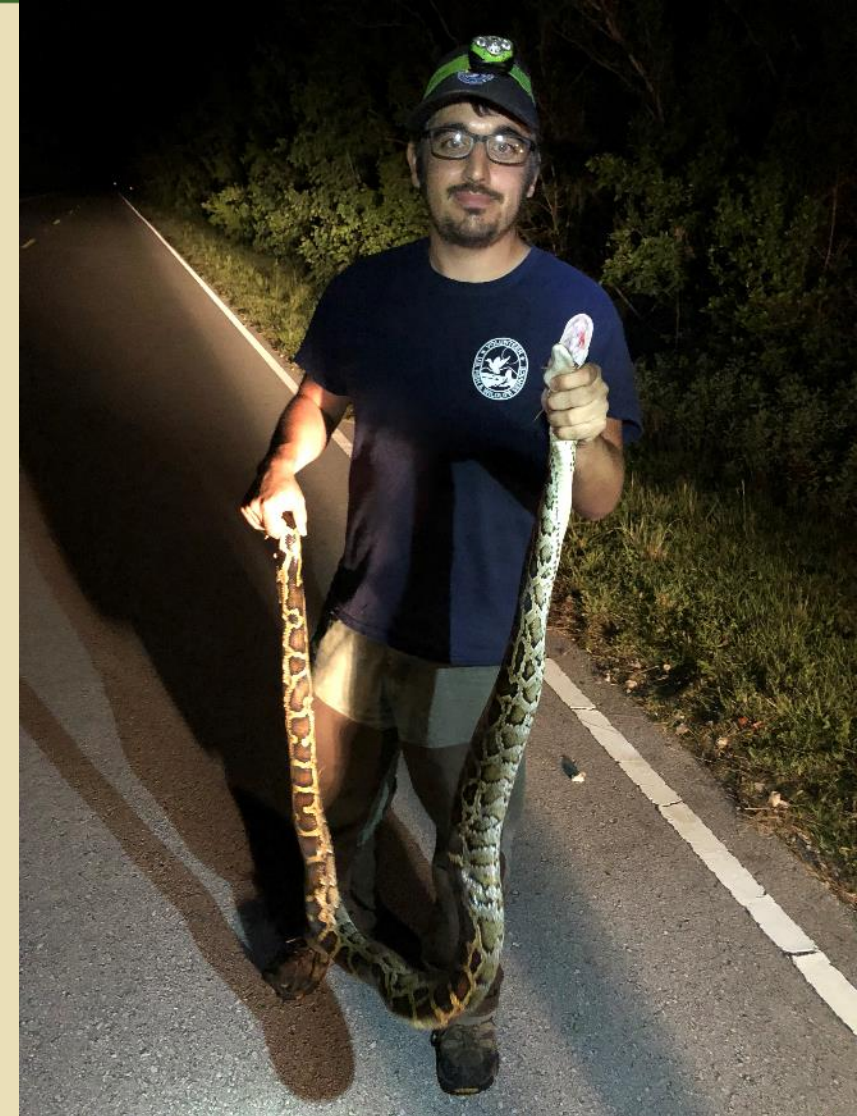




# Everglades National Park Python Removal Authorized Agent Program Expansion



- Increased cap on participants from 40 to 120
- Increase in participation by public, staff, partners, and paid FWC contractors
- FWC contractors also allowed to conduct humane field euthanasia, including with a shotgun
- Removes potential obstacle for capturing pythons, especially for contractors working solo
- Most FWC contractors stated they prefer to capture and turn in live pythons





# Everglades National Park Python Removal Authorized Agent Program Expansion

- Program is unique within National Park Service
- Program is not hunting
- Hunting is not an authorized activity in EVER
- Federal regulations do allow EVER and its agents to manage and remove exotic wildlife
- Expert python removal agents are still our most effective, available tool for finding pythons and supporting research
- Challenge is getting useful info from effort data: What is essential to collect? Are there easier ways to get what we need?
- Combination of smart data collecting tools/datasheets and creating routes/search protocol





As always, thank you to all of our partners!

