MASSACHUSETTS DIVISION OF FISHERIES & WILDLIFE EST. 1866

MASSWILDLIFE

Coyotes 101

Presented by

Patricia Huckery – Northeast District Manager

Dave Wattles – Black Bear and Furbearer Biologist

MassWildlife Mission Statement

The Massachusetts Division of Fisheries and Wildlife is responsible for the conservation - including restoration, protection, and management - of the state's natural heritage of wildlife and habitat diversity for the benefit and enjoyment of the public now and into the future.

Eastern Coyote – *Canis latrans*

- The subspecies of coyote in the eastern U.S.
- Result of western coyotes interbreeding with gray wolves and domestic dogs
  - More on natural history later
- Eastern coyote DNA is **60-84% coyote** in northeastern states
  - Very little wolf DNA

Physical Description

- Medium-sized dog
- Not very large animals
  - Females average 33-40lbs
  - Males average 34-47 lbs
    - Very large males may weigh up to 60lbs, exceptional
- Often look much larger due to thick fur
- Variety of coat colors

Activity

- Typically shy and elusive
- Active day or night
  - Often most active dawn/dusk
- Active year round
  - Do not hibernate

Coyote Life Cycle

Time of Year	Activity
February – March *	Breeding
April – May	Young born
June – August *	Teach young to hunt
September – November	Young disperse

* Most visible & vocal during breeding and while raising young

Coyote Young

- Average 6 pups per litter
  - Range from 1-9
- Weaned after 35 days
  - No longer depend on mother's milk
  - Leave den site, explore surroundings
- Disperse at 6-8 months old
  - Some pups may stay with family group

Howling & Other Vocalizations

- A means of communication
  - Among family group members
  - To defend home range against transients
  - Attract a mate during breeding season
  - Pups practice during summer, learning to communicate
- Not malicious or used to announce predation

Food

- Omnivorous
- Opportunistic

Habitat

- Adapted to just about any habitat type

Home Range Size

- Dependent on
  - Food abundance
  - Rural vs. suburban

Family Group

- Rural home range
  - Average 20 mi^2
- Suburban home range
  - Average 6 mi^2

Transient individuals

- Home range as large as 200 mi^2

Travel 7 to 16 miles daily

Adaptability

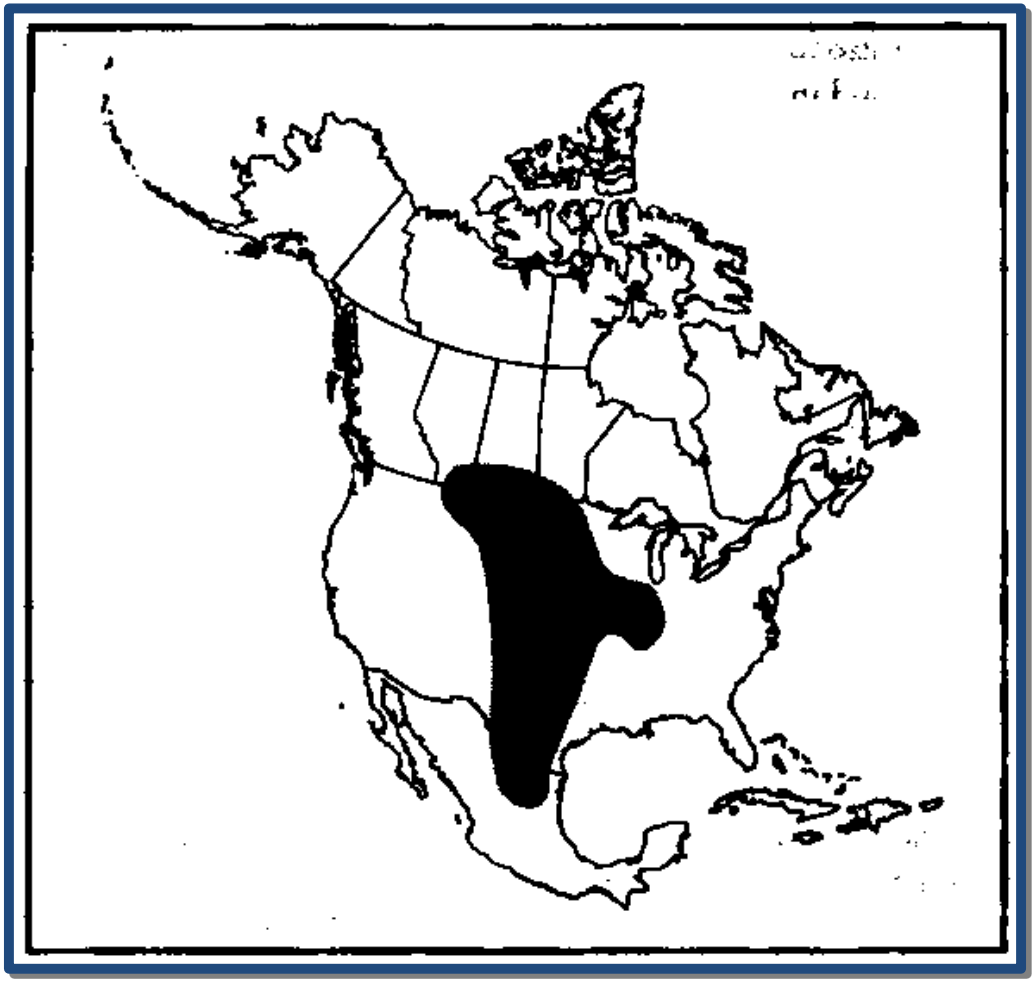
- Habitat
- Food
- Behavior

MASSWILDLIFE

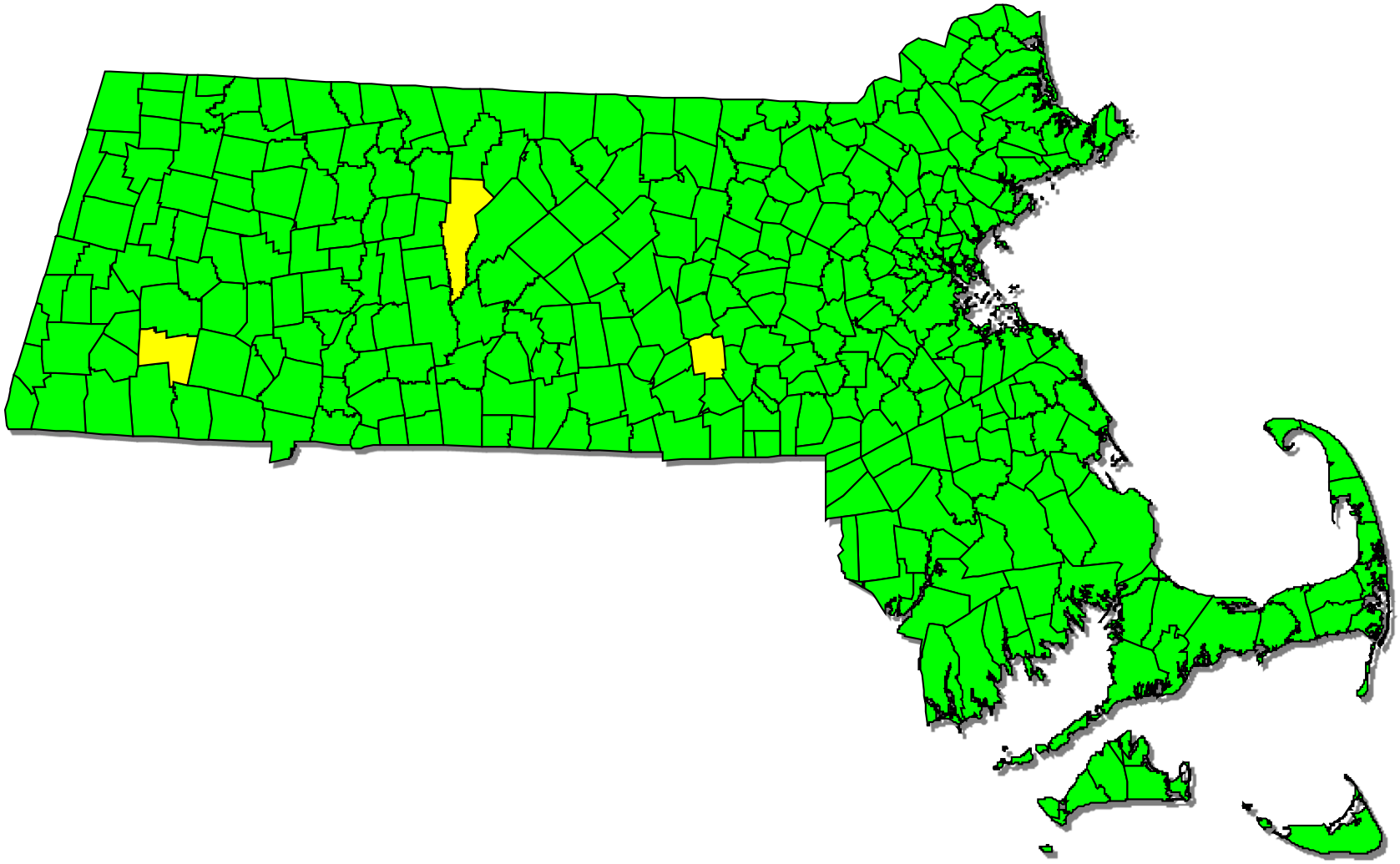
Natural History of the Eastern Coyote

How did they get here?

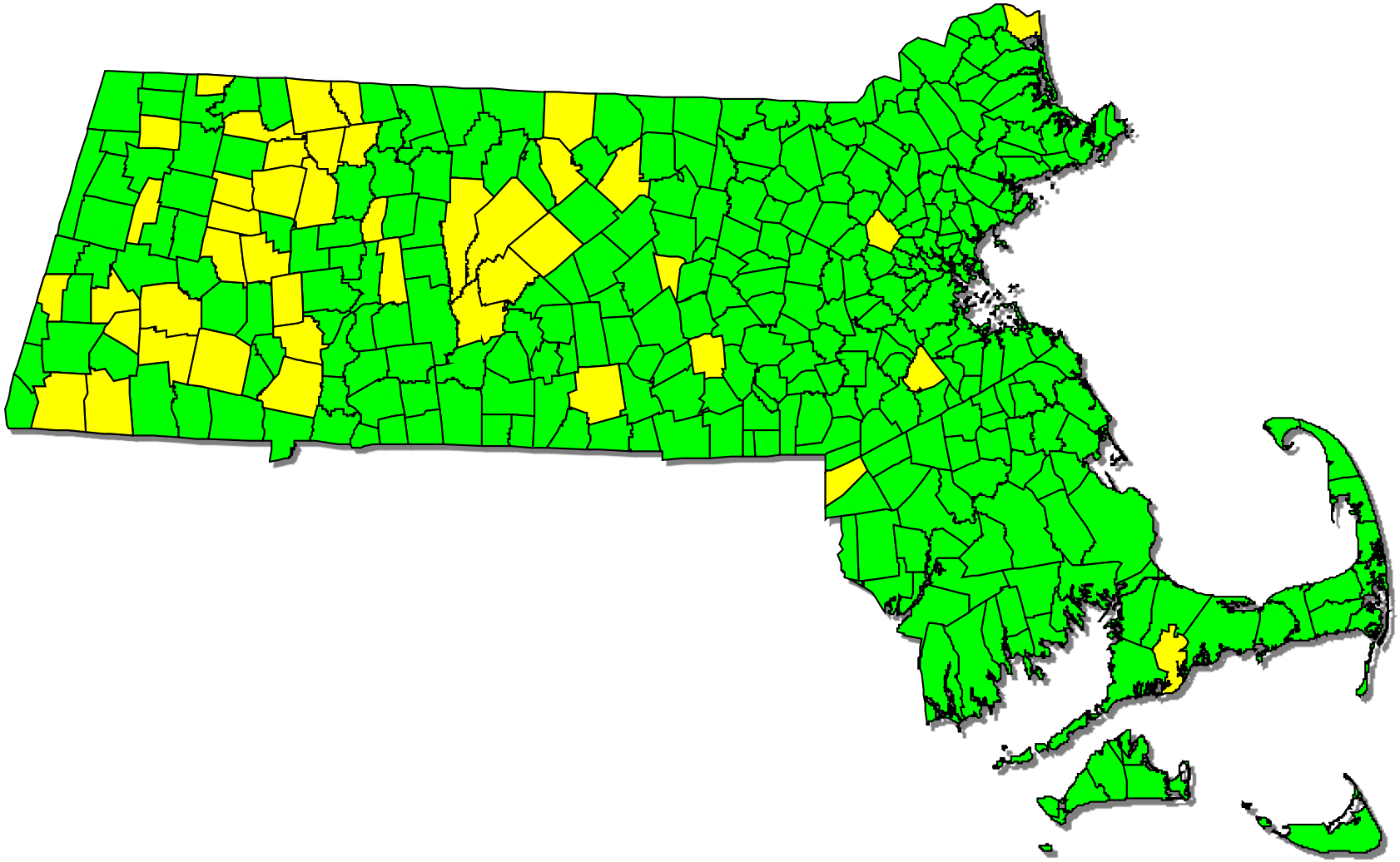
Coyote Range in the U.S. Pre-Settlement



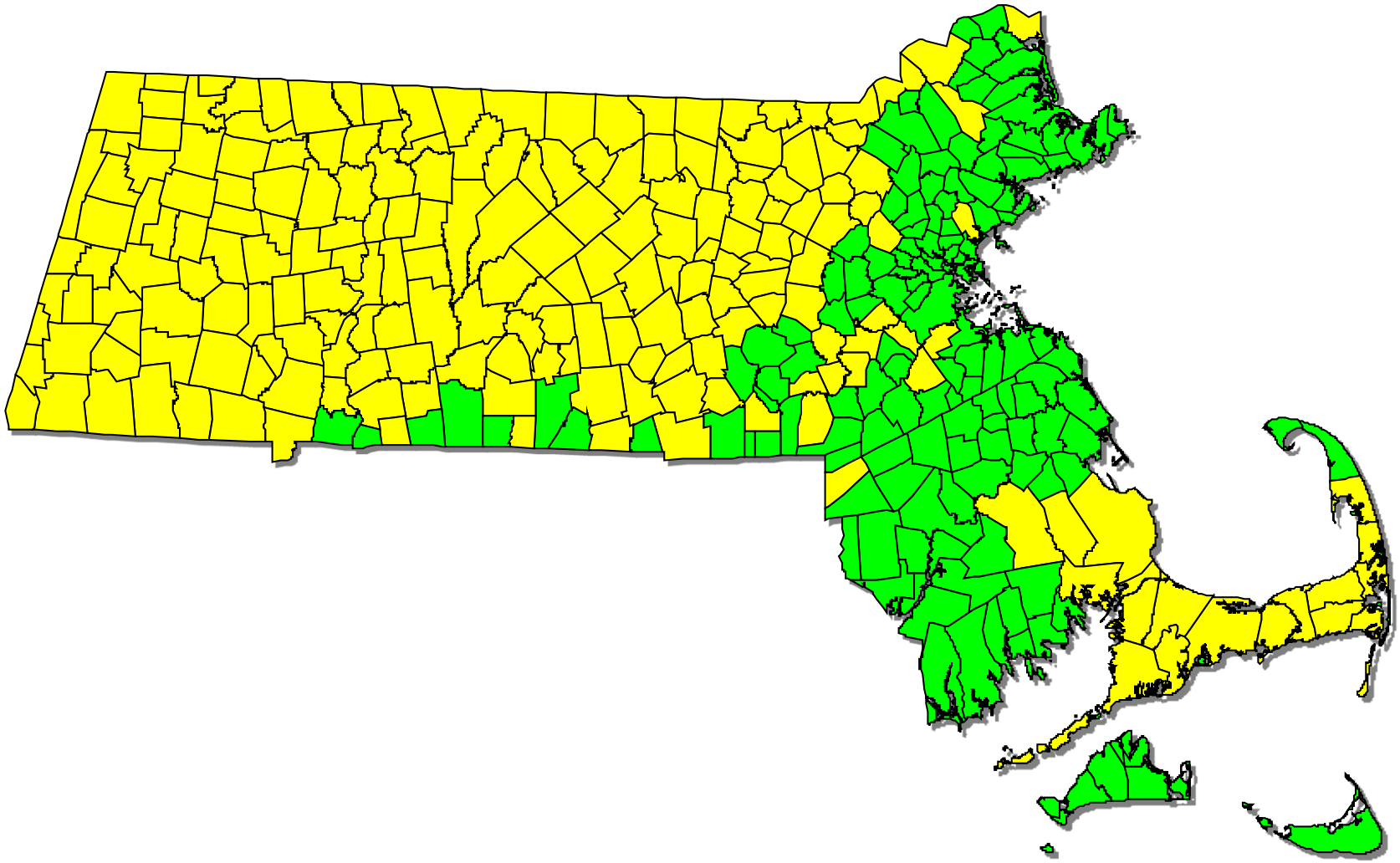
Coyote Distribution - 1959



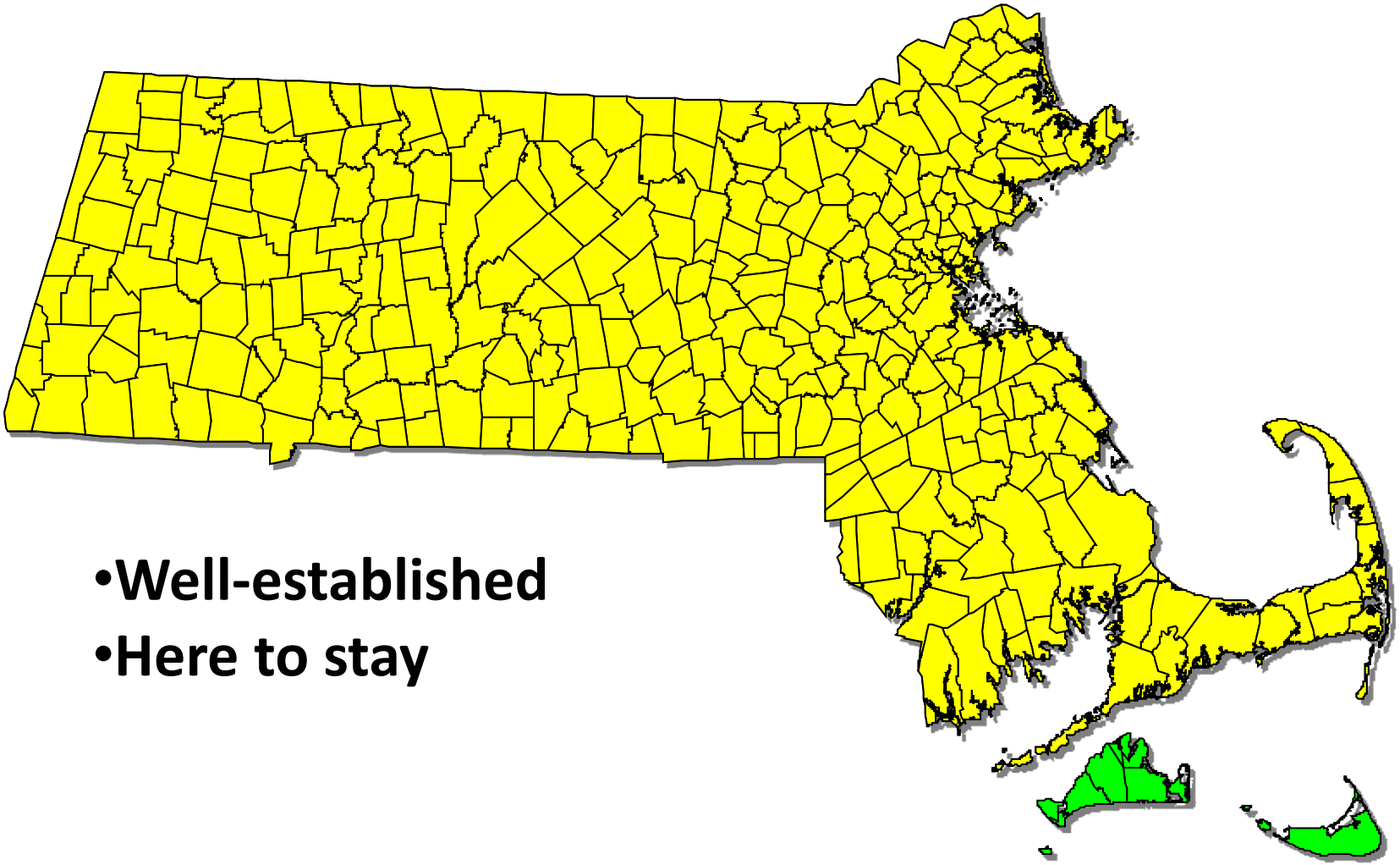
Coyote Distribution - 1980



Coyote Distribution - 1990



Coyote Distribution - Present



- Well-established
- Here to stay

Coyotes are a valuable species

- Ecologically
- Intrinsically
- Educationally
- Recreationally

MassWildlife Coyote Management

- MassWildlife manages coyotes as an important natural resource
- Work to resolve conflicts and support values
  - Regulating hunting and trapping seasons
  - Regulating Problem Animal Control Agents
    - Currently 52 coyote certified agents
  - Public education

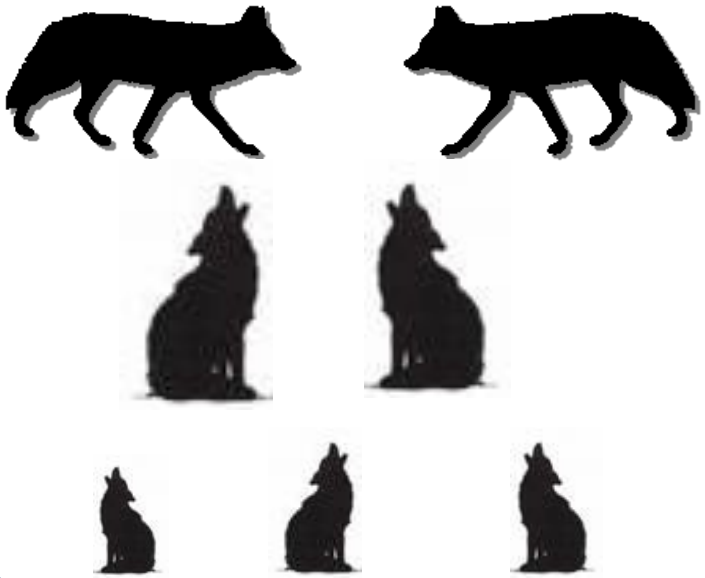
MASSWILDLIFE

Population Dynamics

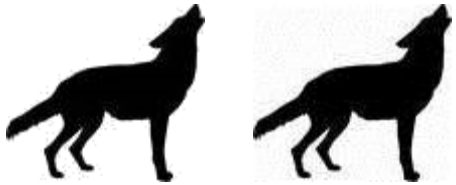
Social Organization

Population consists of:

Residents with stable home range



Transients

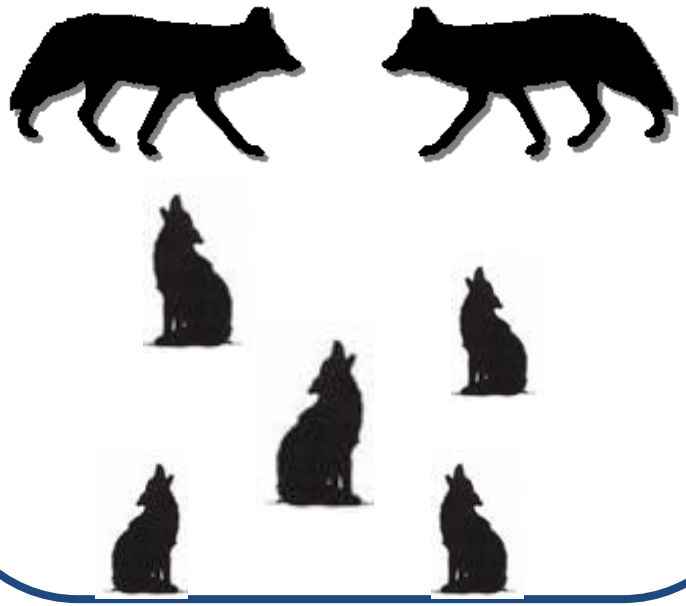


Family group centers around adult alpha pair

Highly territorial

What happens at the town level?

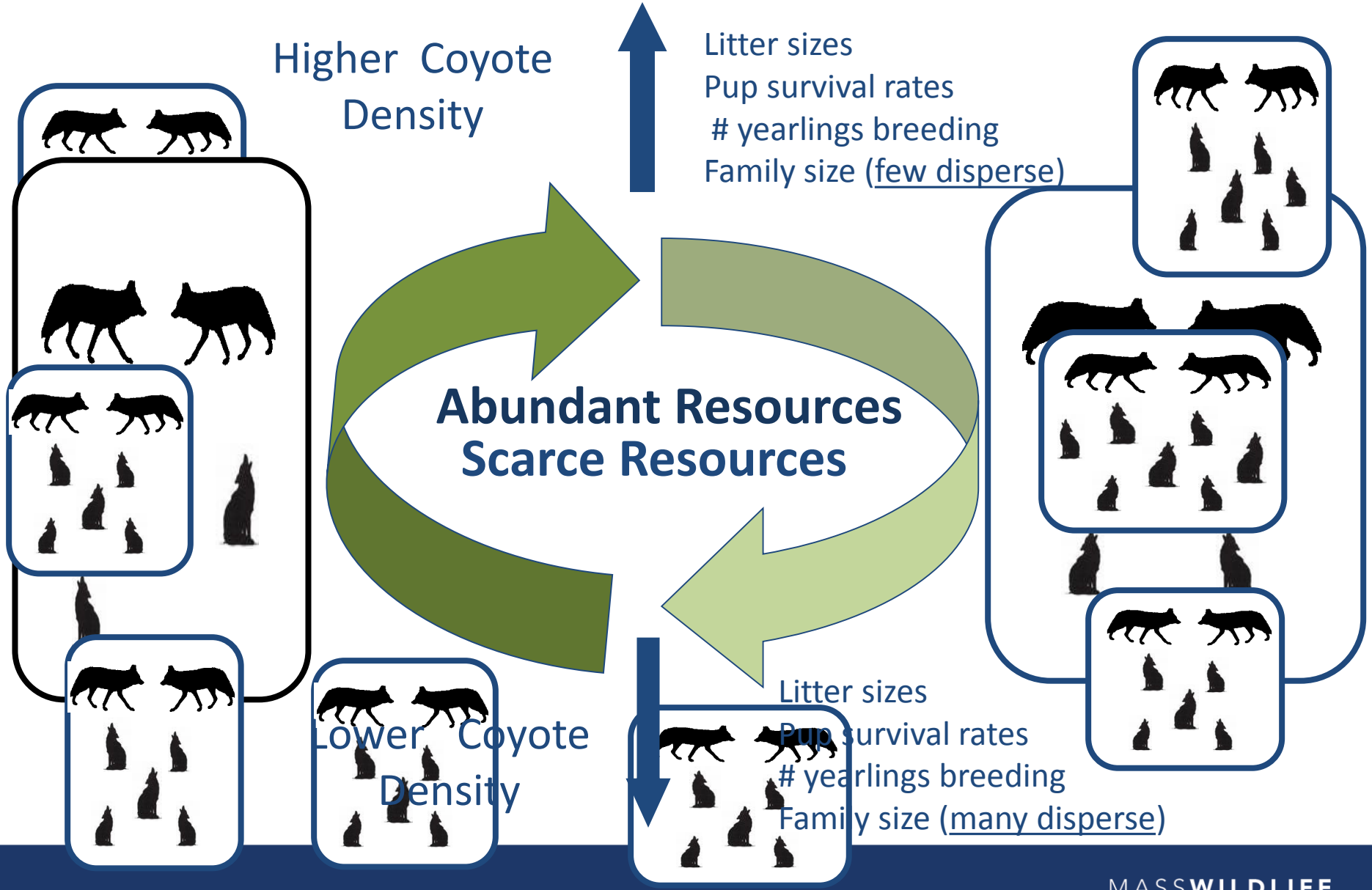
Residents with stable home range



< 1 year

Transients

Coyotes and Resources



Coyotes and Mortality

1. Vehicle 2. Disease 3. Hunting

Litter sizes
Survival rates
yearlings breeding

Low Mortality

Increased competition

Decreased competition

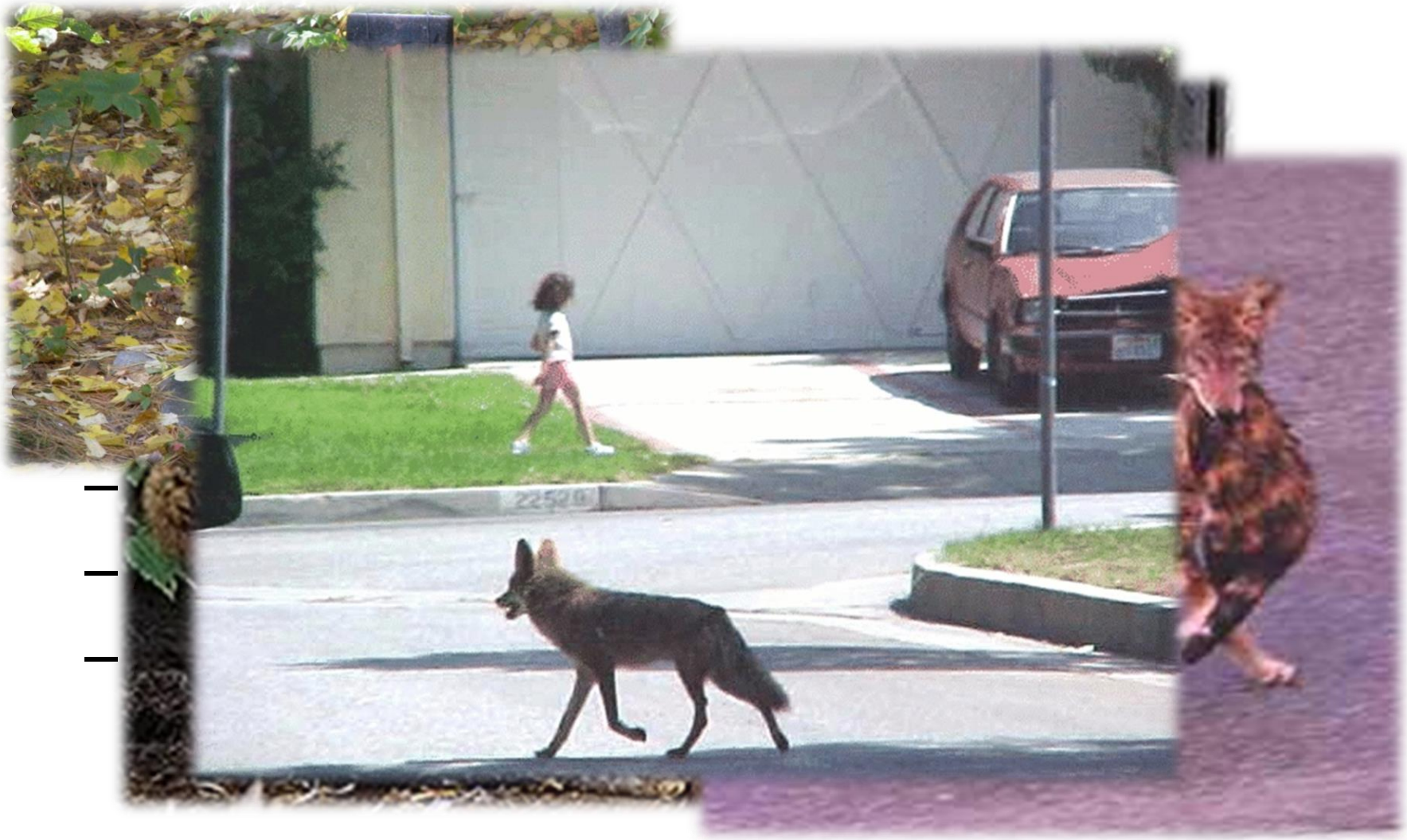
High Mortality

Litter sizes
Survival rates
yearlings breeding

MASSWILDLIFE

Human – Coyote Conflicts

What are people concerned about?



Why do these conflicts occur?

- **<u>Human</u>** behavior and tendencies
  - Intentional feeding
  - Unintentional feeding
  - Lack of harass

Attacks on People

- Are <u>very RARE</u>
- Only 7 confirmed incidences since 1950's
  - 2 confirmed rabid, 3 suspected rabid
  - 2 highly habituated
- Put in perspective: there are ~4.5 million dog bites every year in the U.S.

Northborough man turns tables on attacking coyote

'Grampy' not badly injured after assault

M Fish

By Lisa Gentes

and were standing there in an open grassy area talking and then the female coyote attacked me from behind and bit me in one of my legs," Cole recalled yesterday. "The attack was un-

ote, which was still biting Cole. Police then killed the coyote. "We basically choked the animal to death," Northborough Police Sgt. James Bruce said.

Suspected coyote attacks prompt warnings in Sudbury

H. Fish

By Kristen Green
GLOBE CORRESPONDENT

Fisheries and Wildlife, said there is no conclusive proof that either

more aggressive approach has to

life in the suburbs, where their

that two coyotes were stalking

Rabies and Coyotes in MA

- Coyotes are <u>not</u> a major rabies vector species
- Since 1992, there have only been **13** coyotes that tested positive for rabies
- **0.034%** of all rabid animals
- 138 coyotes submitted
- ~9% of all coyotes submitted tested positive
- **21** cows have tested positive (20%)

Habituation

- Occurs when:
  - Lack of threats
  - Acclimated to human presence
  - Human-associated food sources
  - Food rewards

Human-associated food sources

- Bird feeders
- Garbage
- Compost
- Pet food

Progression of Problem Behavior

Coyote Behavior	Progression
Frequent use of residential areas	Normal
Frequent daytime activity	Normal
Nighttime attack on *unsupervised* pet	Somewhat bold
Daytime attack on *unsupervised* pet	More bold
Attack on leashed pet (human present)	Very bold
Approaches/*closely* follows people; does not flee when heavily harassed	Extremely bold
Physically attacks people	Aggressive

Not at all

SEVERITY

Extreme

These behaviors do <u>not</u> constitute a threat to public safety

These behaviors <u>do</u> constitute a threat to public safety

MASSWILDLIFE

Resolving and Preventing Conflicts

Modify Human Behavior

- Remove human-associated food sources
- Harassment

Eliminate Food Sources

- Remove all bird feeders
- Secure garbage
- Use compost containers

Harassment

- Loud, offensive noises – not everyday sounds
  - Air horn, whistle, bang pots and pans
- Throw objects
  - Tennis balls, water balloons
- Spray with hose or water gun
- Use aggressive body language
  - Make eye contact
  - Do not run, turn your back, or retreat
  - Charge at the animal

What should kids do?

- Know the difference between a coyote and a dog
  - Parents teach them not to approach an animal they don’t know
- Make themselves look bigger
  - Open coat, wave arms over head
- Slowly back away, do not run
- Find an adult to harass the coyote

Modify Habitat

- Cut back brushy areas
- Remove brush/rock piles
- Disturb/eliminate den sites

Exclusion

- Fencing
  - At least 6 feet high
  - Install roll bars
- Containment of livestock & pets
  - Electric fencing
  - Avoid free-range practices
  - Keep house cats indoors
  - Keep dogs leashed <u>and</u> closely supervised
    - A leash does nothing to protect your dog if there isn't a person attached to the other end!

Tolerance

- Tolerate behavior well within reason
  - General presence w/out nuisance behaviors
  - Howling
  - Pursuit of naturally available food sources

MASSWILDLIFE

Removal of Problem Coyotes

Removal of a problem coyote is necessary when….

- There is a direct threat to human health and safety
- Property is damaged

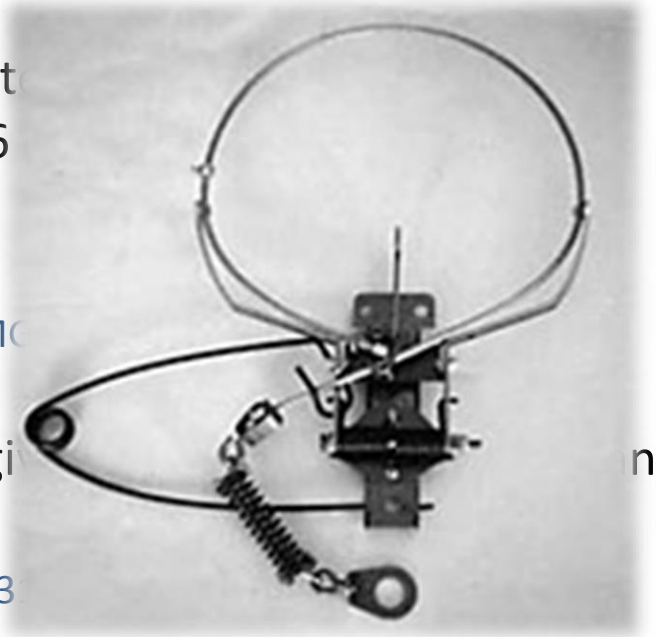
ONLY when the responsible coyote can be identified definitively and caught in the act

Cannot indiscriminately remove wildlife

Legality Issues & Limitations

- **Relocation of wildlife is prohibited**
  - Liberation of wildlife prohibited (321 CMR 2.15, Section 4)
  - Transportation for the purposes of euthanasia only (321 CMR 2.14 Section 20c)

- **Trapping restrictions**
  - Trapped animals must be euthanized or released on same property where caught (321 CMR 2.14 Section 20c)
  - Box traps only – not effective for coyot
  - 1996



- **Hu ns** (M
  - ess gi nts
  - nces
  - ter 13

Who can legally remove individual problem coyotes lethally?

- Local law enforcement officers
- Animal Control Officers, if deputized

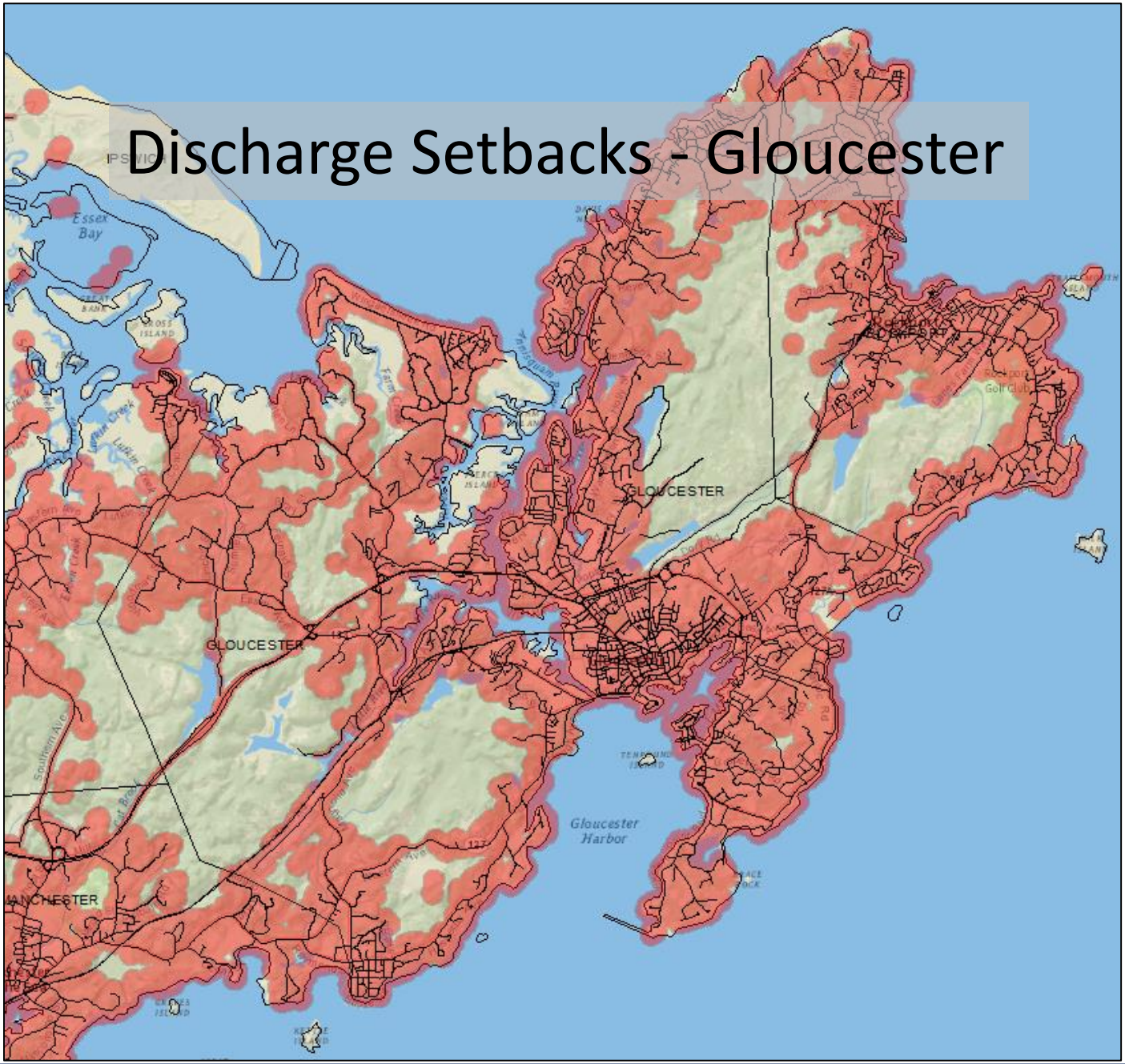
If the animal is confirmed a threat to public safety

- MA Environmental Police Officers

- Coyote certified Problem Animal Control Agents
- Municipal Problem Animal Control Agents
- Licensed hunters and trappers

All trapping and firearms discharge restrictions apply

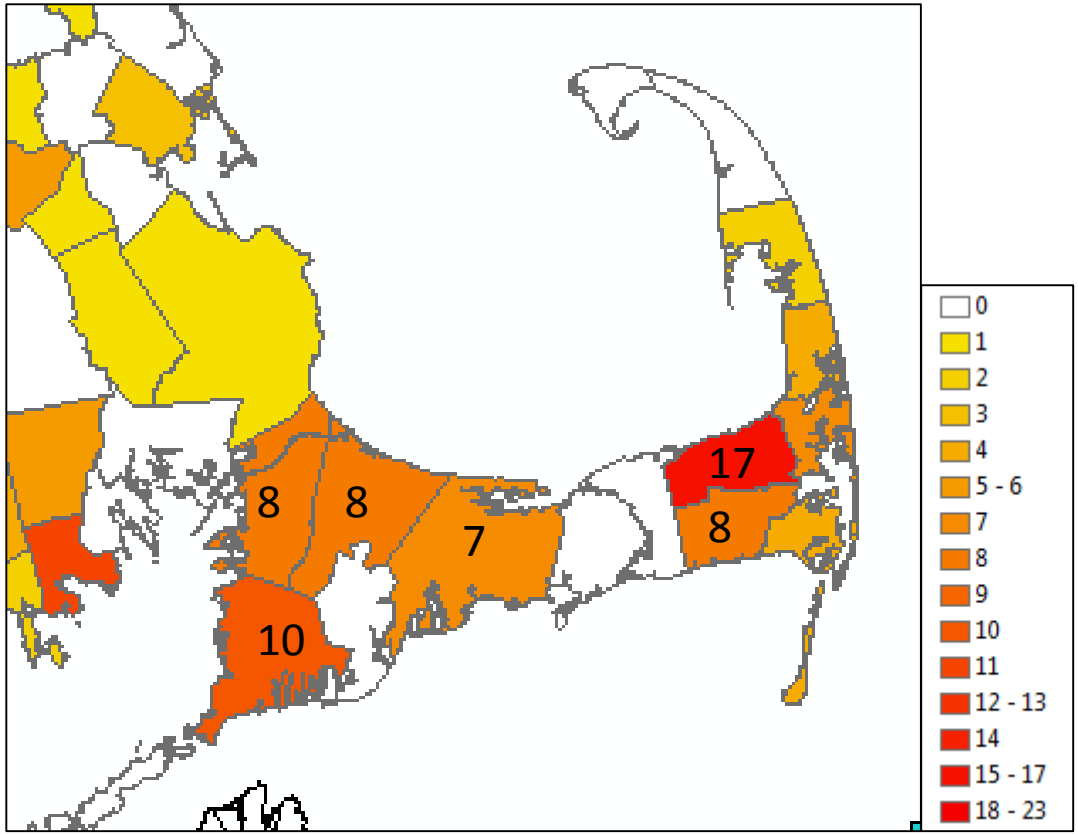
Discharge Setbacks - Gloucester



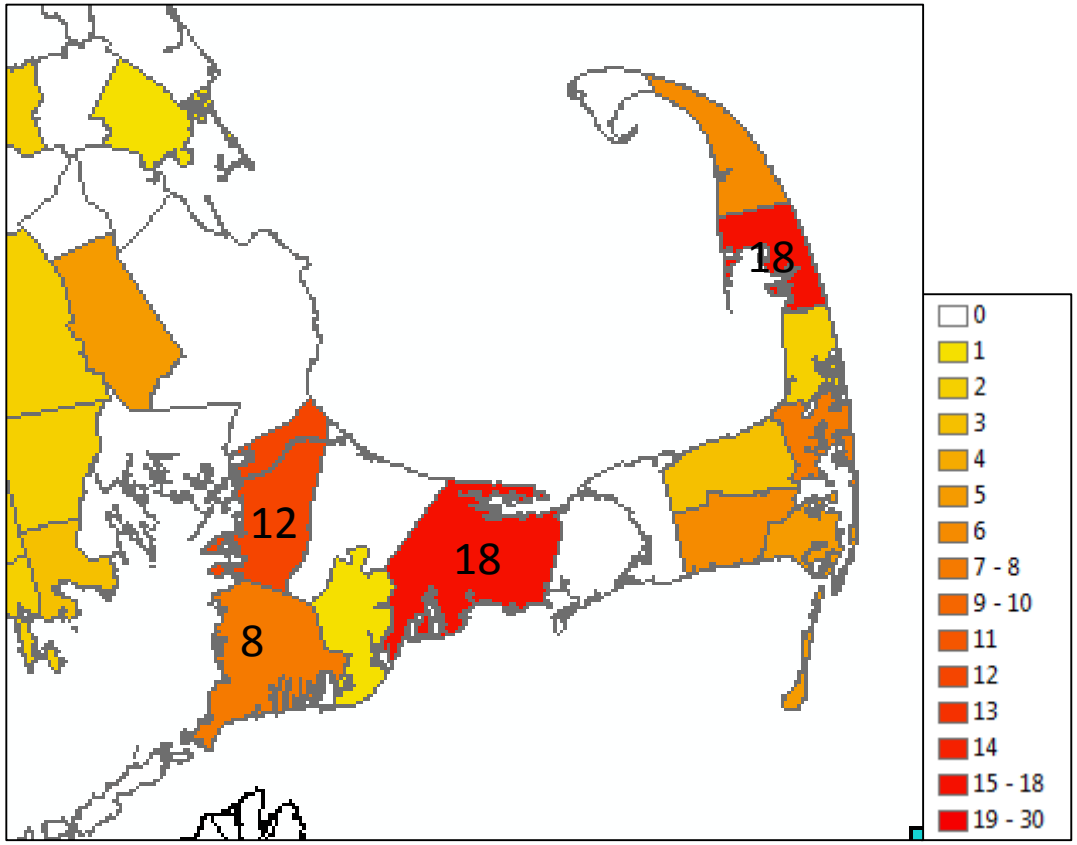
Who can legally remove individual problem coyotes lethally?

- Property owner (MGL Chapter 131, Section 37)
  - Immediate family member
  - Permanent employee
- Only by legal means (no poison, no prohibited traps, no discharge of firearms within 150’ of road)
- Only if animal is caught in the act of damaging property

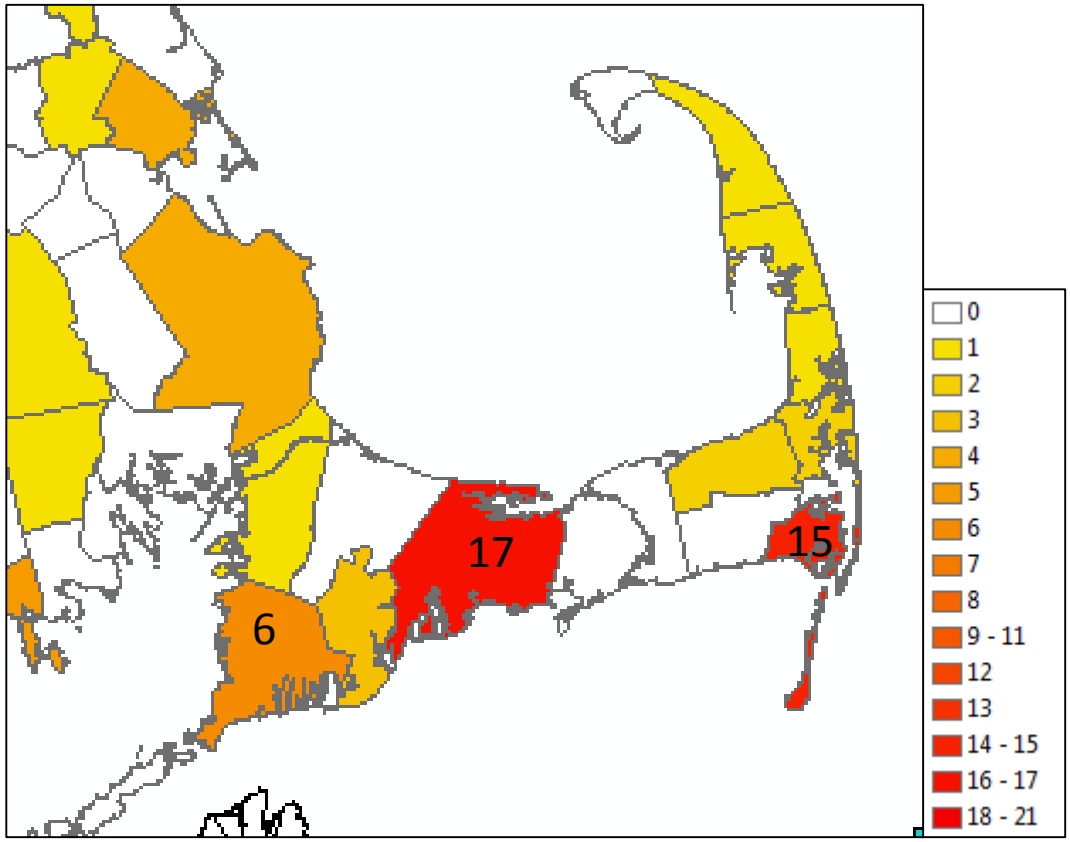
Coyote Harvest Cape Cod 2011-12



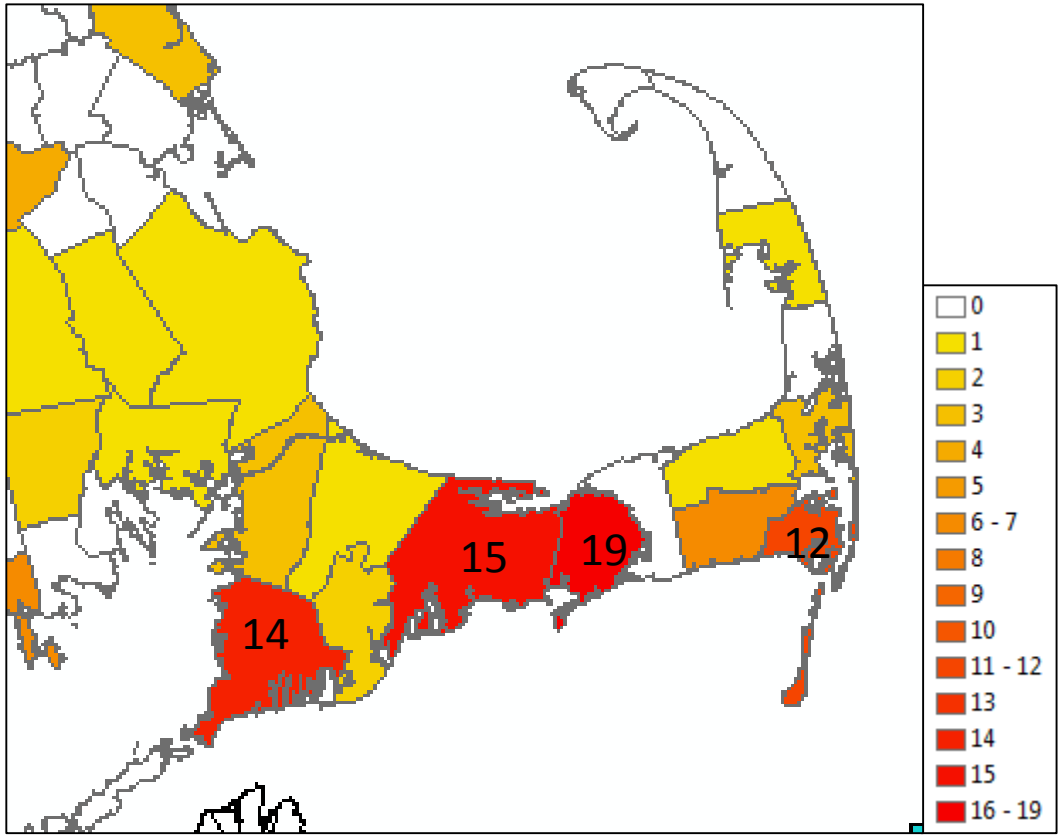
Coyote Harvest Cape Cod 2012-13



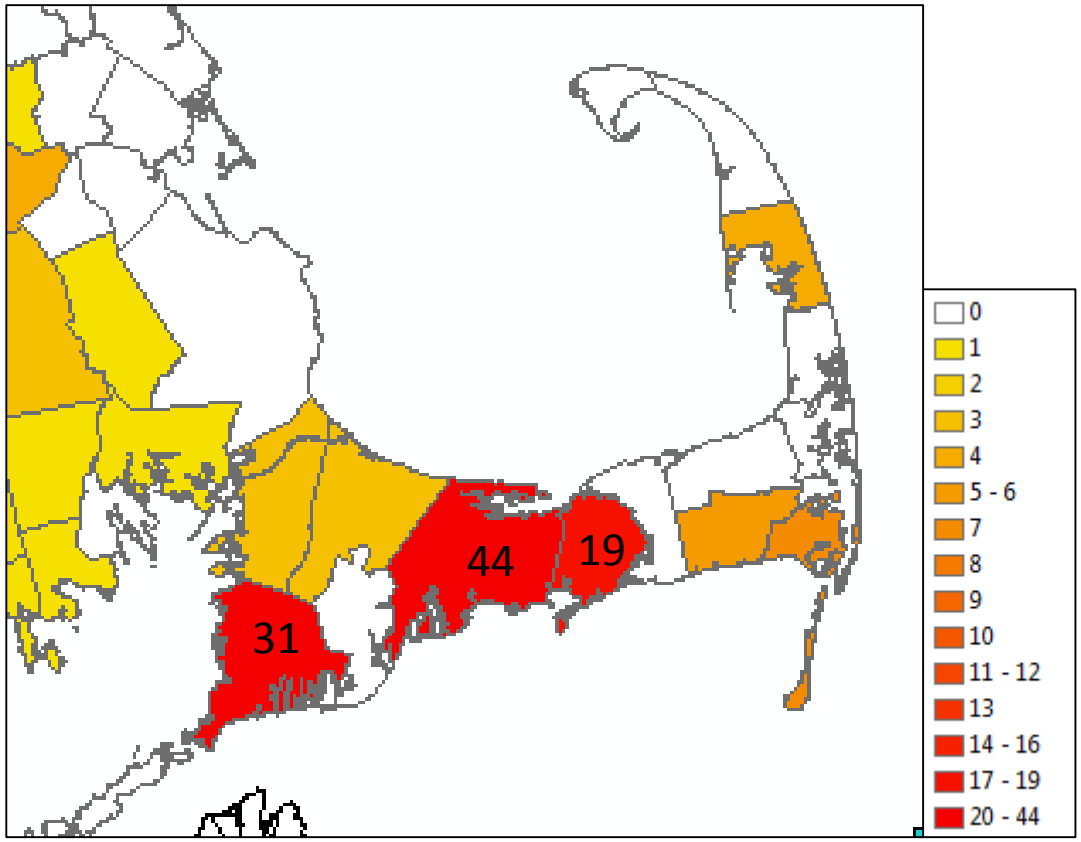
Coyote Harvest Cape Cod 2013-14



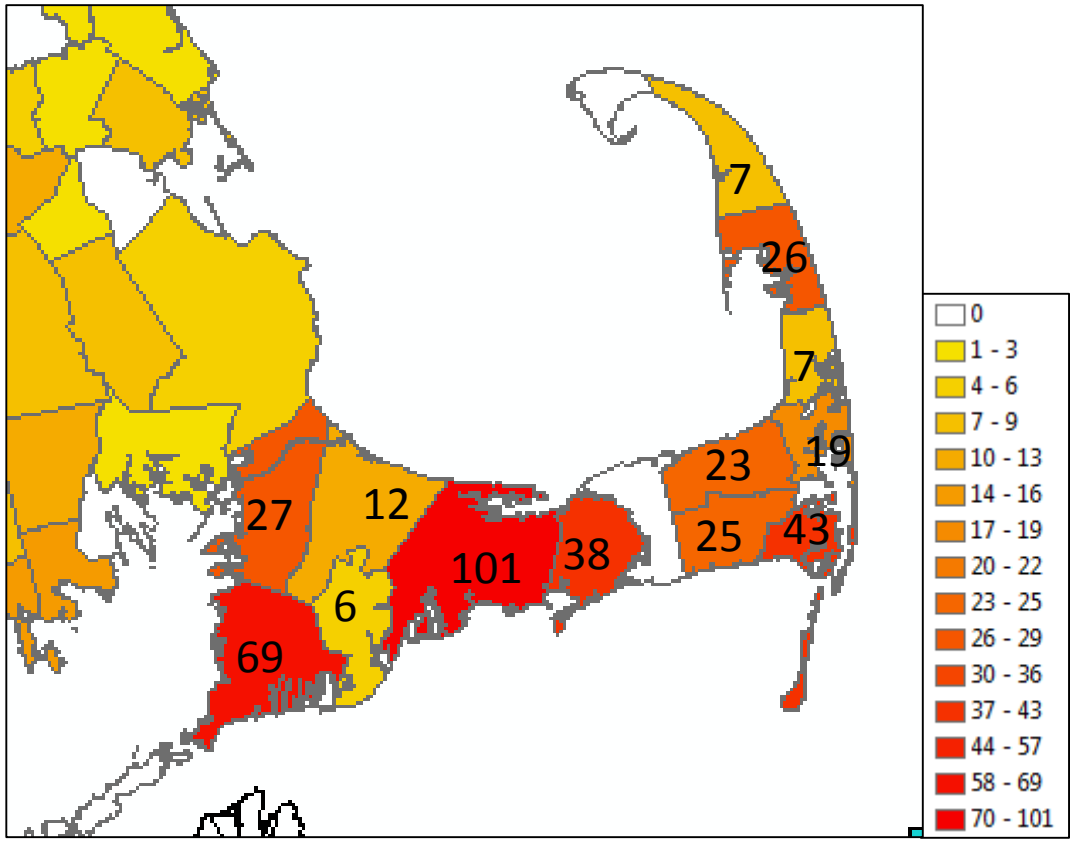
Coyote Harvest Cape Cod 2014-15



Coyote Harvest Cape Cod 2015-16



Coyote Harvest Cape Cod 2011-16



MASSACHUSETTS DIVISION OF FISHERIES & WILDLIFE EST. 1866

MASSWILDLIFE

COYOTES 101

Presented by

Patricia Huckery – Northeast District Manager

pat.huckery@state.ma.us/978-772-2145

Dave Wattles – Bear and Furbearer Biologist

dave.wattles@state.ma.us/508-389-6359