

# Indian River County Board of County Commissioners

## Free-Roaming Cats & Public Health Risks

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Miranda Hawker, MPH, Health Officer

Florida Department of Health in Indian River County

Tad Stone, Indian River County Emergency Services Director

# How many are there?

- 66% of owned cats spend all or part of their lives outdoors
- United States
  - 107 million+ outdoor cats
- Indian River County
  - 38,000+ pet cats
  - 30,000+ stray / feral cats
  - 55,000+ outdoor cats

## References:

2012 AVMA US Pet Ownership & Demographics Sourcebook, Pet Ownership Calculator

Winter L. 2004. Trap-neuter-release programs: the reality and the impacts. J Am Vet Med Assoc.

Levy JK, Crawford PC. 2004. Humane strategies for controlling feral cat populations. J Am Vet Med Assoc.



# Florida bat bite victim dies of rabies

Highlands County resident did not seek treatment, officials say

By Daniel Dahm - Digital Manager

Posted: 3:10 PM, October 27, 2017

Updated: 3:10 PM, October 27, 2017



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Florida bat.

## 6-year-old boy infected with rabies has died



Maggie Fox  
NBC News

Jan. 15, 2018 at 10:08 AM

A 6-year-old Florida boy fighting rabies has died, his father said Sunday.

Ryker Roque was being kept under anesthesia in an Orlando hospital in a desperate bid to save him from the deadliest virus there is.



share link



Boy undergoes experimental treatment for rabies after bat bite

PLAY VIDEO - 2:15

# Warning issued after Pace resident exposed to rabid cat

From staff reports, pnj.com Published 5:04 p.m. CT Feb. 19, 2018 | Updated 5:11 p.m. CT Feb. 19, 2018



(Photo: File)

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After a Pace resident was exposed to a cat that tested positive for rabies, officials are warning the public to take precautions to avoid contact with potentially rabid wild or domestic animals.

Most cases of rabies occur in wild animals such as raccoons, foxes, skunks and bats, but pets can also contract the disease if they are not vaccinated, according to the Florida Department of Health in Santa Rosa County.

The virus is carried in the saliva of infected animals and is usually transmitted through a bite or scratch.

Rabies can be fatal to humans and animals. In humans, the disease can be prevented if the rabies vaccine is administered as soon as possible after exposure.

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## Rabid stray cat attacks three in Tampa

Image Gallery

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HEALTH

## Doctors Lake residents warned of feral cat with rabies

### Clay County health advisory to last for 60 days

By Destiny McKeiver - Multi-media journalist

Posted: 3:52 PM, September 05, 2018  
Updated: 7:58 PM, September 05, 2018

TAMPA (FOX 13) - A 60-day rabies alert has been issued for a feral cat with rabies found to be rabid.

The Florida Department of Health in Hillsborough County (DOH) has issued a rabies alert for a feral cat found to be rabid at the 4500 block of W Knollwood Street in Tampa.

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## Rabid cat shot after attacking man in Gibsonton

Image Gallery

News Local News Live Video Feed Video Archives Site Map

## Brevard Health Department Issues Rabies Alert in Response to Stray Cat That Tested Positive in Cocoa

By Space Coast Daily // September 10, 2018

**RABIES ALERT FOR THE FRIDAY ROAD, FLEETWOOD PLACE AREA IN COCOA**



The Florida Department of Health in Brevard County issued a rabies alert for the Friday Road, Fleetwood Place area in Cocoa. This is in response to a stray cat that tested positive on last Friday.

**BREVARD COUNTY • MERRITT ISLAND, FLORIDA** – The Florida Department of Health in Brevard County issued a rabies alert for the Friday Road, Fleetwood Place area in Cocoa. This is in response to a stray cat that tested positive on last Friday.

# Rabid cat found in Tampa, two people treated for rabies exposure

BY: WFTS Webteam  
POSTED: 9:32 AM, Mar 7, 2018  
UPDATED: 10:02 AM, Mar 8, 2018

f | |

GOOD MORNING TAMPA BAY

**CAT TESTS POSITIVE FOR RABIES**



GREEN COVE SPRINGS, Fla. - The Clay County Health Department issued a rabies advisory Wednesday for the Doctors Lake area for Orange Park after officials said a person was bitten by a feral cat, which tested positive for rabies.

# Animal Rabies in Indian River County by Species CY 2007 – July 2018

Raccoon	7	(44%)
Bat	4	(25%)
Cat	4*	(25%)
Otter	1	(6%)
Total	16	



\*Positive cats: 2007, 2010(2), May 2018

# Outdoor Cats

## Public Health Issues

### Other Diseases Spread to Humans

- Toxoplasmosis (fecal parasite, chronic infection)
- Roundworms / Hookworms – larva migrans (fecal parasites)
- Cat bite infections
- Cat Scratch Disease
- Others



Courtesy DOH in Miami-Dade County

# Toxoplasmosis

Parasite found only in cat feces (poop)

- Infects most warm-blooded animals

Spread

- Cat to human
- Foodborne
- Mother to child
- To lagoon

Human infection

- No symptoms in most healthy people
- Miscarriage
- Neurologic disease
- Eye disease

Hydrocephalus



Ocular Toxoplasmosis





# Hookworm Outbreaks

## 2018 Pompano Beach

- 7 infected
- still being investigated

## 2011 Miami Beach

- at least 15 infected
- linked to feral cats

## 2007 Miami Children's Camp

- 22 infected
- linked to feral cats



# Outdoor Cats & Rabies

## Why Does it Happen?

- Raccoons main rabies carrier in eastern US
- Outdoor cats have contact with raccoons (fighting over food)
- Cats are #1 rabid domestic animal
- Rabid cats can be aggressive and dangerous
- Hard to catch, confine and observe for signs of rabies
  - Victim is more likely to require rabies post-exposure treatment



# High Risk Animal Rabies Exposure



**Free Roaming  
Domestic  
Animals**

**Open  
Feeding**



**Exposure to  
Rabies  
High Risk  
Animal**

**Vaccinated For  
Rabies**



**NOT vaccinated  
for Rabies**

**Capture Booster for Rabies and  
Quarantine and Observed for  
45 Days**

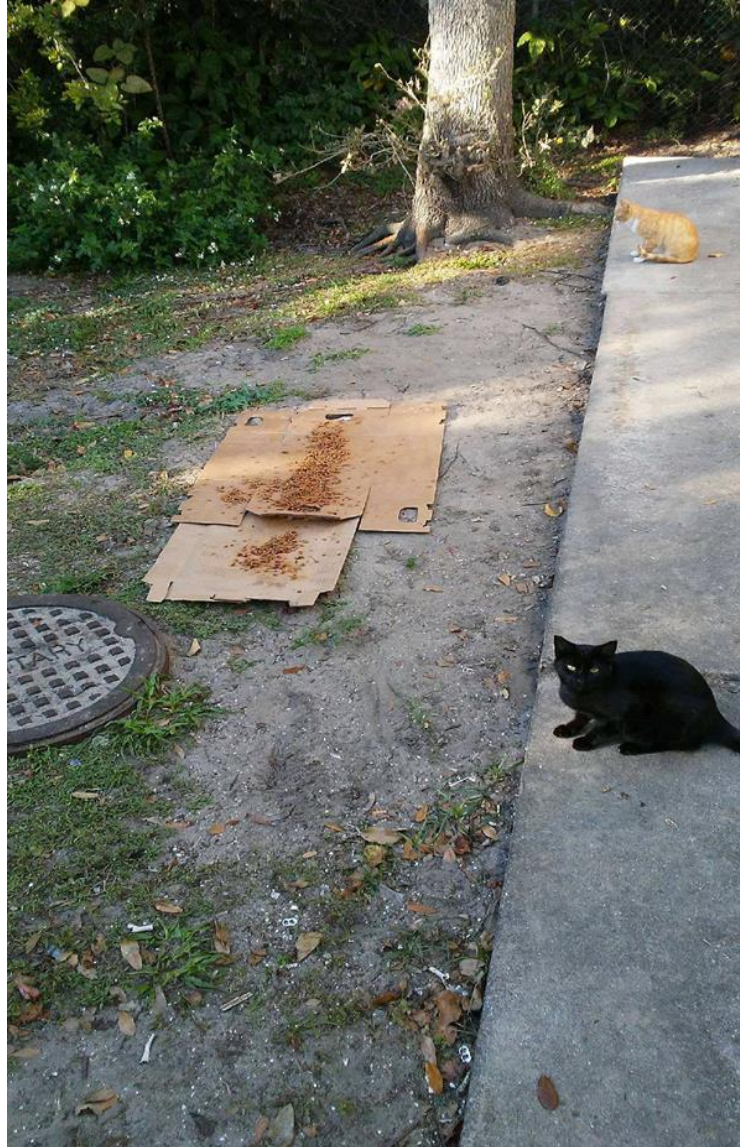
**Capture Vaccinate for Rabies  
and Quarantine for 120 Days**

# Trap-Neuter-Release or Return (TNR)

- Ineffective at population control in most situations
  - Can't capture every cat
  - Immigration of intact animals into population
  - Continued dumping of animals by humans
- Feeding stations
  - Increase animal congregation and density
  - Wildlife comingling / competing for food
  - Increase disease spread
    - Within the colony
    - To other species
    - To humans



# Open Feeding



# Public Health Threats from Sanitary Nuisances

**Feeding Colonies Often Create other Sanitary Nuisances  
Threatening and Impacting Neighborhoods**



Animal Intake Data  
Humane Society and Animal Control  
2010-2018



# Density of Captured Cats

## 8-year period (2010 - 2018)

**LEGEND**

Density of Captures

- High
- Low

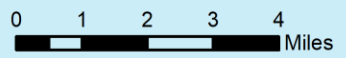
Rabies Alert Boundaries

- 2018
- 2010 (December)
- 2007

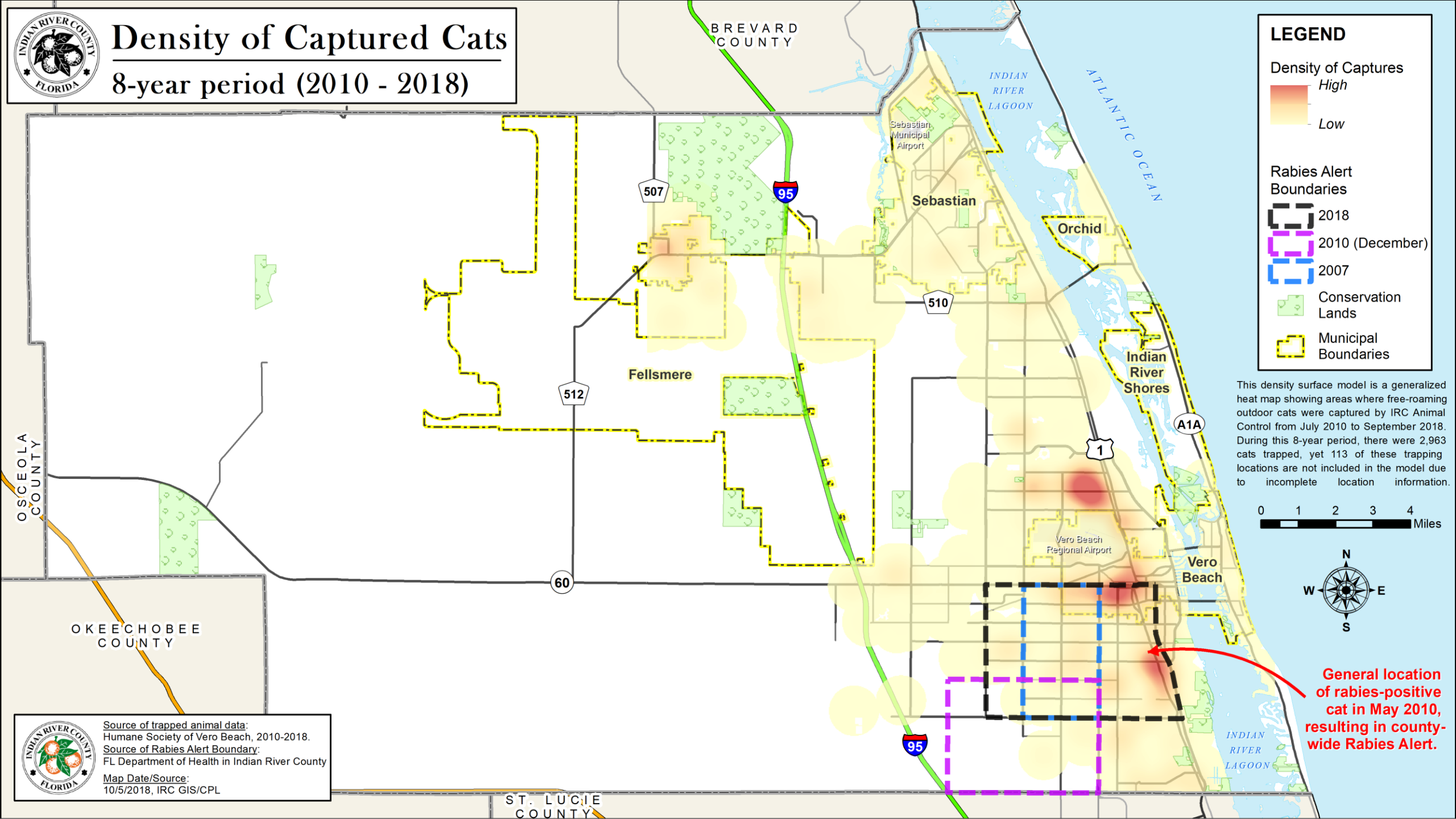
Conservation Lands

Municipal Boundaries

This density surface model is a generalized heat map showing areas where free-roaming outdoor cats were captured by IRC Animal Control from July 2010 to September 2018. During this 8-year period, there were 2,963 cats trapped, yet 113 of these trapping locations are not included in the model due to incomplete location information.



**General location of rabies-positive cat in May 2010, resulting in county-wide Rabies Alert.**



Source of trapped animal data:  
Humane Society of Vero Beach, 2010-2018.  
Source of Rabies Alert Boundary:  
FL Department of Health in Indian River County  
Map Date/Source:  
10/5/2018, IRC GIS/CPL

ST. LUCIE COUNTY



# Capture Counts: Gifford

## 8-year period (2010 - 2018)

### LEGEND

**Capture Locations**

*Cat Count Per Location*

- 1 - 2
- ▲ 3 - 6
- ◆ 7 - 14
- ⊙ 15 - 30

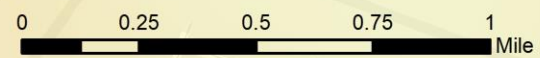
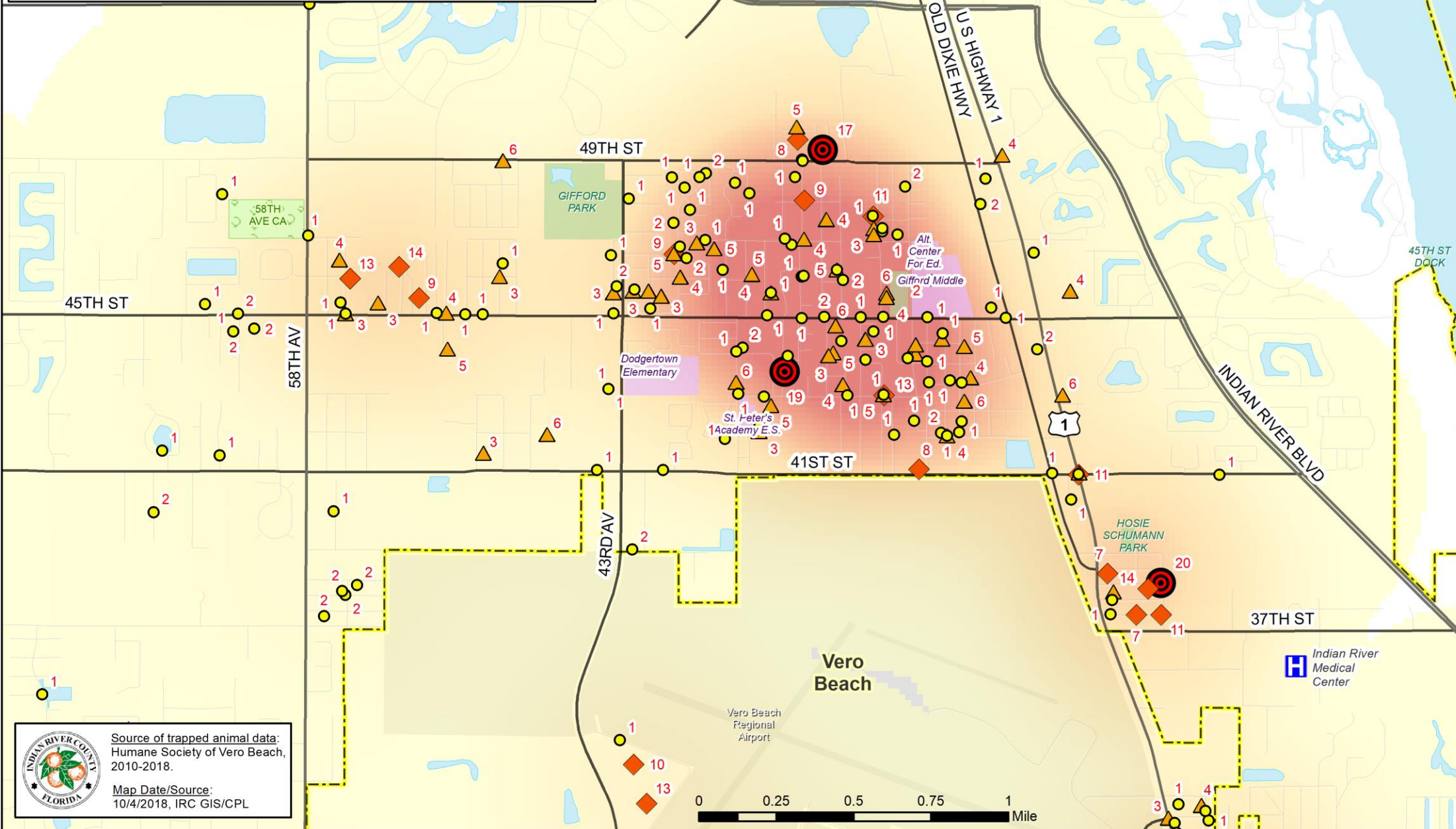
**Density of Captures**

High

Low

The point symbology represents a range of successful captures by magnitude at locations where public complaints were made from July 2010 thru September 2018 (8-year period). Labels indicate the actual number of cats captured at a single location.

- County Parks
- Conservation Lands
- Schoolyard



Source of trapped animal data:  
Humane Society of Vero Beach,  
2010-2018.

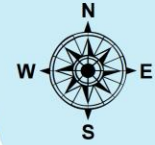
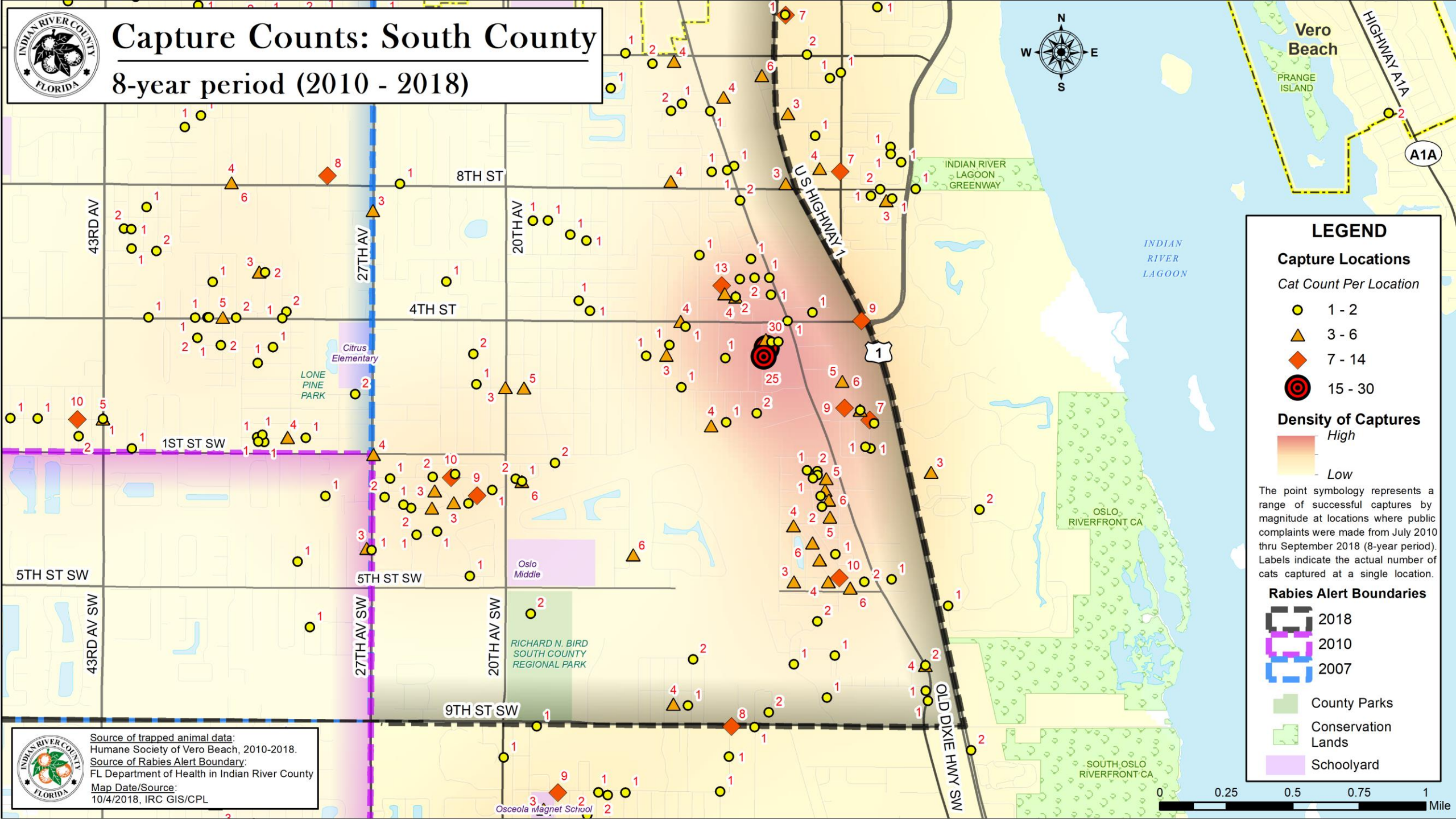
Map Date/Source:  
10/4/2018, IRC GIS/CPL





# Capture Counts: South County

## 8-year period (2010 - 2018)



### LEGEND

**Capture Locations**

*Cat Count Per Location*

- 1 - 2
- 3 - 6
- 7 - 14
- 15 - 30

**Density of Captures**

*High*

*Low*

The point symbology represents a range of successful captures by magnitude at locations where public complaints were made from July 2010 thru September 2018 (8-year period). Labels indicate the actual number of cats captured at a single location.

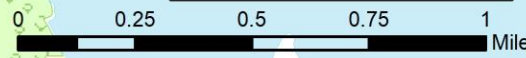
**Rabies Alert Boundaries**

- 2018
- 2010
- 2007

- County Parks
- Conservation Lands
- Schoolyard



Source of trapped animal data:  
Humane Society of Vero Beach, 2010-2018.  
Source of Rabies Alert Boundary:  
FL Department of Health in Indian River County  
Map Date/Source:  
10/4/2018, IRC GIS/CPL





# Capture Counts: Fellsmere

## 8-year period (2010 - 2018)

### LEGEND

**Capture Locations**

*Cat Count Per Location*

- 1 - 2
- 3 - 6
- 7 - 14
- 15 - 30

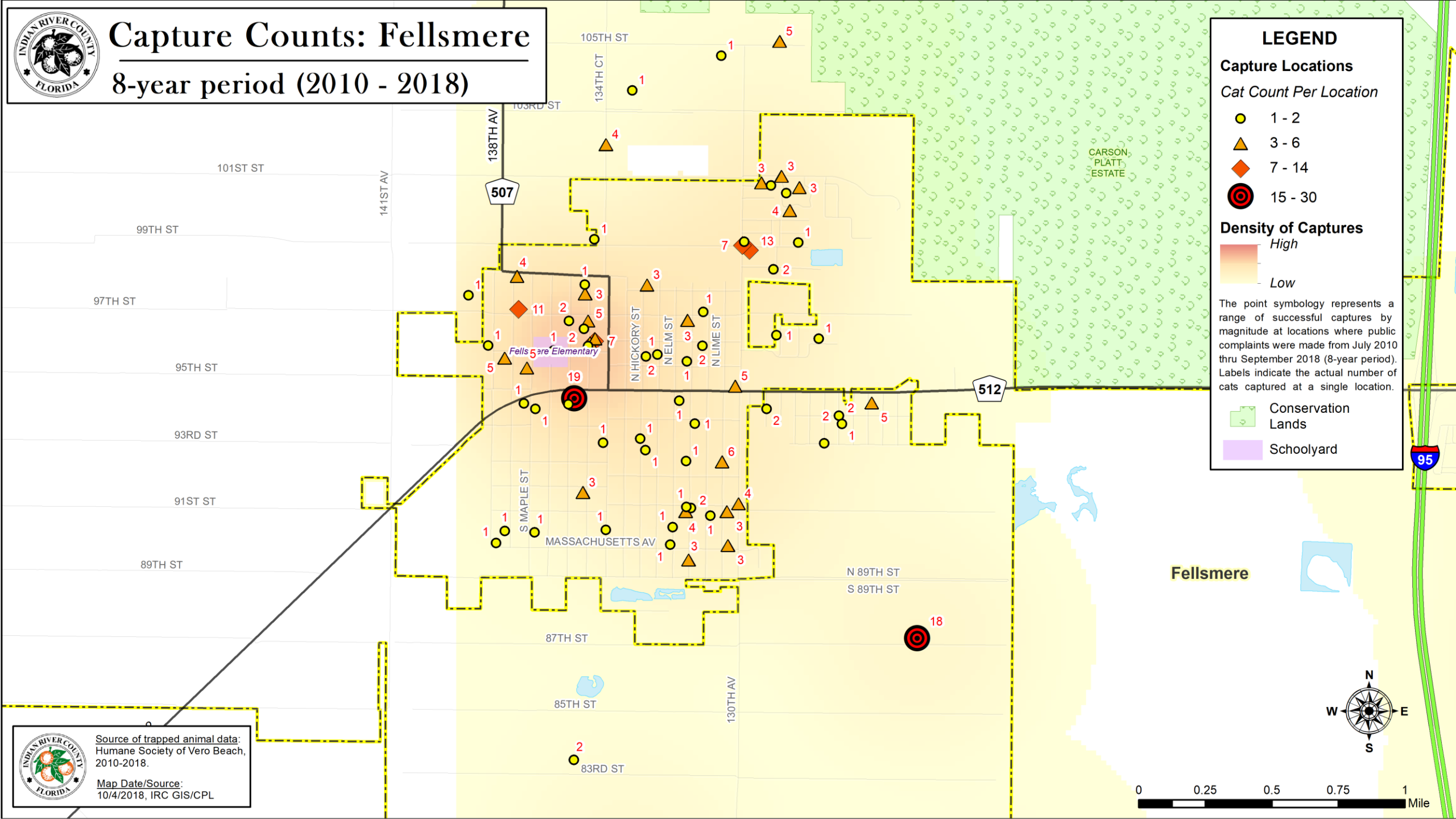
**Density of Captures**

*High*

*Low*

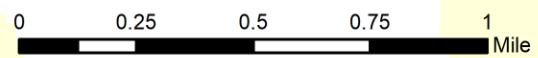
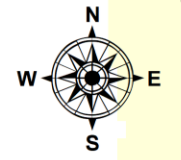
The point symbology represents a range of successful captures by magnitude at locations where public complaints were made from July 2010 thru September 2018 (8-year period). Labels indicate the actual number of cats captured at a single location.

- Conservation Lands
- Schoolyard



Source of trapped animal data:  
Humane Society of Vero Beach,  
2010-2018.

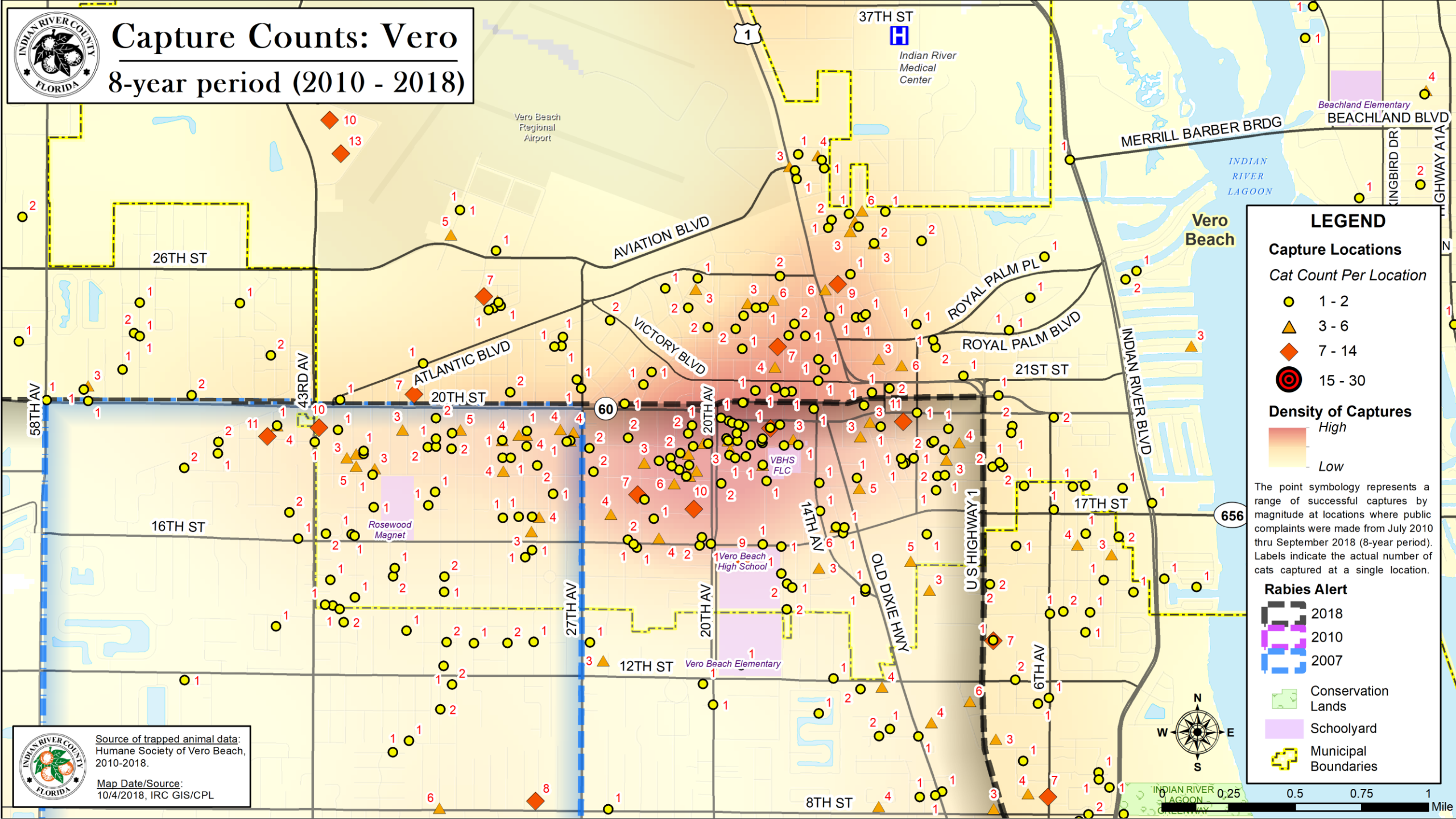
Map Date/Source:  
10/4/2018, IRC GIS/CPL





# Capture Counts: Vero

## 8-year period (2010 - 2018)



### LEGEND

**Capture Locations**

**Cat Count Per Location**

- 1 - 2
- ▲ 3 - 6
- ◆ 7 - 14
- ◎ 15 - 30

**Density of Captures**

High  
Low

The point symbology represents a range of successful captures by magnitude at locations where public complaints were made from July 2010 thru September 2018 (8-year period). Labels indicate the actual number of cats captured at a single location.

**Rabies Alert**

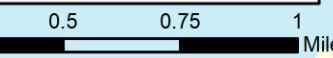
- 2018
- 2010
- 2007

- Conservation Lands
- Schoolyard
- Municipal Boundaries



Source of trapped animal data:  
Humane Society of Vero Beach,  
2010-2018.

Map Date/Source:  
10/4/2018, IRC GIS/CPL





# Capture Counts: Sebastian North

## 8-year period (2010 - 2018)

**LEGEND**

**Capture Locations**

*Cat Count Per Location*

- 1 - 2
- ▲ 3 - 6
- ◆ 7 - 14
- ◎ 15 - 30

**Density of Captures**

High

Low

The point symbology represents a range of successful captures by magnitude at locations where public complaints were made from July 2010 thru September 2018 (8-year period). Labels indicate the actual number of cats captured at a single location.

- Conservation Lands
- County Parks
- Schoolyard
- Municipal Boundaries



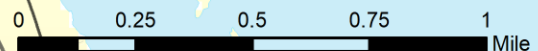
BREVARD COUNTY

St. Sebastian River Preserve State Park



Source of trapped animal data:  
Humane Society of Vero Beach,  
2010-2018.

Map Date/Source:  
10/4/2018, IRC GIS/CPL





# Capture Counts: Sebastian South

## 8-year period (2010 - 2018)

### LEGEND

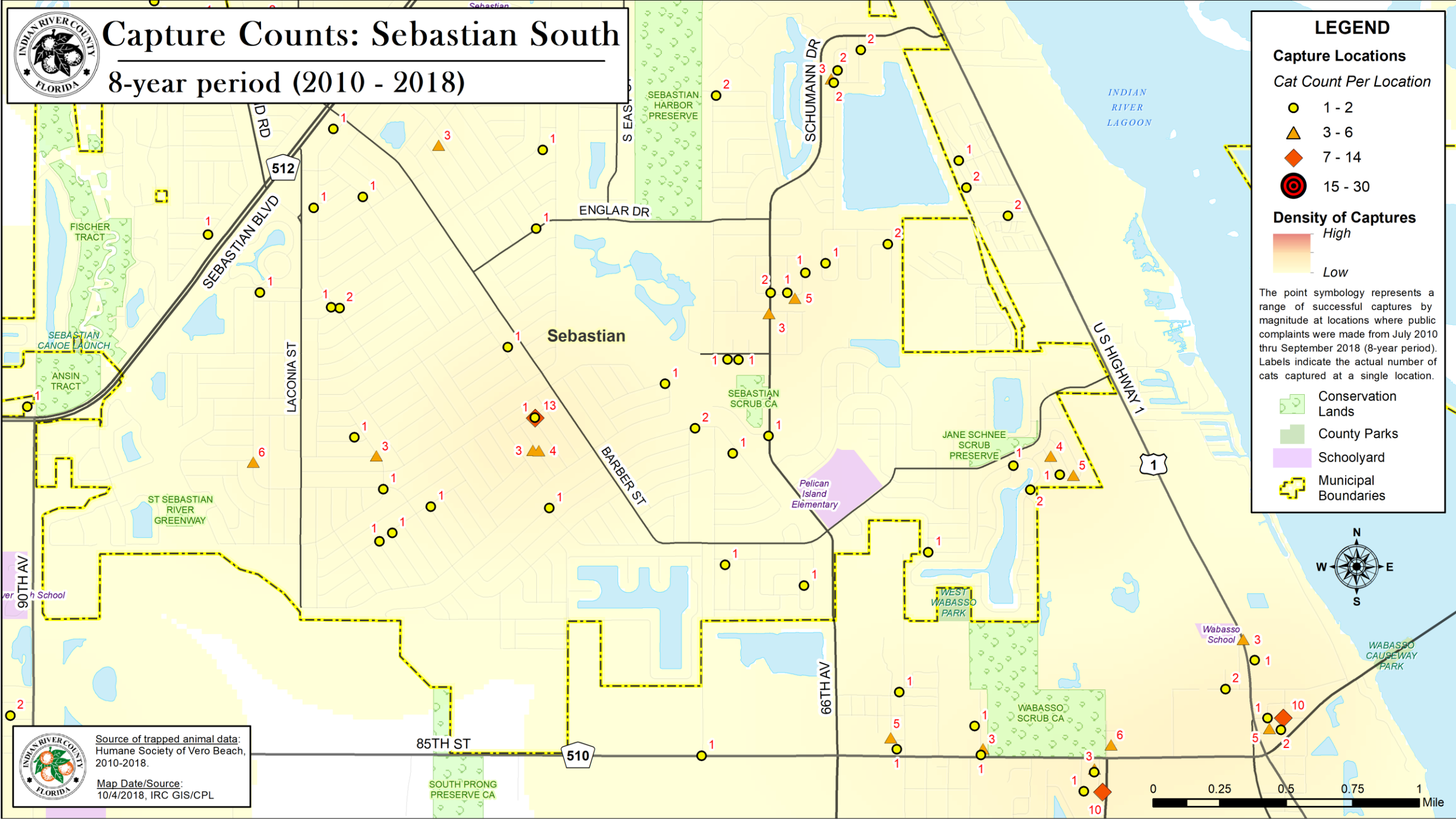
**Capture Locations**  
*Cat Count Per Location*

- 1 - 2
- ▲ 3 - 6
- ◆ 7 - 14
- ⊙ 15 - 30

**Density of Captures**  
*High*  
  
*Low*

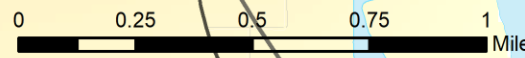
The point symbology represents a range of successful captures by magnitude at locations where public complaints were made from July 2010 thru September 2018 (8-year period). Labels indicate the actual number of cats captured at a single location.

- Conservation Lands
- County Parks
- Schoolyard
- Municipal Boundaries



Source of trapped animal data:  
 Humane Society of Vero Beach,  
 2010-2018.

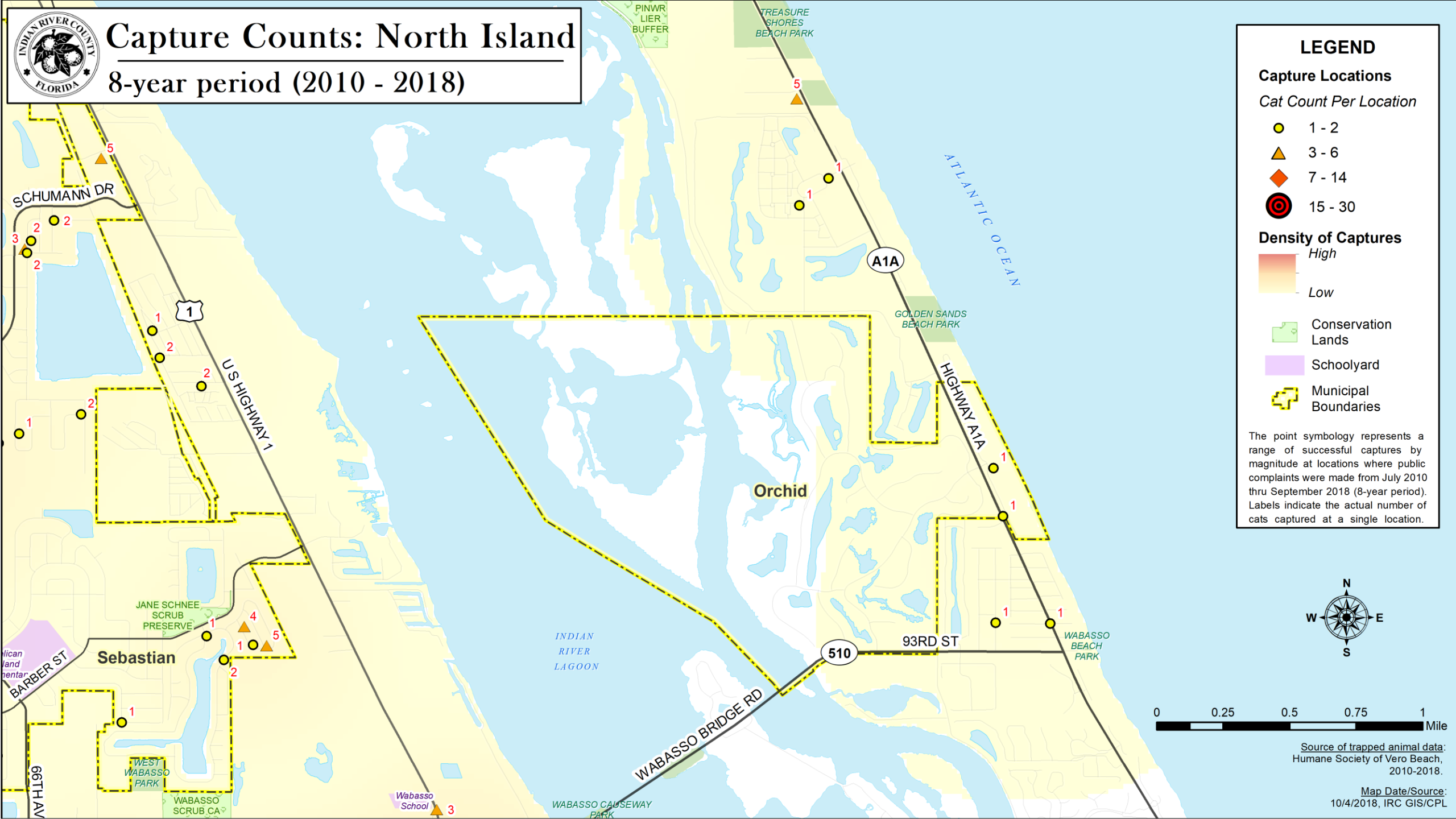
Map Date/Source:  
 10/4/2018, IRC GIS/CPL





# Capture Counts: North Island

## 8-year period (2010 - 2018)



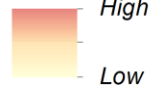
### LEGEND

#### Capture Locations

#### Cat Count Per Location

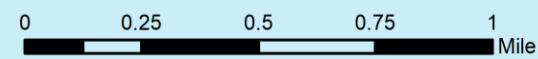
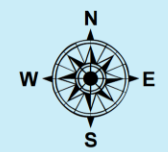
- 1 - 2
- ▲ 3 - 6
- ◆ 7 - 14
- ◎ 15 - 30

#### Density of Captures



- Conservation Lands
- Schoolyard
- Municipal Boundaries

The point symbology represents a range of successful captures by magnitude at locations where public complaints were made from July 2010 thru September 2018 (8-year period). Labels indicate the actual number of cats captured at a single location.



Source of trapped animal data:  
Humane Society of Vero Beach,  
2010-2018.

Map Date/Source:  
10/4/2018, IRC GIS/CPL



# Capture Counts: Central Island

## 8-year period (2010 - 2018)

**LEGEND**

**Capture Locations**

**Cat Count Per Location**

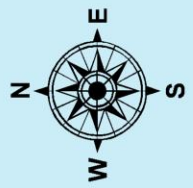
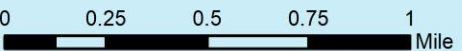
- 1 - 2
- ▲ 3 - 6
- ◆ 7 - 14
- ◎ 15 - 30

**Density of Captures**

High

Low

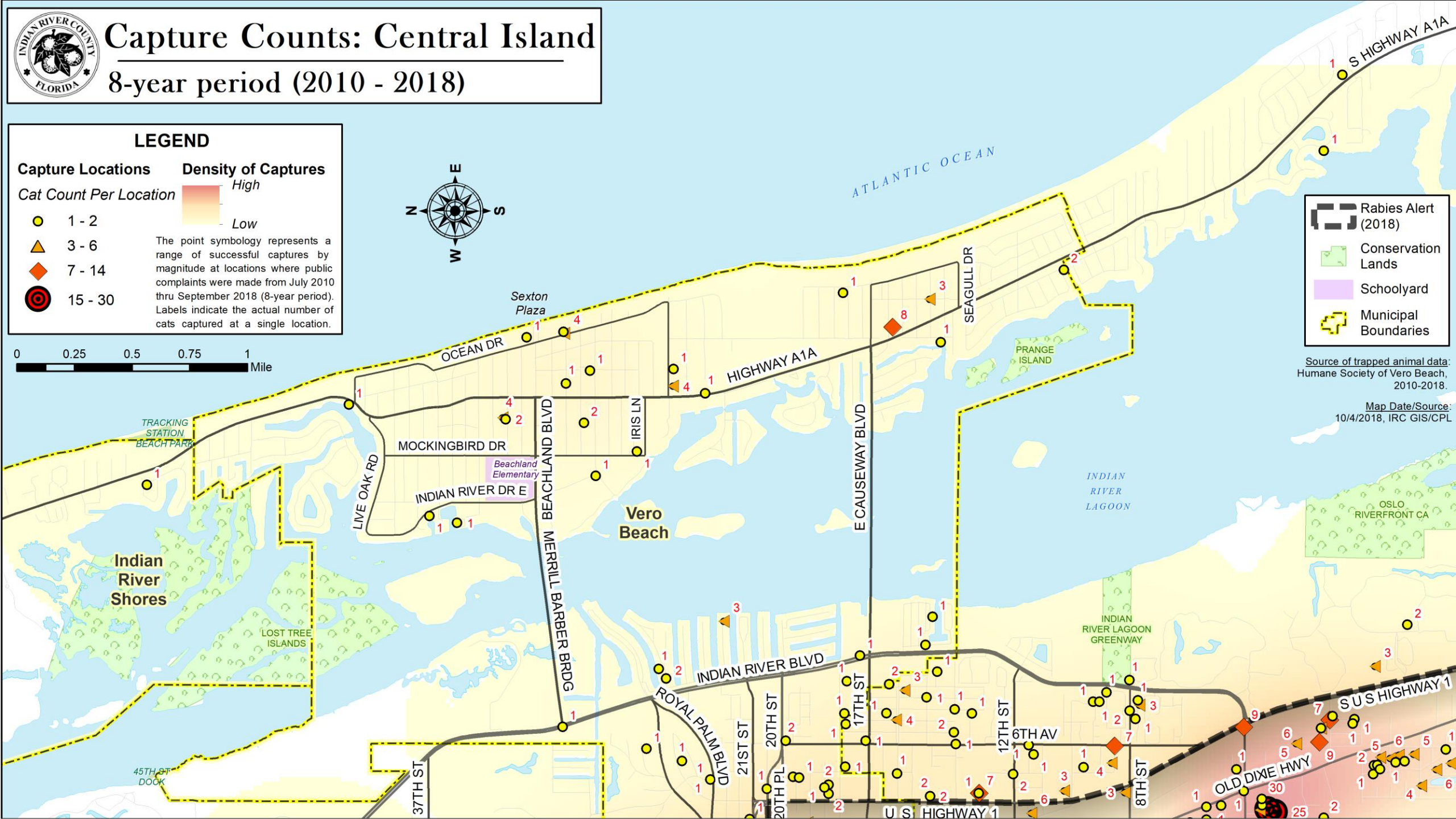
The point symbology represents a range of successful captures by magnitude at locations where public complaints were made from July 2010 thru September 2018 (8-year period). Labels indicate the actual number of cats captured at a single location.



- Rabies Alert (2018)
- Conservation Lands
- Schoolyard
- Municipal Boundaries

Source of trapped animal data:  
Humane Society of Vero Beach,  
2010-2018.

Map Date/Source:  
10/4/2018, IRC GIS/CPL



# Possible Solutions

## Finding Common Ground

- Public Education
  - Prevent further abandonment
  - Educate cat owners – value cats as indoor pets!
  - Educate feral cat feeders
- Policy Change
  - Strengthen ordinances
  - Properly fund animal control agencies & humane organizations
- Support Humane Alternatives to TNR
  - Increased adoption
  - Widespread low cost spay/neuter and vaccination clinics
  - Enclosed cat sanctuaries





# Safe Solutions for Cats

- Outdoor enclosures (pet cats)
  - Cat-safe fencing
  - Catio
  - Free-standing enclosures
- Cat Sanctuaries
  - Unadoptable cats



# Legal Authorities

## Florida Department of Health

### **Statute**

- Chapter 381.0011(2), F.S. – Control of communicable diseases, illness and hazards to health among humans and from animals to humans, and the general health...
- Chapter 386.01-386.051, F.S. – Authority to require sanitary nuisance removal or abatement.

### **Administrative Code**

- Chapter 64D-3.04, F.A.C. – Rabies control in domestic and wild animals according to *Rabies Prevention and Control in Florida*, and the recommendations of the Florida Rabies Advisory Committee.

# Legal Authorities

## Indian River County Animal Control

### Local Ordinances

- Animal restraint, rabies vaccination, licensure
- Animals as nuisances
- Animal cruelty
- Animal impoundment facilities
- Kennels - definition and requirements