



The Coyote in New Jersey



Basic Ecology

Historical Perspective

Distribution and Population

Impacts on Other Wildlife Species

Avoiding Negative Interactions

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The Coyote in New Jersey



Basic Coyote Ecology



Coyote Ecology 101



- ❧ Open lands to forests with a diversity of habitats.
- ❧ Males 30-35 lbs.; Females 25-30 lbs.
- ❧ Basic social unit = mated pair; sometimes sustained for life; may form small packs (3-7) consisting of parents and young of different ages.
- ❧ Litter size = 5-10 (average 6; maximum 19); both parents and sometimes older siblings forage.
- ❧ Variety of foods; 75% small mammals, also birds, reptiles, amphibians, seasonal fruits, and plants.
- ❧ Home range (males) 8-16 mi²; overlapping. Home range (females) 3-5 mi² with no overlap.
- ❧ Man is the only serious enemy.

TWS Researchers Track Metropolitan Coyote Habitats

<http://wildlife.org/tws-researchers-track-metropolitan-coyote-habits/>

February 2, 2015



Thirteen years after Gehrt had first captured her and attached a radio collar to track her movements through urban areas [of Chicago] and with a little whiter hair, 'the Schaumberg female' died of natural causes – not an easy achievement since coyotes living in urban areas often meet their end from cars or other vehicles.

“You can't have preconceived notions of what makes suitable habitat for these animals. We didn't think that coyotes would be able to penetrate or colonize certain parts of the Chicago area because it would just be too urban, but **apparently there's no part that they can't colonize**”.



The Coyote in New Jersey



Historical Perspective



From West to East



Several possibilities exist:

- ❧ On their own across southern Canada to Quebec, then across the St. Lawrence River (either by swimming or by walking over ice) and then disbursing south into New England.
- ❧ On their own directly eastward from western states.
- ❧ “Imported by insurance companies in an effort to reduce claims resulting from deer-vehicle collisions.”
- ❧ “Introduced by NJ DFW.”

In the Northeast



State	1st Report	1st Verified Report
CT	mid-1950s	
DE		
MA	Berkshire Co., 1936	1957
MD		Cecil, Frederick, Washington co., 1972
ME	1936	
NH		Grafton Co., 1944
NJ	Hunterdon Co., 1939	Cape May Co., 1948
NY	1920s (1925)	Northern Adirondack region
OH	Logan Co., 1919	
PA	1930s	Tioga Co., 1940
RI		Bristol Co., 1969
VA		Tazewell Co., 1952
VT	late 1940s	
WV	Tucker Co., 1950	Lewis and Fayette cos., 1970s

Recent Records of Coyotes in PA and NJ
Journal of Mammalogy Vol. 30, No. 4, Nov. 1949
Frederick A. Ulmer, Jr. / Zoological Society of Phila.



“Wild coyotes have been collected in almost every eastern state. Naturalists have long felt that these animals did not make their way east under their own power, but rather were escaped or released “pets.” The records of the Philadelphia Zoo would seem to corroborate this. On December 11, 1930, the zoo received a female coyote from an individual in Cape May, New Jersey. A male was presented from Pleasantville, New Jersey, on May 7, 1936. Two from a litter of three born at the zoo on April 28, 1938, were given to a person in Bridgeton, New Jersey. Four young ones were presented to the zoo by a man in Trenton, New Jersey, on June 4, 1942”.

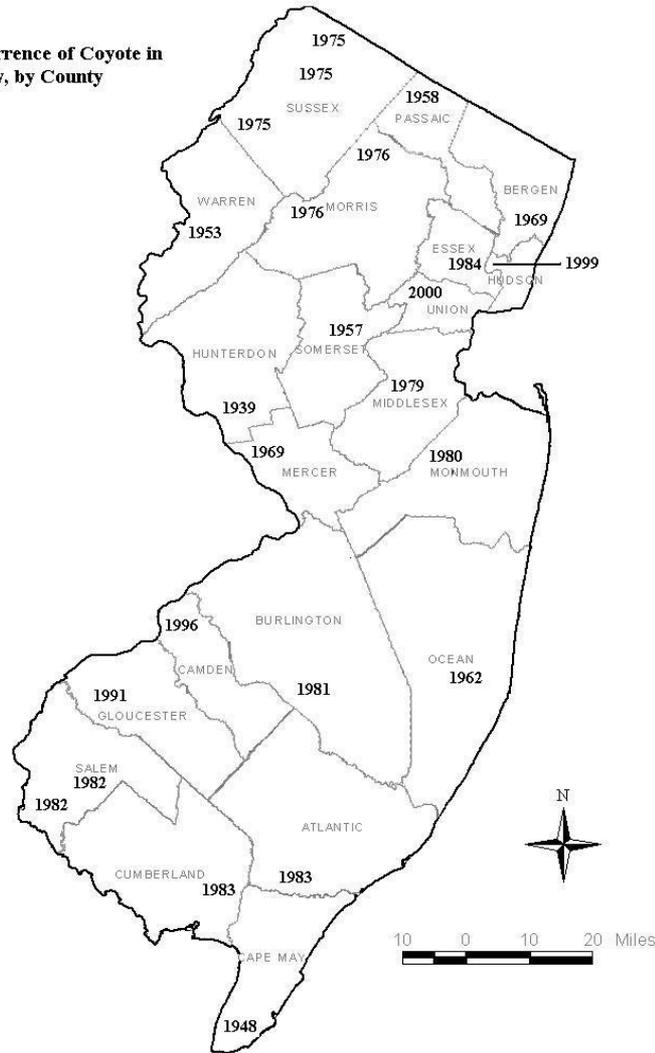
The Coyote in New Jersey



Distribution and Population



**First Occurrence of Coyote in
New Jersey, by County**



First occurrences of coyotes in New Jersey, by county

- 1983 - Corbin City, Atlantic Co.
- 1981 - Shamong Twp., Burlington Co.
- 1996 - Cherry Hill, Camden Co.
- 1948 - Lower Twp., Cape May Co.
- 1983 - Maurice River Twp., Cum. Co.
- 1991 - Woolwich Twp., Gloucester Co.
- 1980 - Manalapan Twp., Mon. Co.
- 1962 - Lacey Twp., Ocean Co.

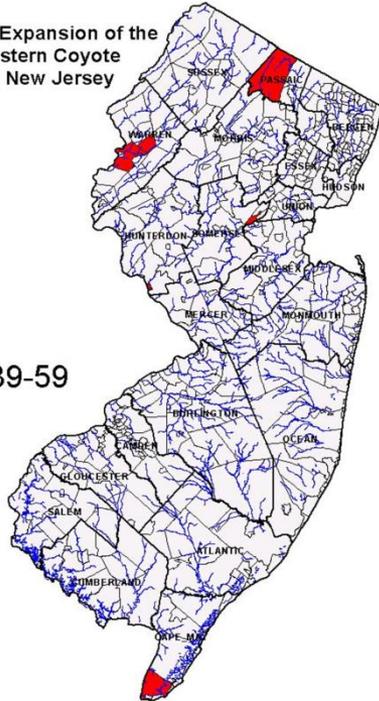
92-99% of Atlantic, Burlington, Cape
May, Cumberland, Gloucester, Ocean;
64% of Camden; 82% of Monmouth

Range Expansion



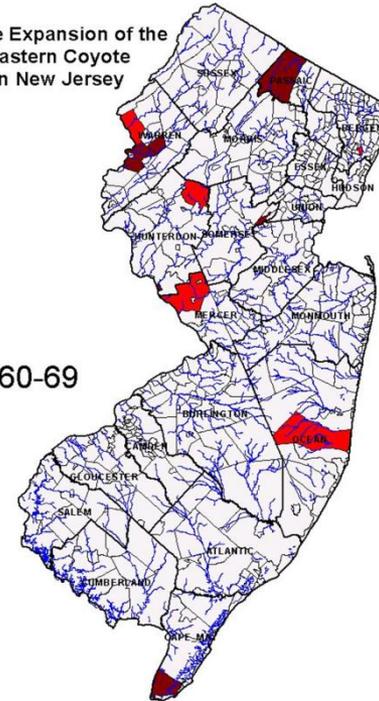
Range Expansion of the Eastern Coyote in New Jersey

1939-59



Range Expansion of the Eastern Coyote in New Jersey

1960-69

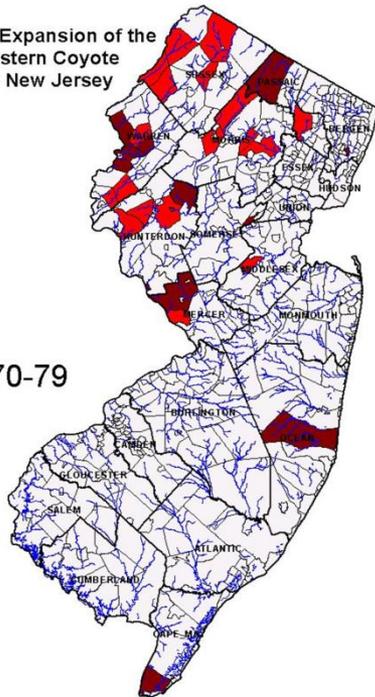


Range Expansion



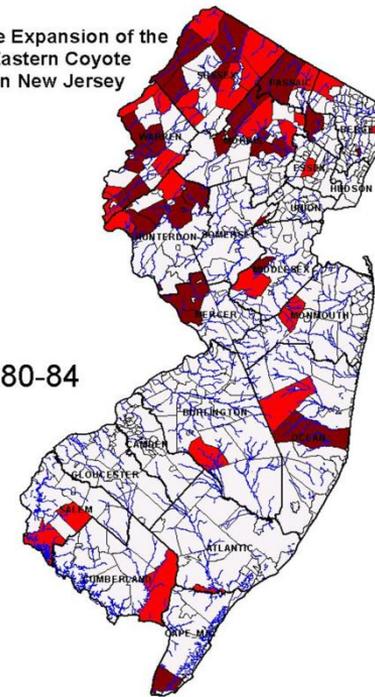
Range Expansion of the Eastern Coyote in New Jersey

1970-79



Range Expansion of the Eastern Coyote in New Jersey

1980-84

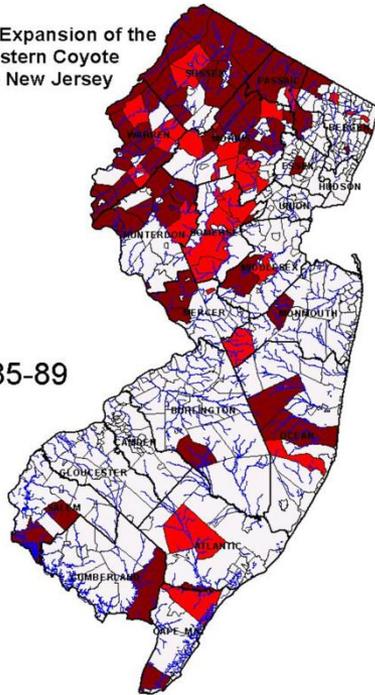


Range Expansion



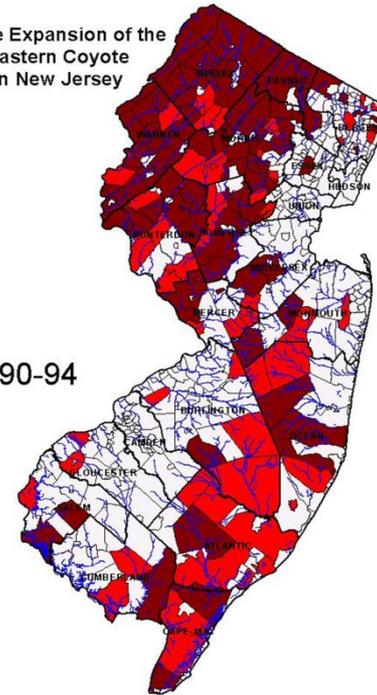
Range Expansion of the Eastern Coyote in New Jersey

1985-89



Range Expansion of the Eastern Coyote in New Jersey

1990-94

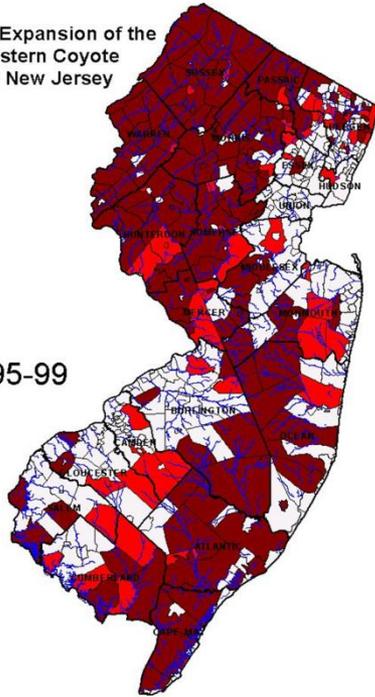


Range Expansion



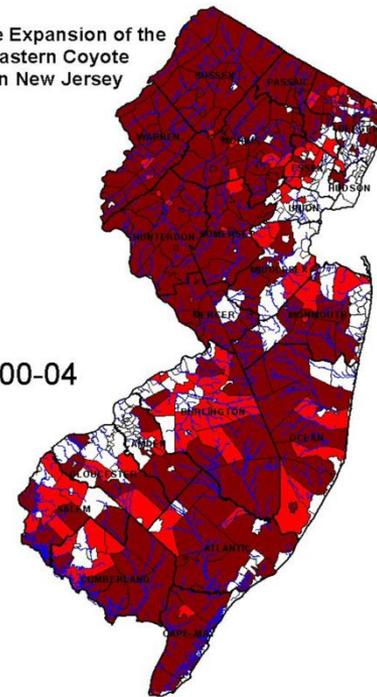
Range Expansion of the Eastern Coyote in New Jersey

1995-99

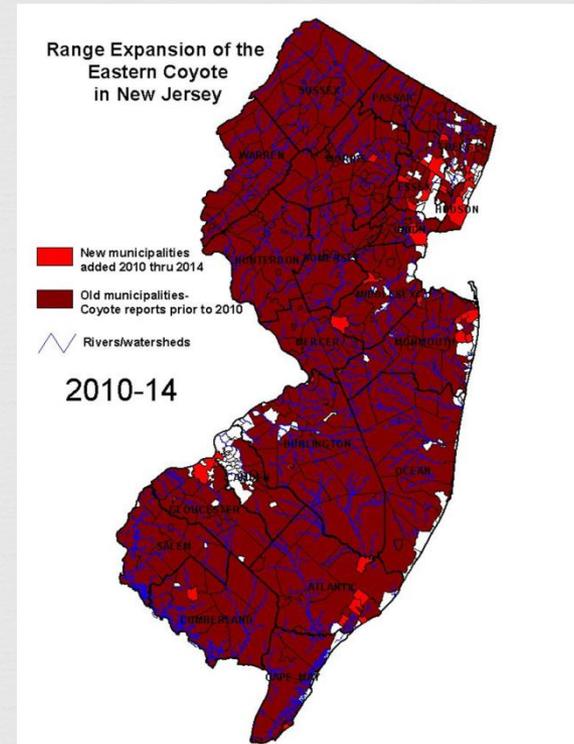
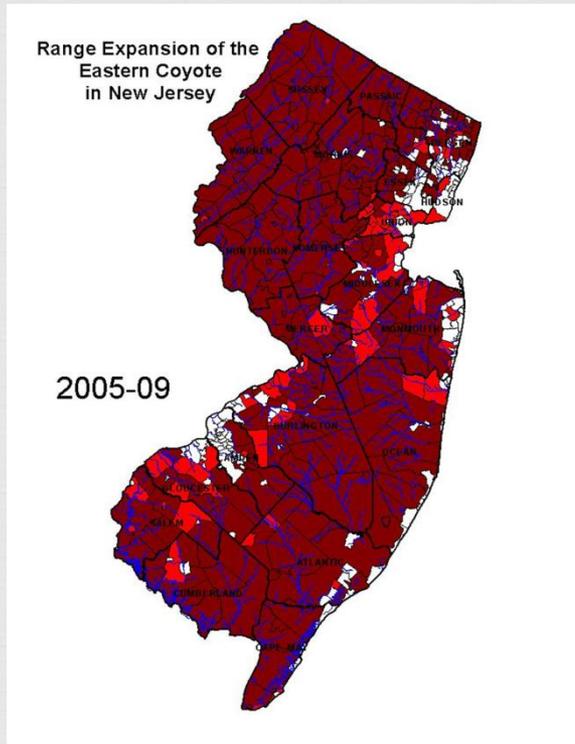


Range Expansion of the Eastern Coyote in New Jersey

2000-04



Range Expansion

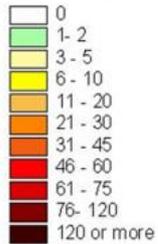


~ 453 municipalities in all 21 counties = 96% of state land area

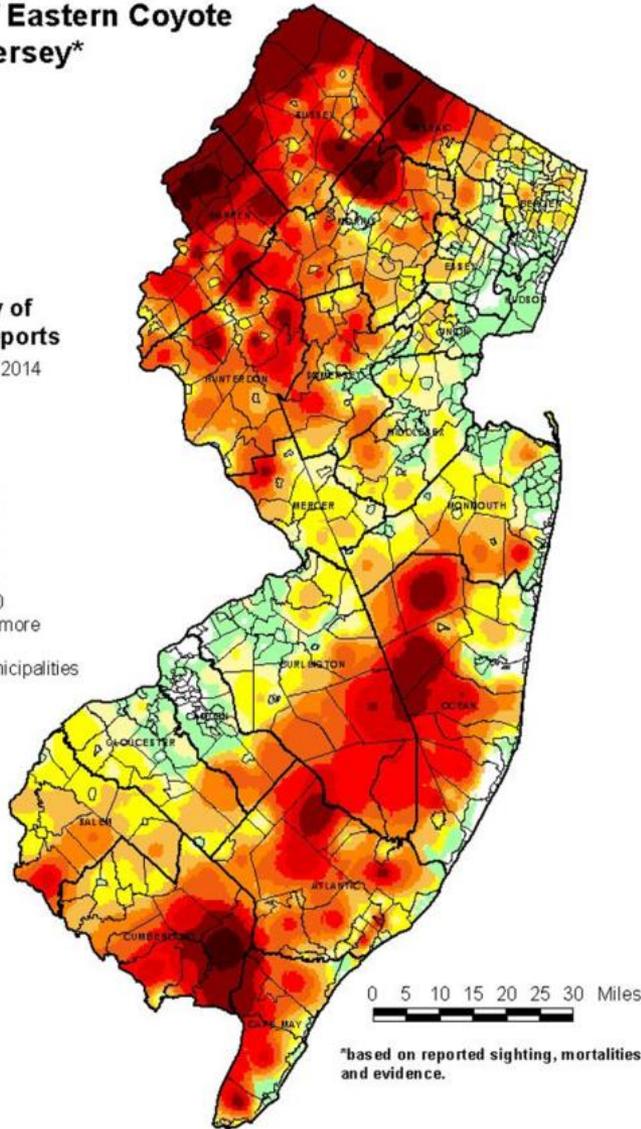
Range of Eastern Coyote in New Jersey*

Frequency of Coyote Reports

as of July 1, 2014



□ NJ Municipalities



*based on reported sighting, mortalities
and evidence.

Coyote “Hot Spots”

Darker colors represent higher
report frequencies.

Regardless of how the coyote got to
NJ, coyotes are here to stay!

Coyote Population Model*



Month	# Coyotes	Notes
June	22,062	Highest; 3/ mi ²
March	7,354	Lowest; 1/ mi ²
7%	- 515	Too young to breed
8%	- 585	Too old to breed
	= 6,251	Breeding ♂ and ♀
	3,125	Breeding ♀
	+ 14,690	Recruitment; 4.7/♀
June	= 22,044	Breeders + Young

*Boddicker, M.L. 2016. Trappers Post, Vol. 8, No. 1. Pages 52-55



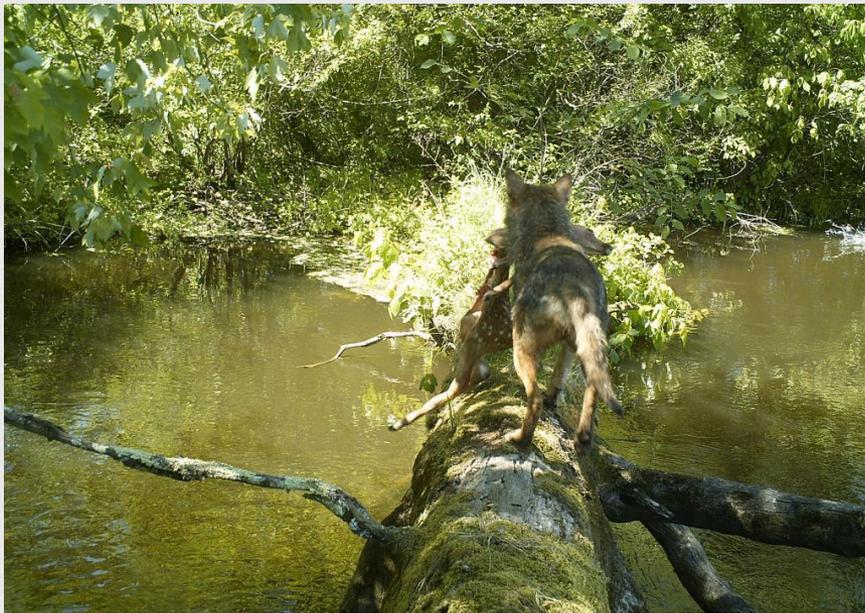
The Coyote in New Jersey



Impacts on Other Wildlife Species

Fawn Predators



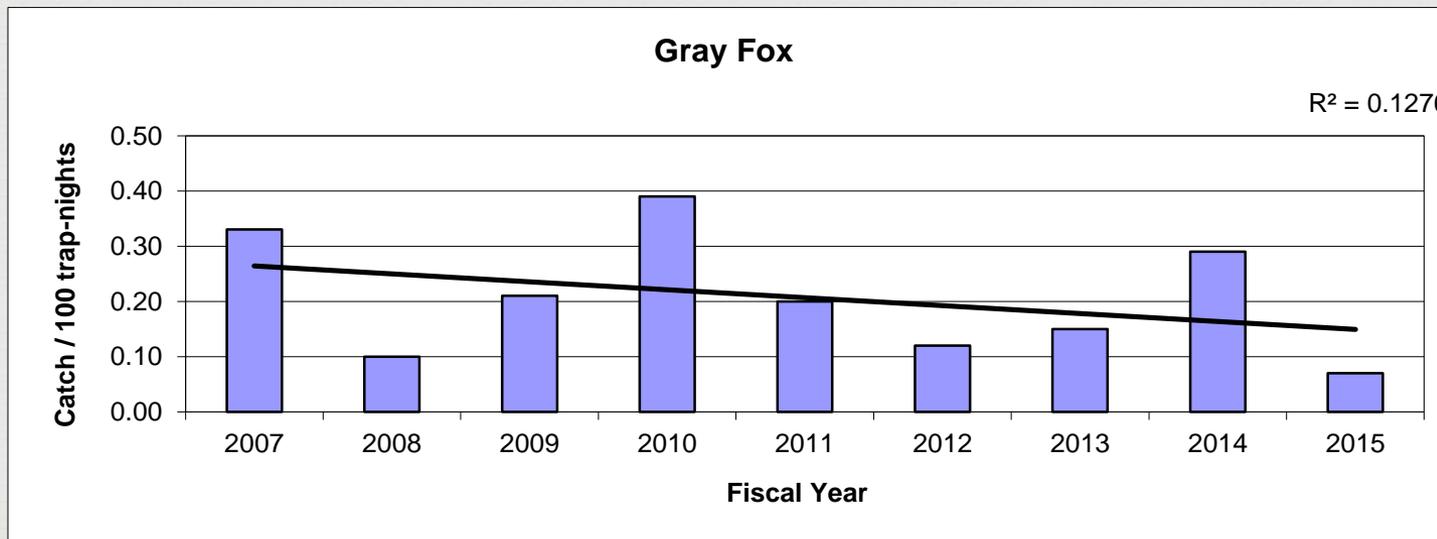


Bushnell Mike.M 60°F15°C

05-27-2013 10:38:31

Impacts on Other Wildlife Species

- *Opportunistic* omnivores
- Greatest impact on deer resource is fawn predation
- Competition with other wild canines
- Occasionally preys on livestock and small domestic pets



Coyote Energy Needs*



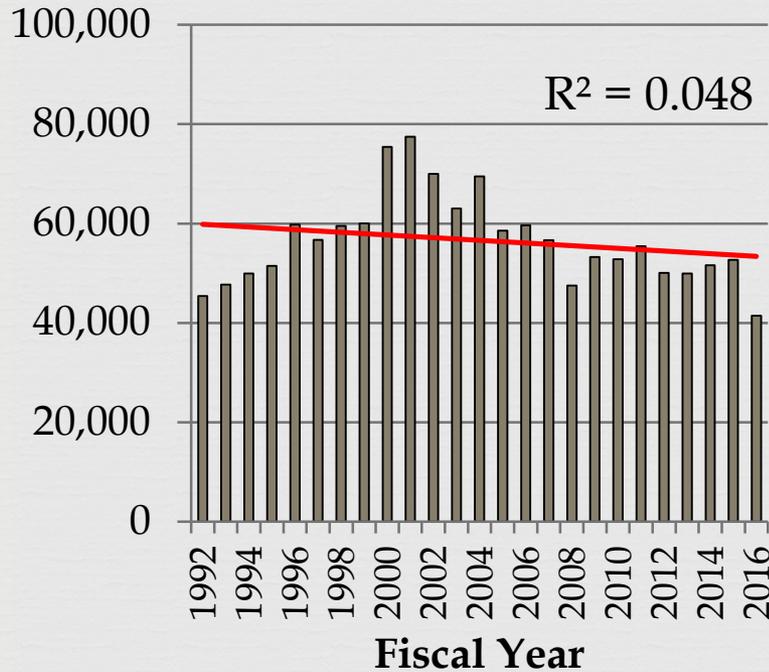
1 Coyote	8 Deer	105 Hare	4,800 Mice
7,354	58,832	772,170	35,299,200
22,044	176,439	2,314,580	105,809,352

*Livaitus, J. A. and W. M. Mautz. 1980. *Food and energy use by captive coyotes*. **Journal of Wildlife Management** 44:56-61

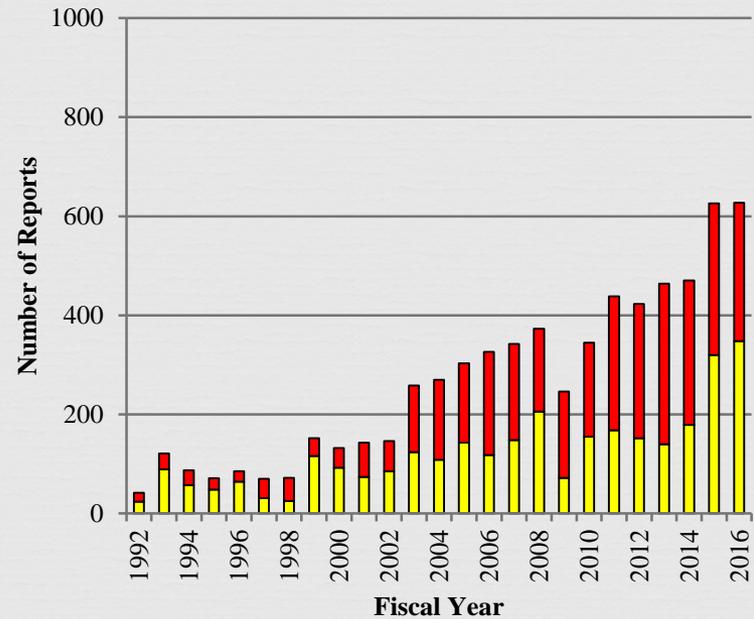
Deer/Coyote Data - Statewide



Deer Harvest



Coyote Reports



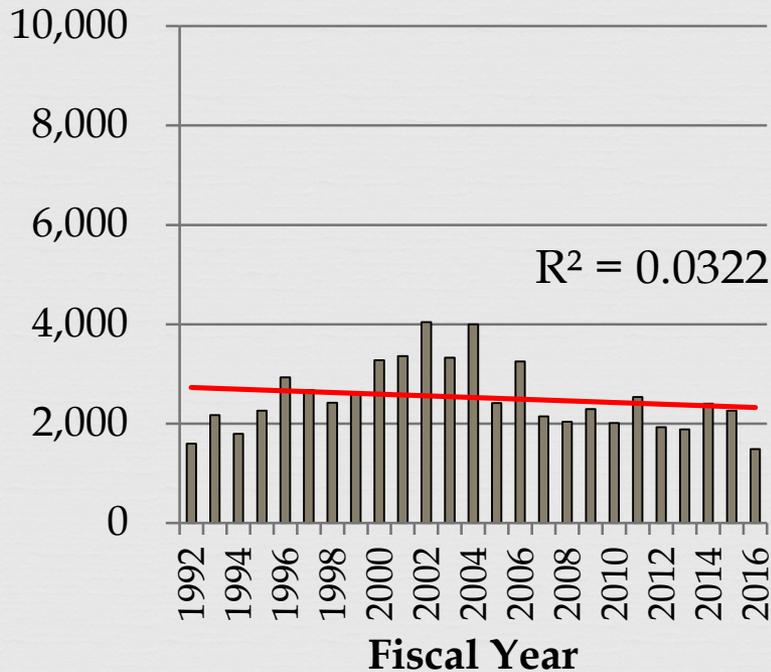
■ Sighting ■ Mortality



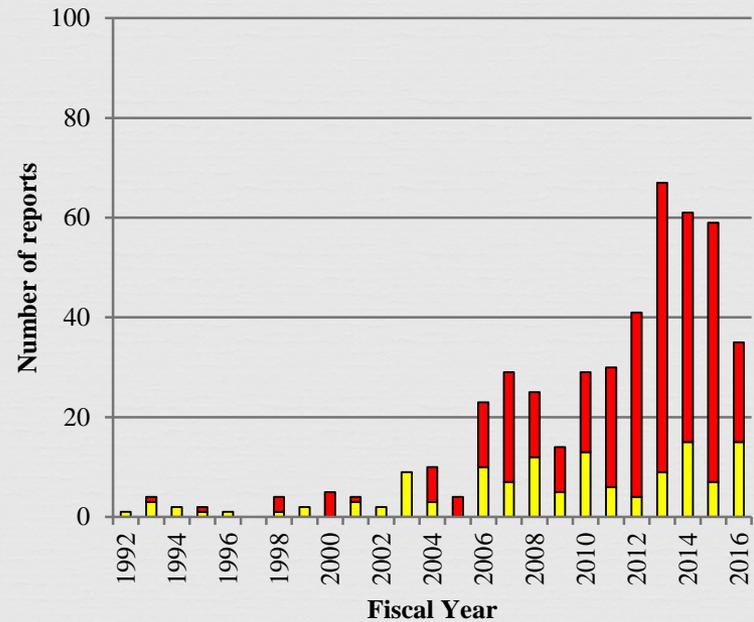
Deer/Coyote Data - Atlantic County



Deer Harvest



Coyote Reports



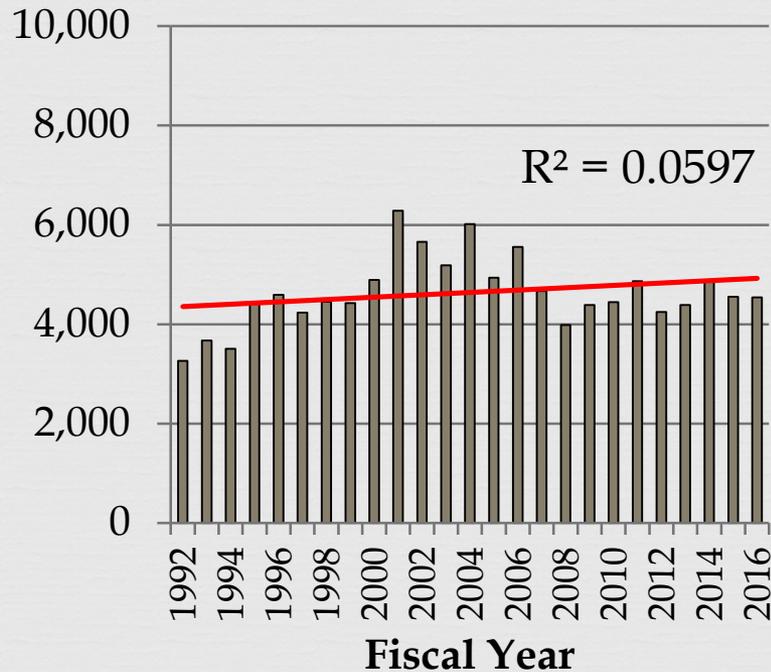
■ Sighting ■ Mortality



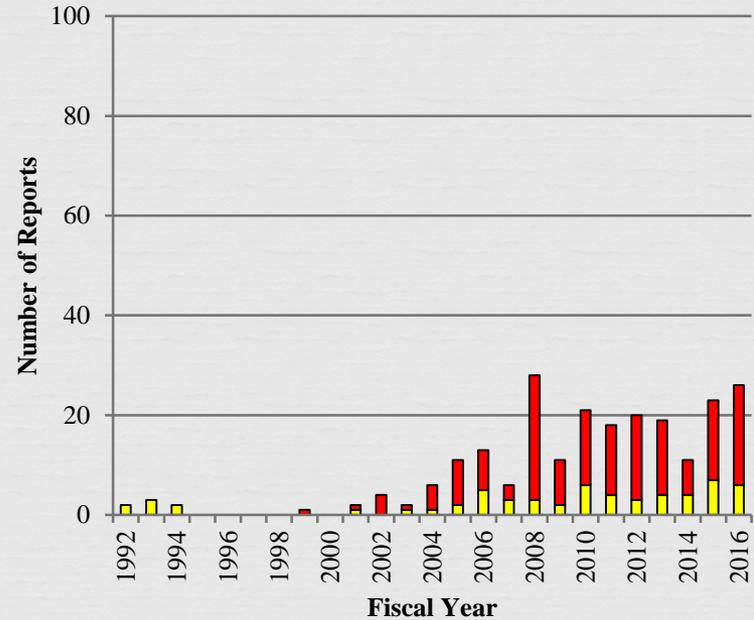
Deer/Coyote Data – Burlington County



Deer Harvest



Coyote Reports

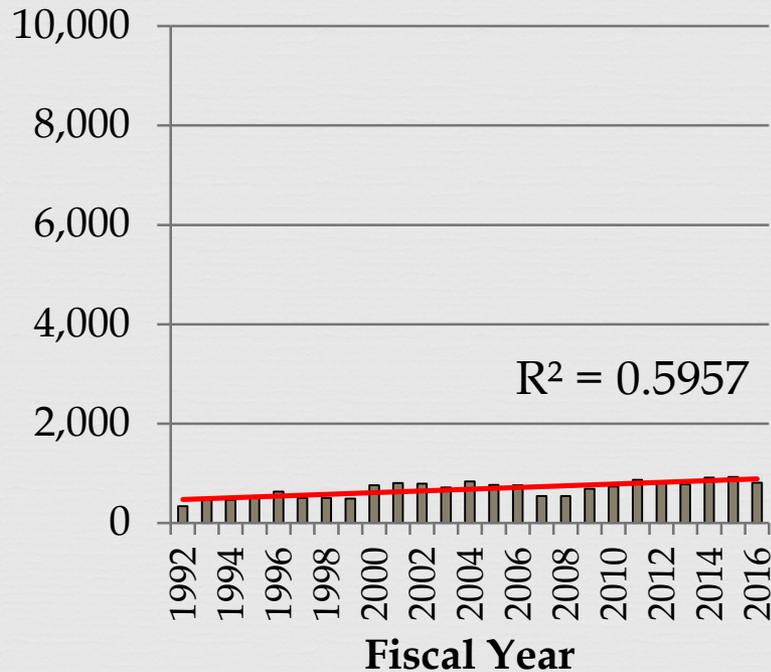


■ Sighting ■ Mortality

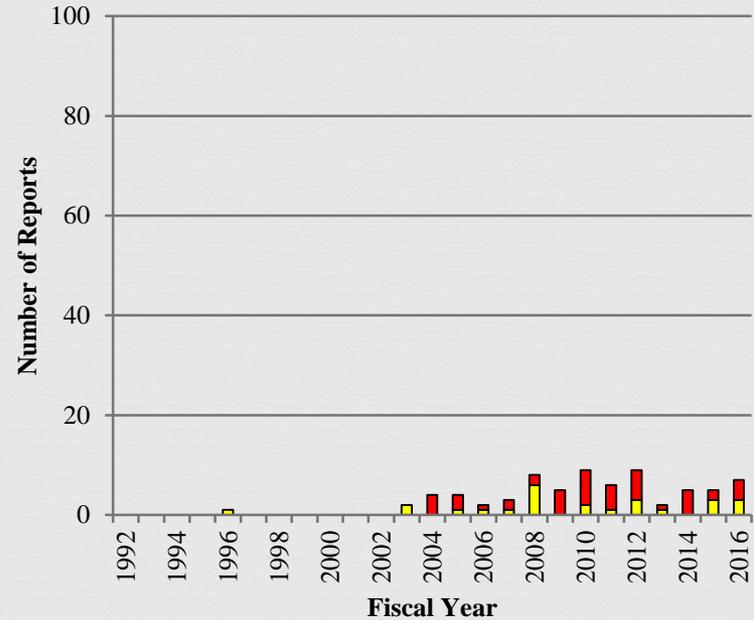
Deer/Coyote Data - Camden County



Deer Harvest



Coyote Reports

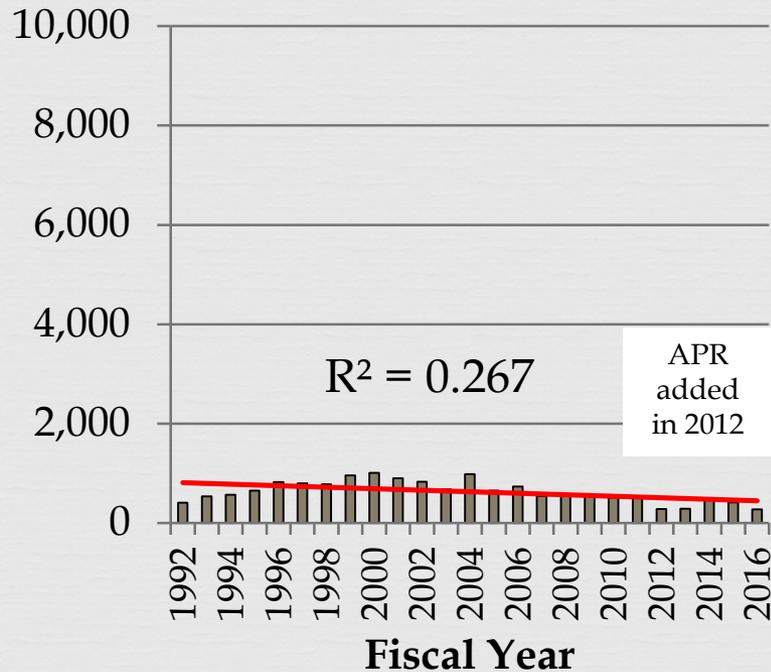


■ Sighting ■ Mortality

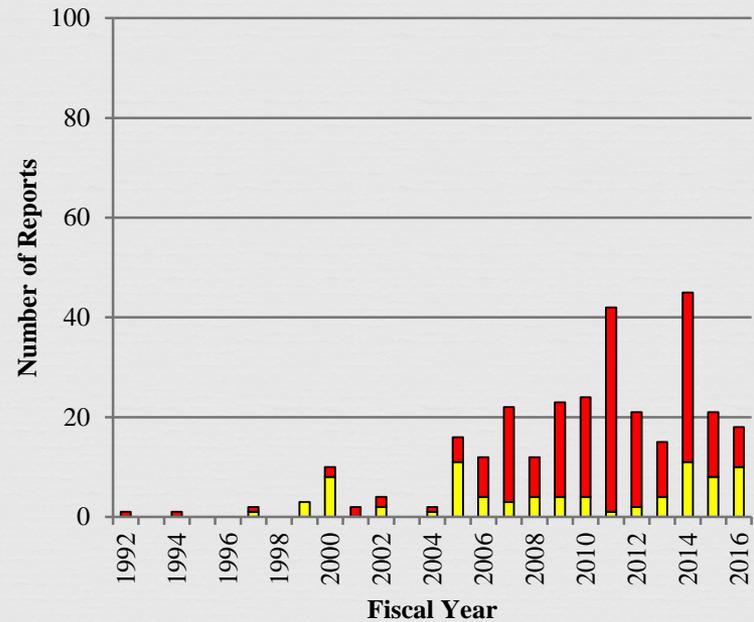
Deer/Coyote Data - Cape May County



Deer Harvest



Coyote Reports



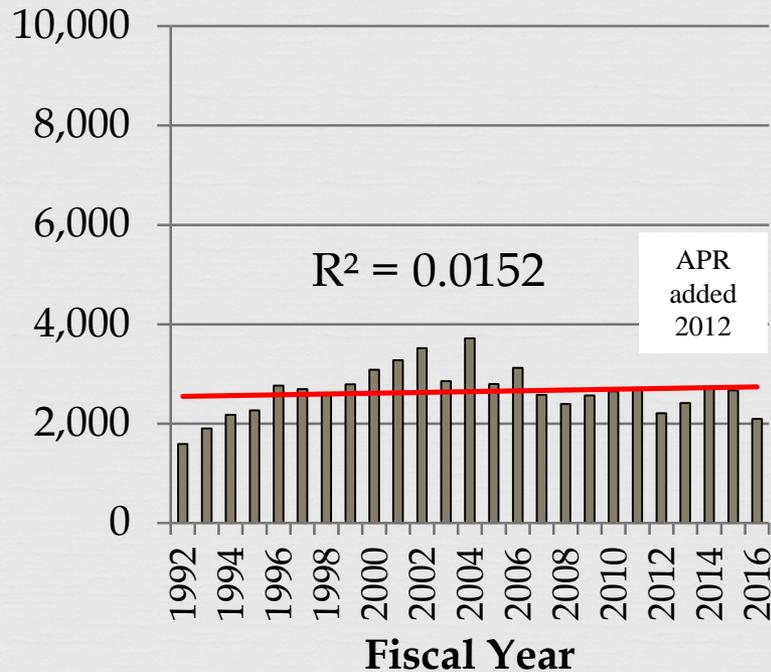
■ Sighting ■ Mortality



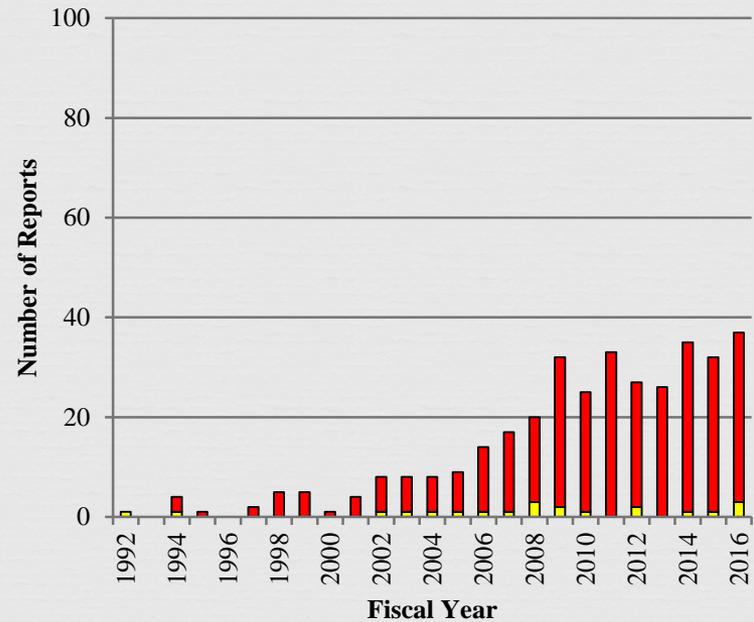
Deer/Coyote Data - Cumberland County



Deer Harvest



Coyote Reports



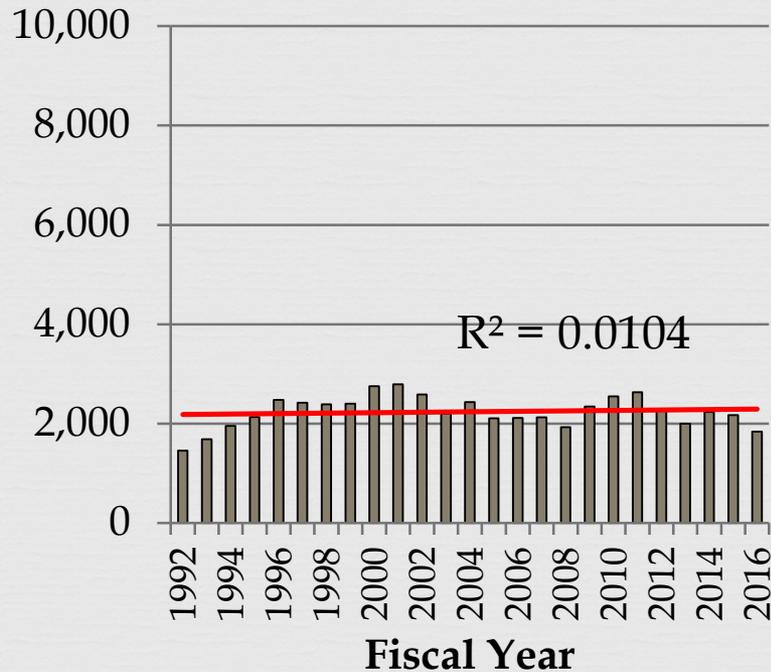
■ Sighting ■ Mortality



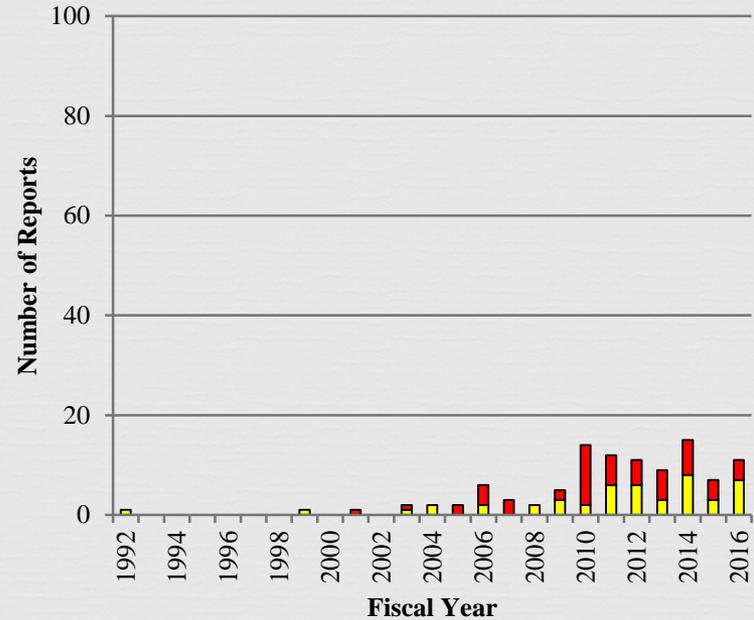
Deer/Coyote Data – Gloucester County



Deer Harvest



Coyote Reports



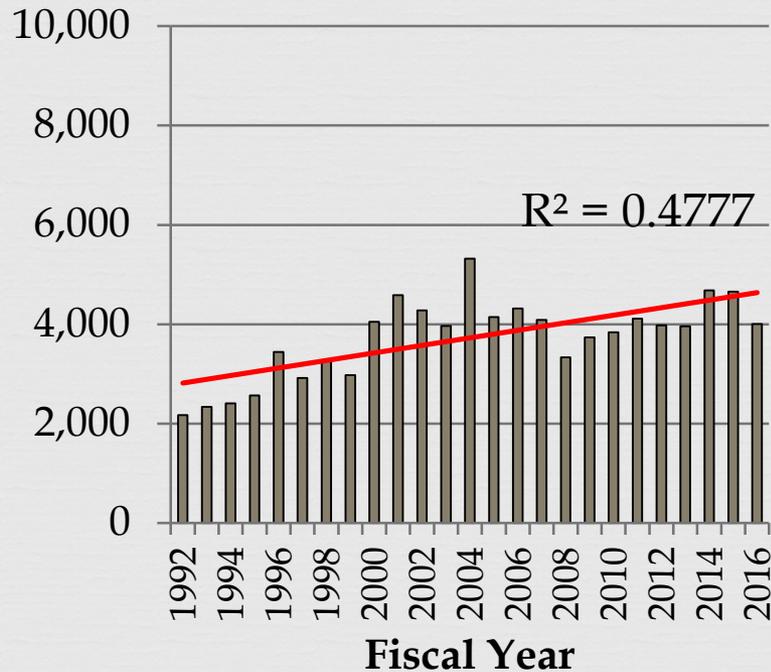
■ Sighting ■ Mortality



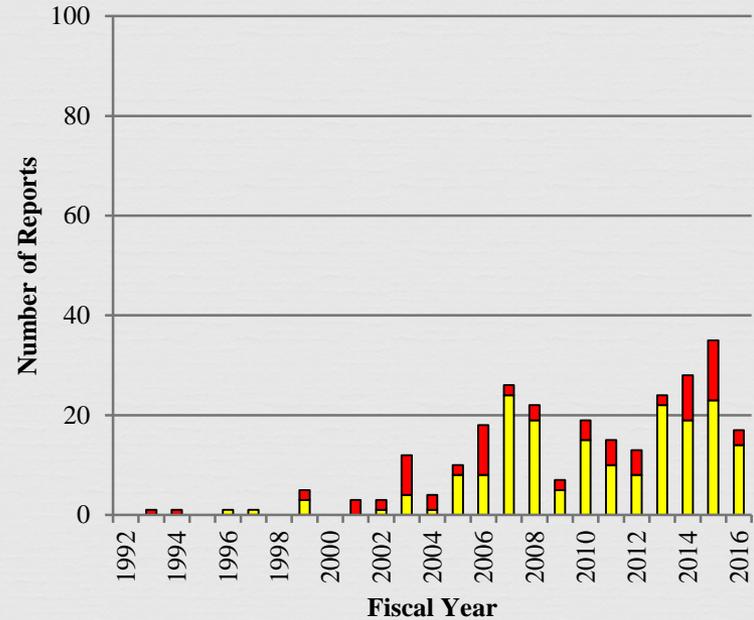
Deer/Coyote Data – Monmouth County



Deer Harvest



Coyote Reports

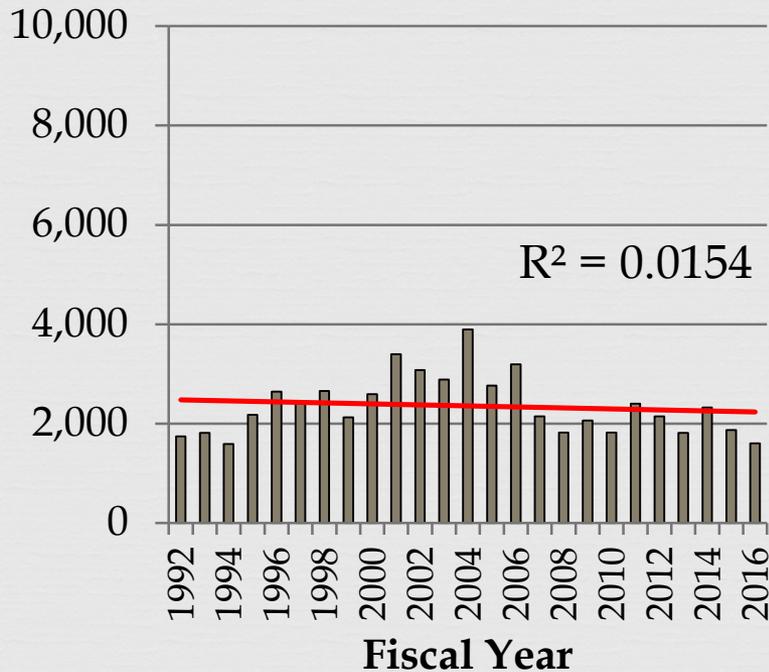


■ Sighting ■ Mortality

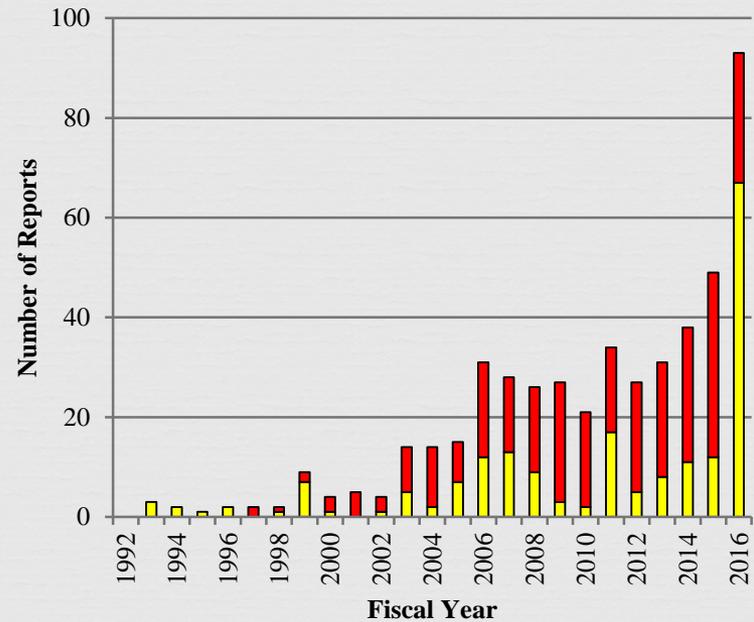
Deer/Coyote Data – Ocean County



Deer Harvest



Coyote Reports



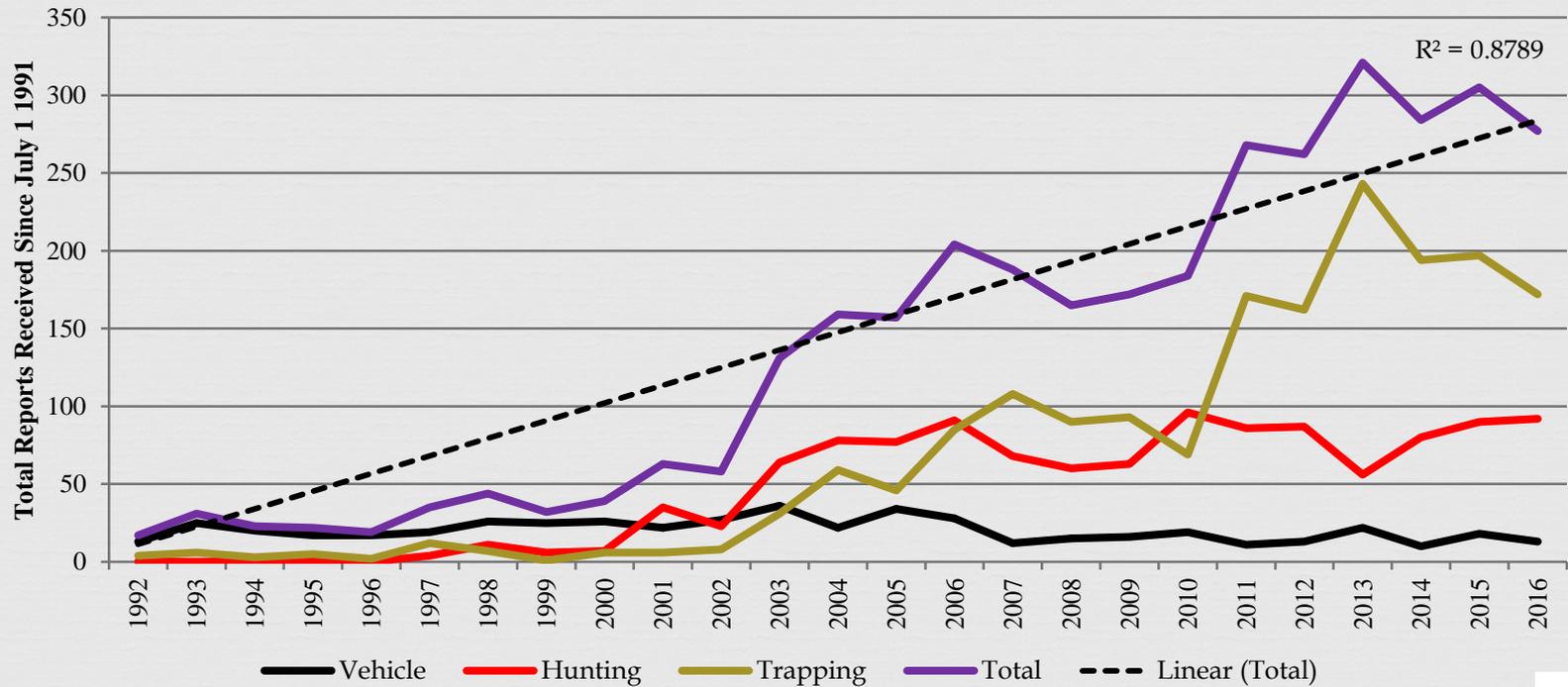
■ Sighting ■ Mortality



Coyote Mortalities



Vehicle + Harvest Mortality = 3,460 (97.4%)

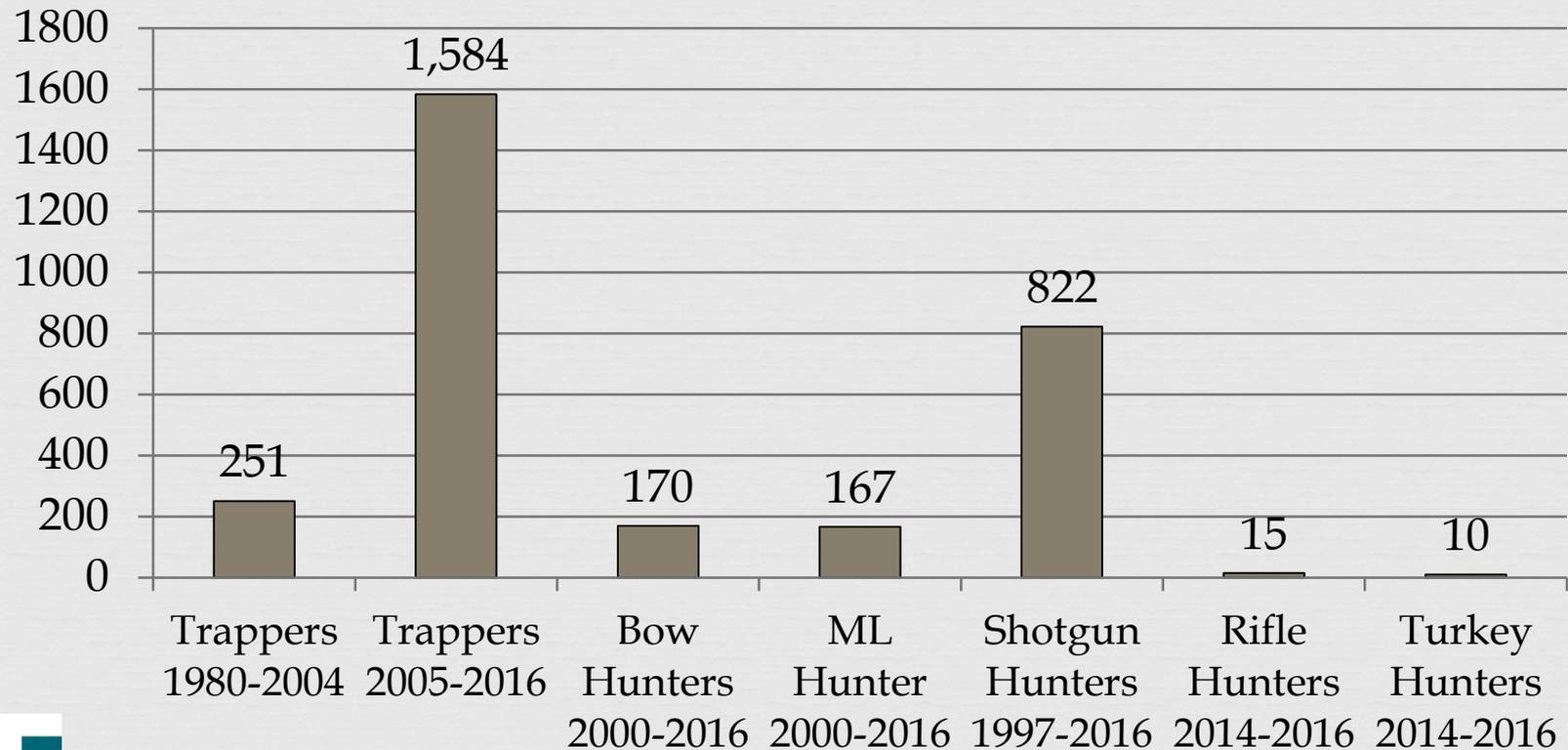


NJ Coyote Regulations



- ❧ 1980 – Given furbearer status (first trapping season)
- ❧ 1997 – Given game animal status (first hunting season, by permit; daylight only)
- ❧ 2000 – Added to small game species (no permit)
- ❧ 2002 – Special Permit Season Feb. 1-18 (bow, ML, shotgun during daylight; shotgun at night)
- ❧ 2005 – Increased cable restraint loop size and height
- ❧ 2006 – Special Permit Season Jan. 16-Feb. 20
- ❧ 2010 – Special Permit Season Jan. 1-Mar. 15
- ❧ 2011 – Small Game Season extended to Mar. 15
- ❧ 2014 – Small caliber rifles allowed during Special Permit Season; incidental to Spring Gobbler Season

Reported Coyote Harvest



The Coyote in New Jersey



Avoiding Negative Interactions

- ❧ Coyotes play an important ecological role, and are by nature normally wary of humans.
- ❧ However, their behavior changes when provided access to human or pet food and garbage.
- ❧ They lose caution and fear, and may cause property damage or threaten human safety.
- ❧ Relocation is not an option as it only moves the problem to someone else's neighborhood.

Avoiding Negative Interactions

Things to keep in mind.

Avoiding Negative Interactions



- ❧ Coyote related damage reports have remained fairly stable.
- ❧ Although coyotes are common, they rarely cause a great deal of physical damage.
- ❧ Most calls received by DFW involve questions or fears about what a coyote *might* do. Such calls are increasing in frequency.

Avoiding Negative Interactions

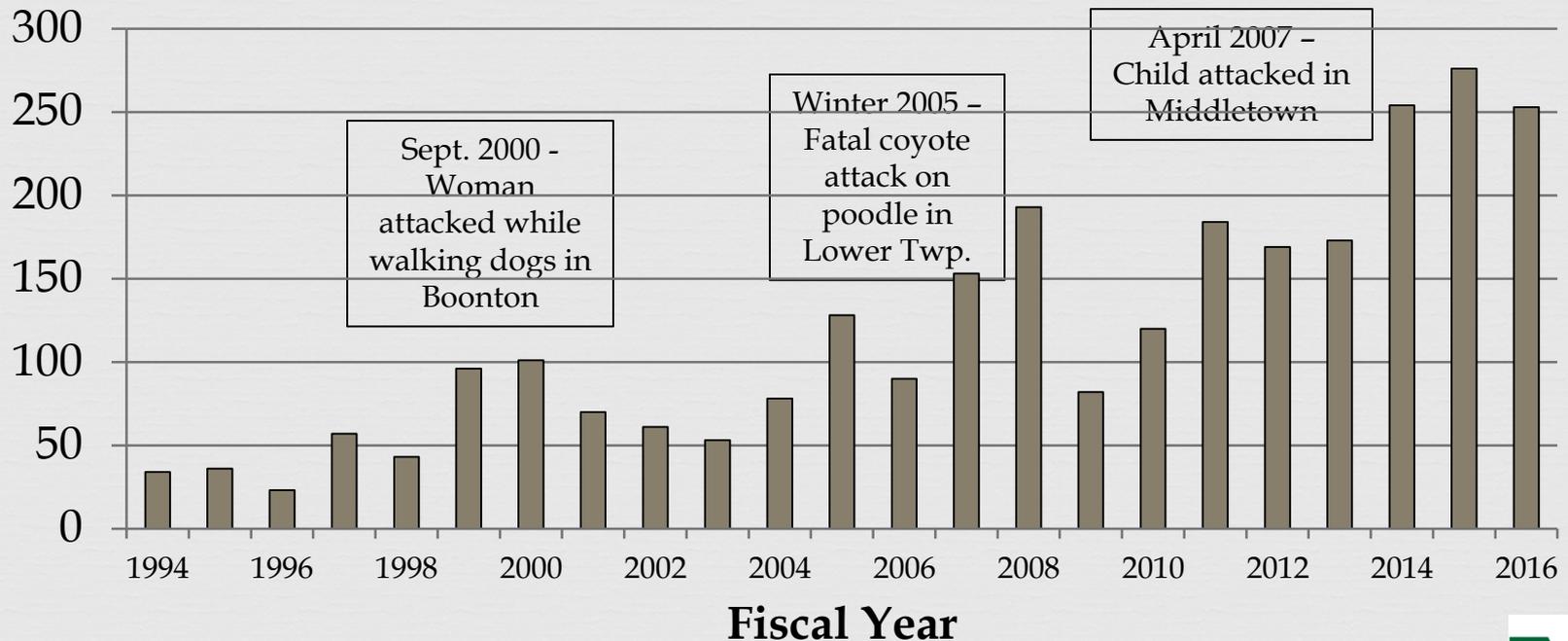


- ❧ June 1969 – aggressive coyote in Bergen Co.
- ❧ Sept 1999 – adult w/dog attacked in Morris Co.
- ❧ Feb 2002 – adult attacked in Monmouth Co.
- ❧ Apr/May 2007 – children attacked in Monmouth Co.
- ❧ Dec 2010 – adult w/dog attacked in Burlington Co.
- ❧ Aug 2013 – aggressive coyote in Union Co.
- ❧ Oct 2014 – 2 adults attacked in Morris Co. (rabid)
- ❧ Apr 2015 – 2 adults attacked in Bergen Co. (rabid)
- ❧ June 2016 – adult w/dog attacked in Burlington Co.
- ❧ During 2003-2013 there were 8 incidents of coyotes attacking / killing dogs

Avoiding Negative Interactions



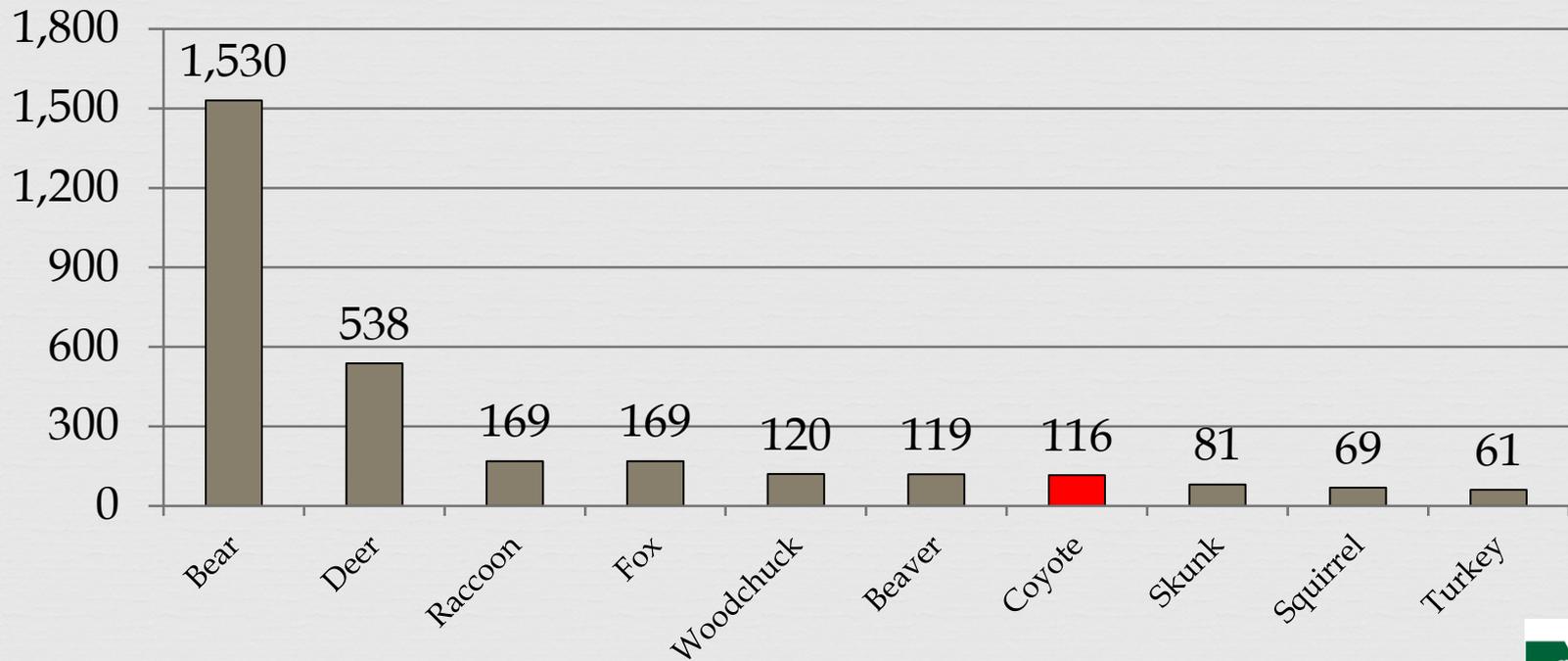
Calls Received



Avoiding Negative Interactions



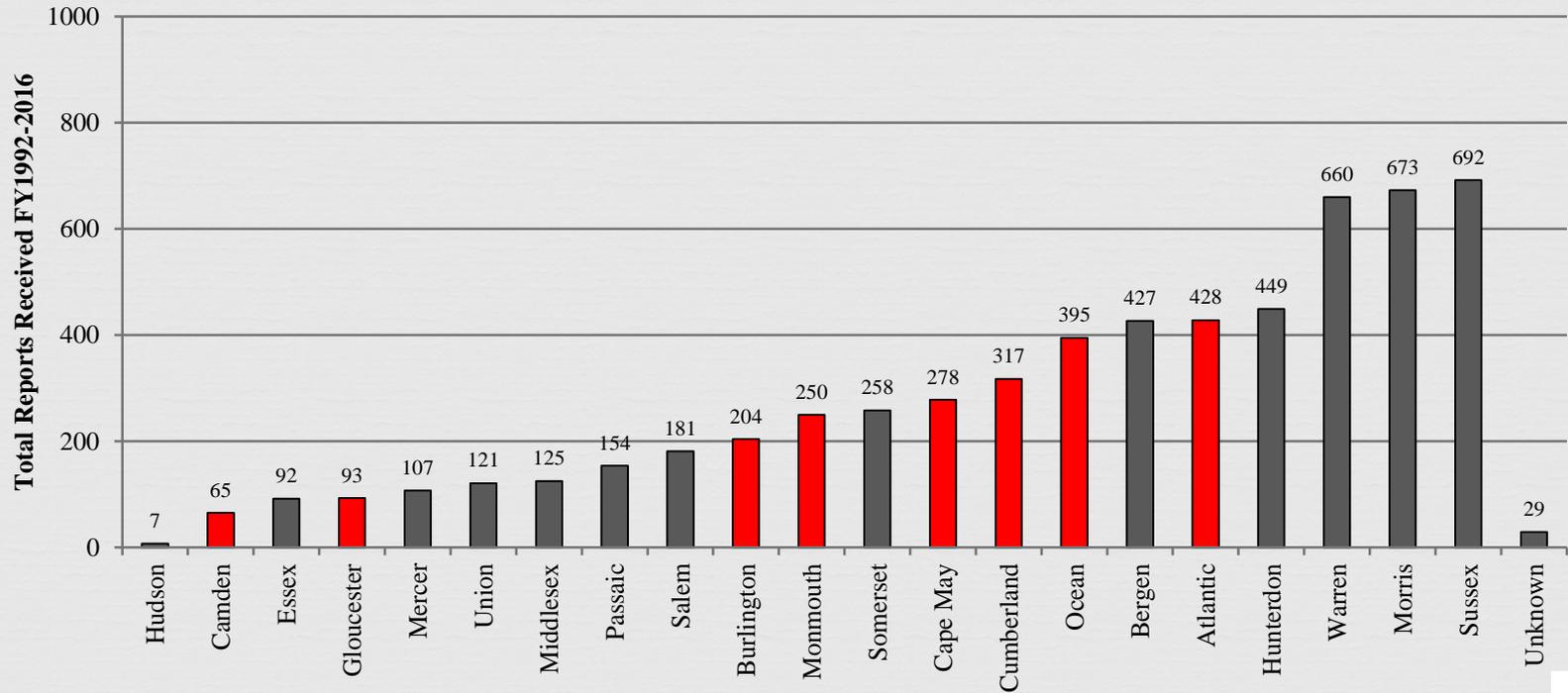
Average Annual Complaints FY1994-2016



Coyote Reports



Rank by County



Avoiding Negative Interactions



- ❧ Never feed a coyote
- ❧ Keep pet food indoors
- ❧ Keep pets indoors
- ❧ Keep garbage secure
- ❧ Put away bird feeders at night
- ❧ Keep livestock secure
- ❧ Pickup fallen fruit and cover compost piles
- ❧ Monitor children / pets while outdoors
- ❧ Install motion-sensitive light fixtures
- ❧ Clear brush and dense weeds from around buildings.

Avoiding Negative Interactions



- ❧ If you see a coyote, make sure they know they're not welcome – make loud noises, blast a canned air siren, throw rocks, or spray with a garden hose.
- ❧ If you see a coyote in the daytime that shows no fear of humans (or if you witness a coyote attacking a human), immediately contact local police and either:
 - ❧ NJ Division of Fish and Wildlife (908) 735-8793 during normal business hours (8:30am-4:30pm) or,
 - ❧ DEP Hotline (877) 927-6337 if outside normal business hours

The Coyote in New Jersey



Potential Future Research

Potential Future Research



- ❧ Obtain coyote carcasses for biological data collection
 - ❧ Age and Sex
 - ❧ Length and Weight
 - ❧ Disease and Parasites
 - ❧ DNA
- ❧ Radio telemetry/ Camera collars
 - ❧ High deer density areas
 - ❧ Low deer density areas
 - ❧ Urban/suburban areas



Questions?



Upland Project	Wildlife Control
Andrew Burnett	Clinton WMA
Principal Biologist	(908) 735-8793
(609) 748-2047	
Andrew.Burnett@dep.nj.gov	

Visit the Division website: www.njfishandwildlife.com