

# Chronic Wasting Disease (CWD)

## **Joint Hearing of the Senate Game & Fisheries and Agriculture & Rural Affairs Committees**

Tuesday, June 13, 2017



# CWD Facts

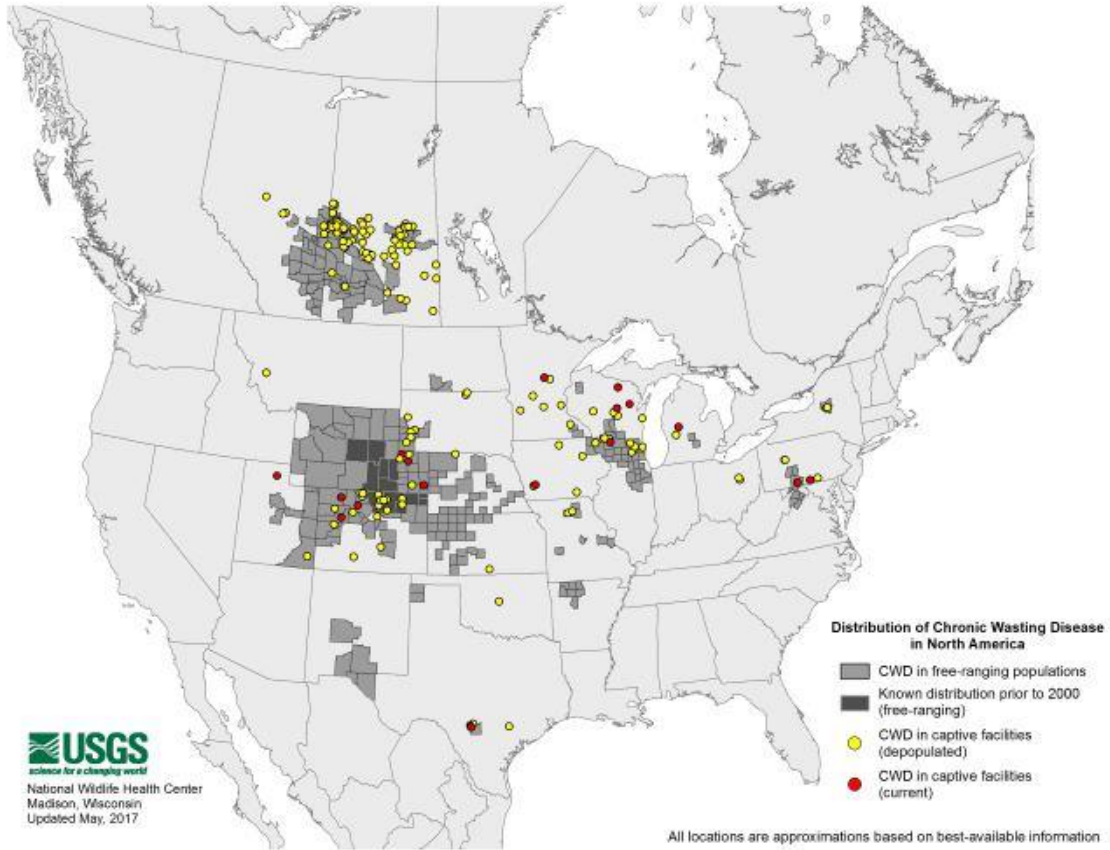
- CWD belongs to a family of diseases known as transmissible spongiform encephalopathies (TSEs)
- CWD susceptible species include: black-tailed deer; elk; moose; mule deer; red deer; sika deer; white-tailed deer; and hybrids of these species.(found in a reindeer but not yet on official list)
- CWD is identified as a dangerous transmissible disease under the Pennsylvania Domestic Animal Law.

# CWD Facts - continued

*There is **no**:*

- *Treatment;*
- *Vaccine;*
- *Reliable live animal test; or*
- *Practical means of testing soil for the presence of the prion.*







**USGS**  
*science for a changing world*  
 National Wildlife Health Center  
 Madison, Wisconsin  
 Updated May, 2017

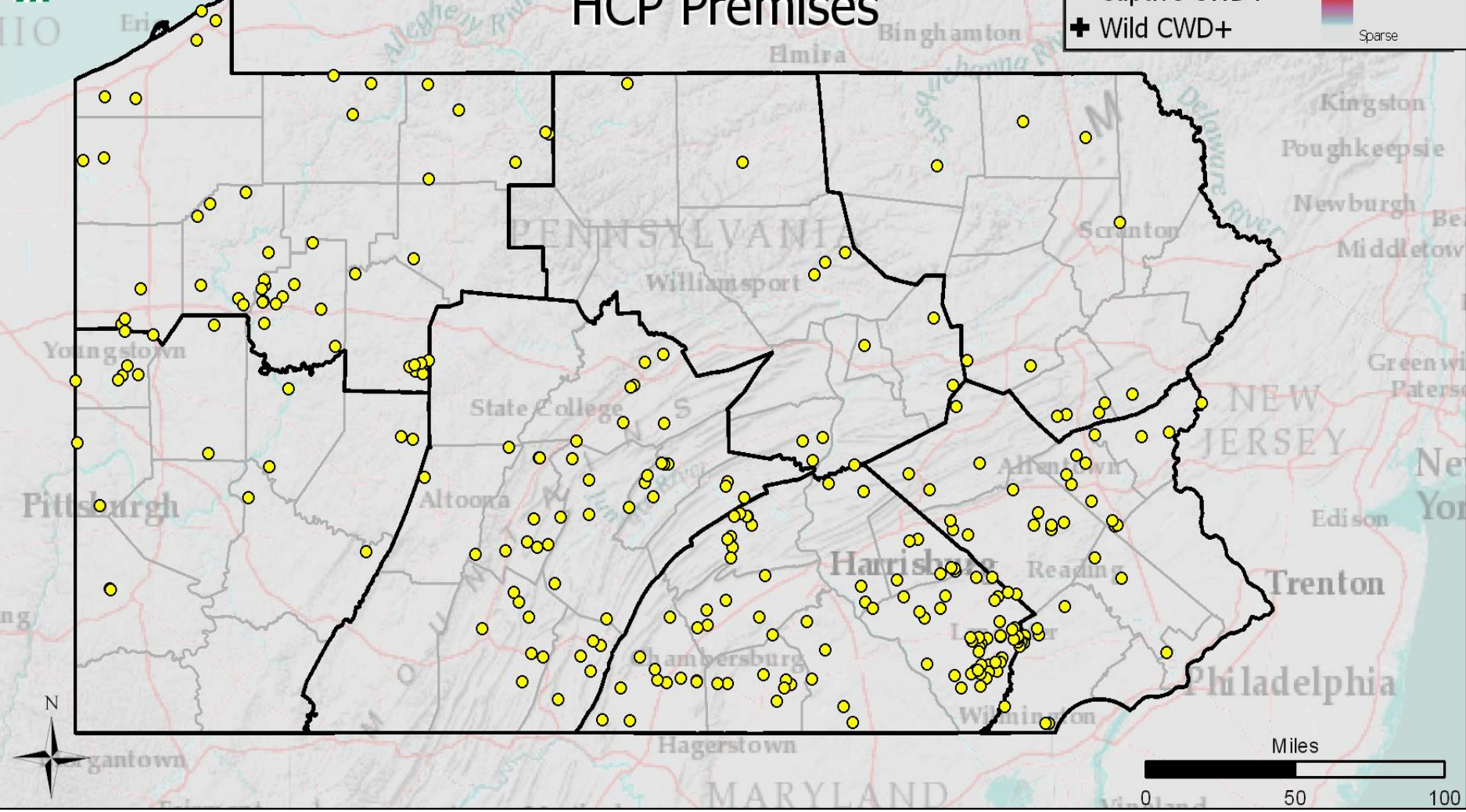
# Herd Certification Program (HCP)

- The CWD HCP is a voluntary program approved by USDA APHIS.
- The requirements are designed to determine the CWD status of domestic cervid herds.
- 257 Pennsylvania herds have attained certified status for interstate movement.
  - 5 years of negative tests and program compliance
  - Emphasis: ID, records, annual inventory, testing, fencing, inspection, vet verified inventory



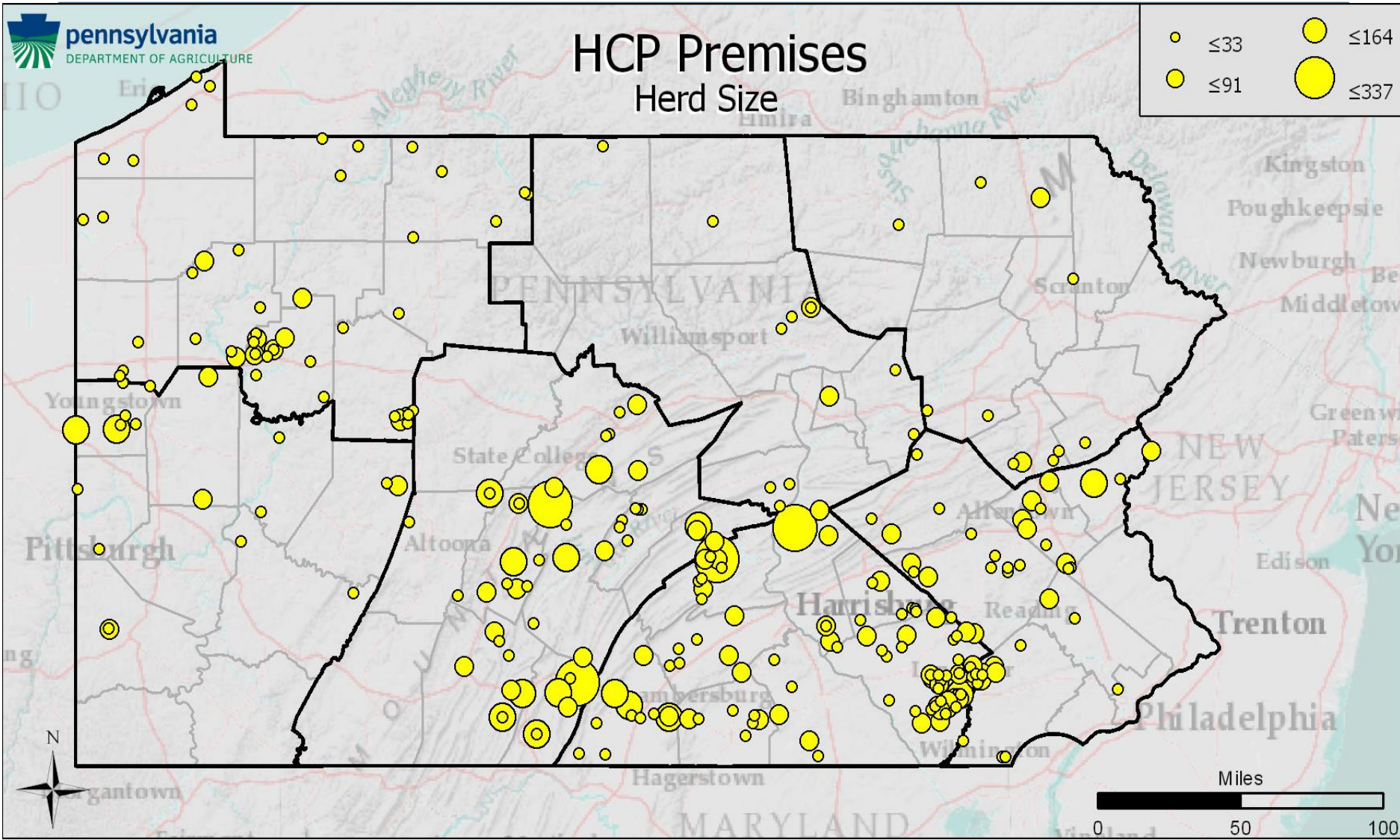
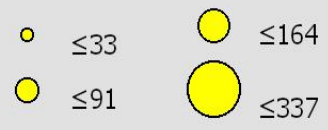
# HCP Premises

● HCP    ● HMP    CWD Proximity  
● Captive CWD+     Dense  
+ Wild CWD+     Sparse



# HCP Premises

## Herd Size





# Herd Monitoring Program (HMP)

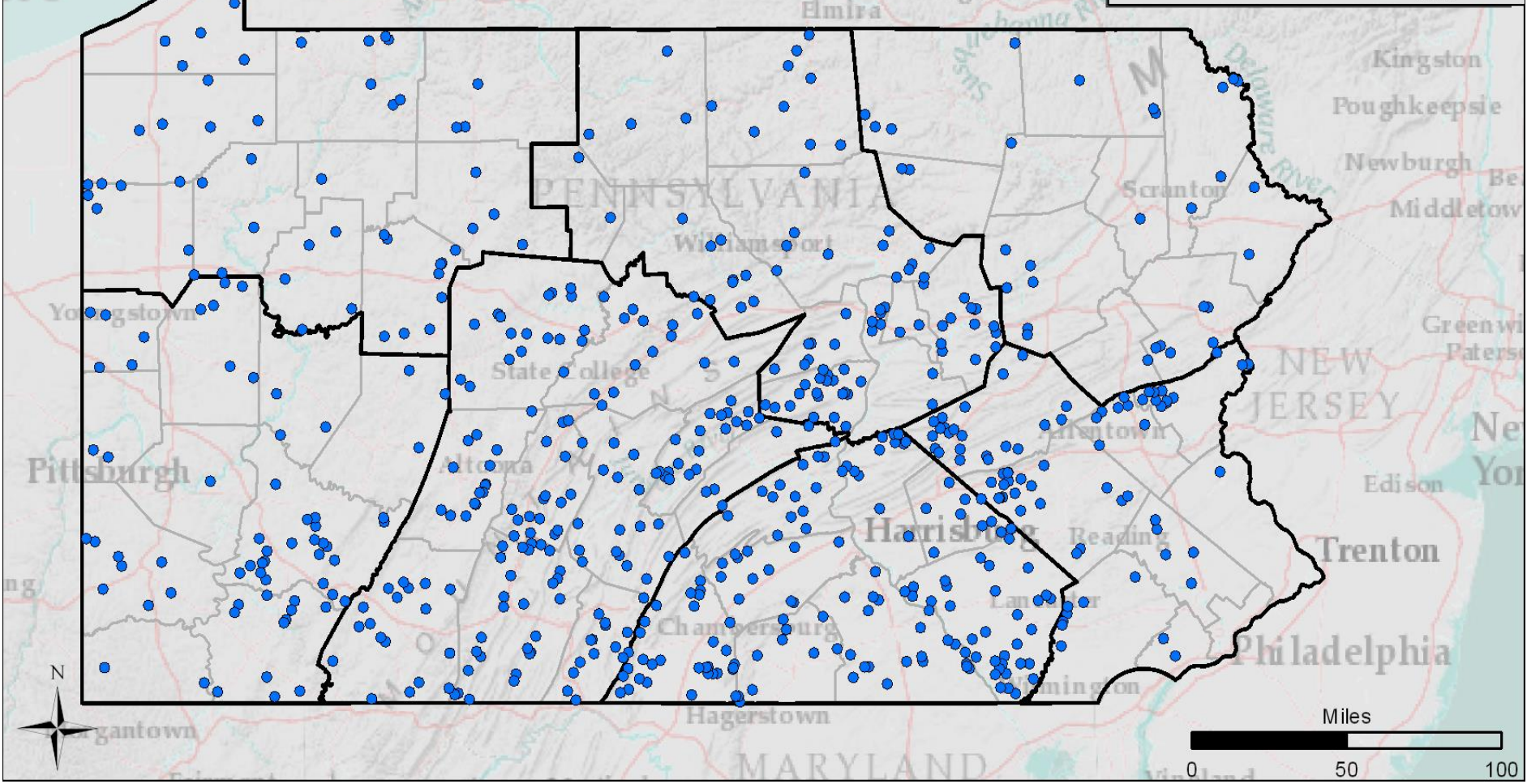
- The Pennsylvania CWD HMP is the mandatory program for all captive cervid herds not enrolled in HCP.
- 720 herds with HMP status are eligible for intrastate movement only.
  - Emphasis: ID only for movement and testing, annual inventory, fencing



# HMP Premises

● HCP ● HMP  
● Captive CWD+  
+ Wild CWD+

CWD Proximity  
Dense  
Sparse

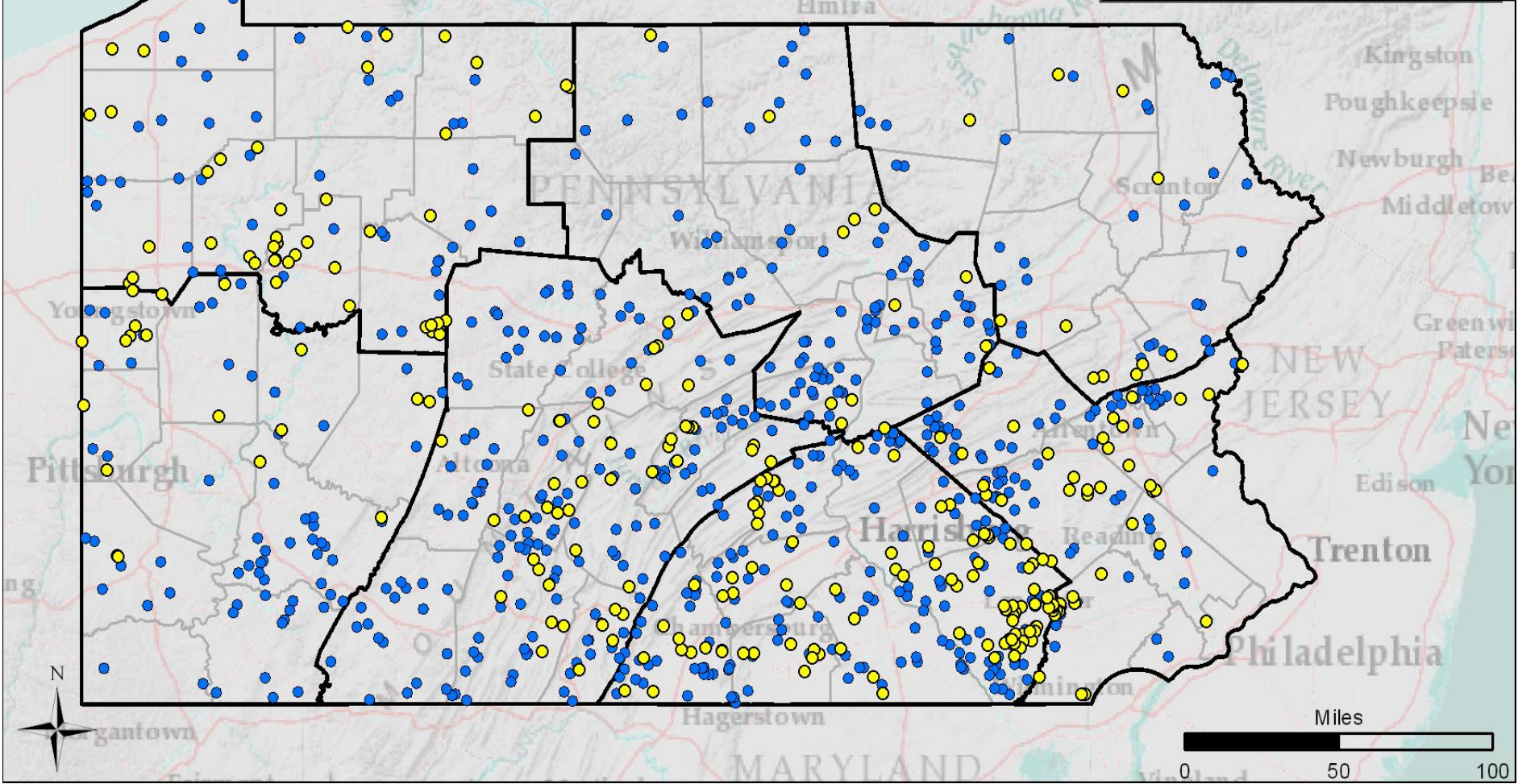




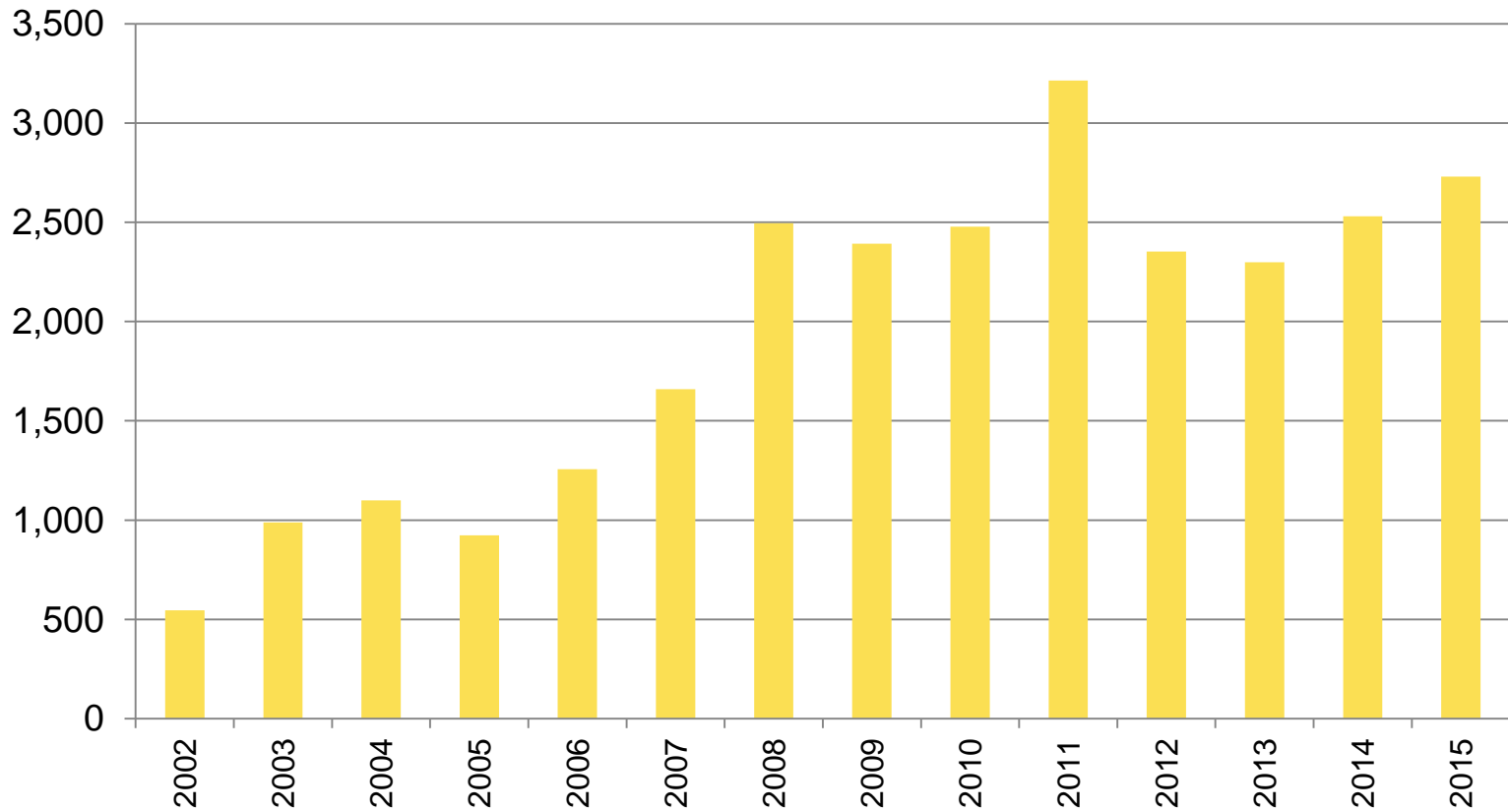
# HCP & HMP Premises

● HCP ● HMP  
● Captive CWD+  
+ Wild CWD+

CWD Proximity  
Dense  
Sparse



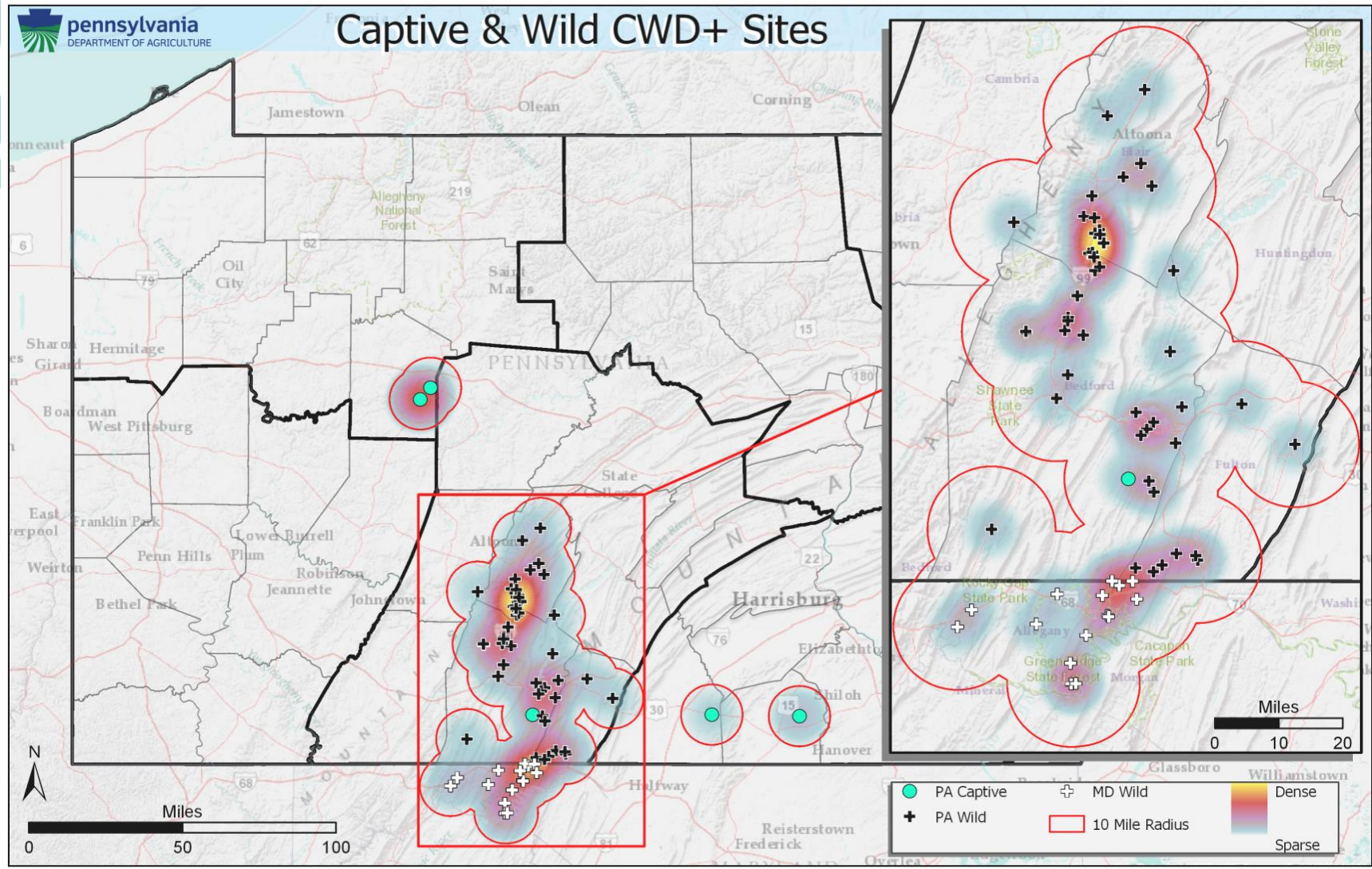
# Captive Cervids Tested



# Captive Cervid CWD Positives

- 6 CWD positive premises in Adams (1), Bedford (1), Franklin (1), Fulton (1) and Jefferson (2) counties
  - 3 premises depopulated and empty
  - 3 premises remain populated under strict QT
- 13 CWD positive animals total
- 21 CWD quarantined premises with exposed animals
  - 13 whole herds
  - 7 of the premises have no animals
  - 1 individual animal






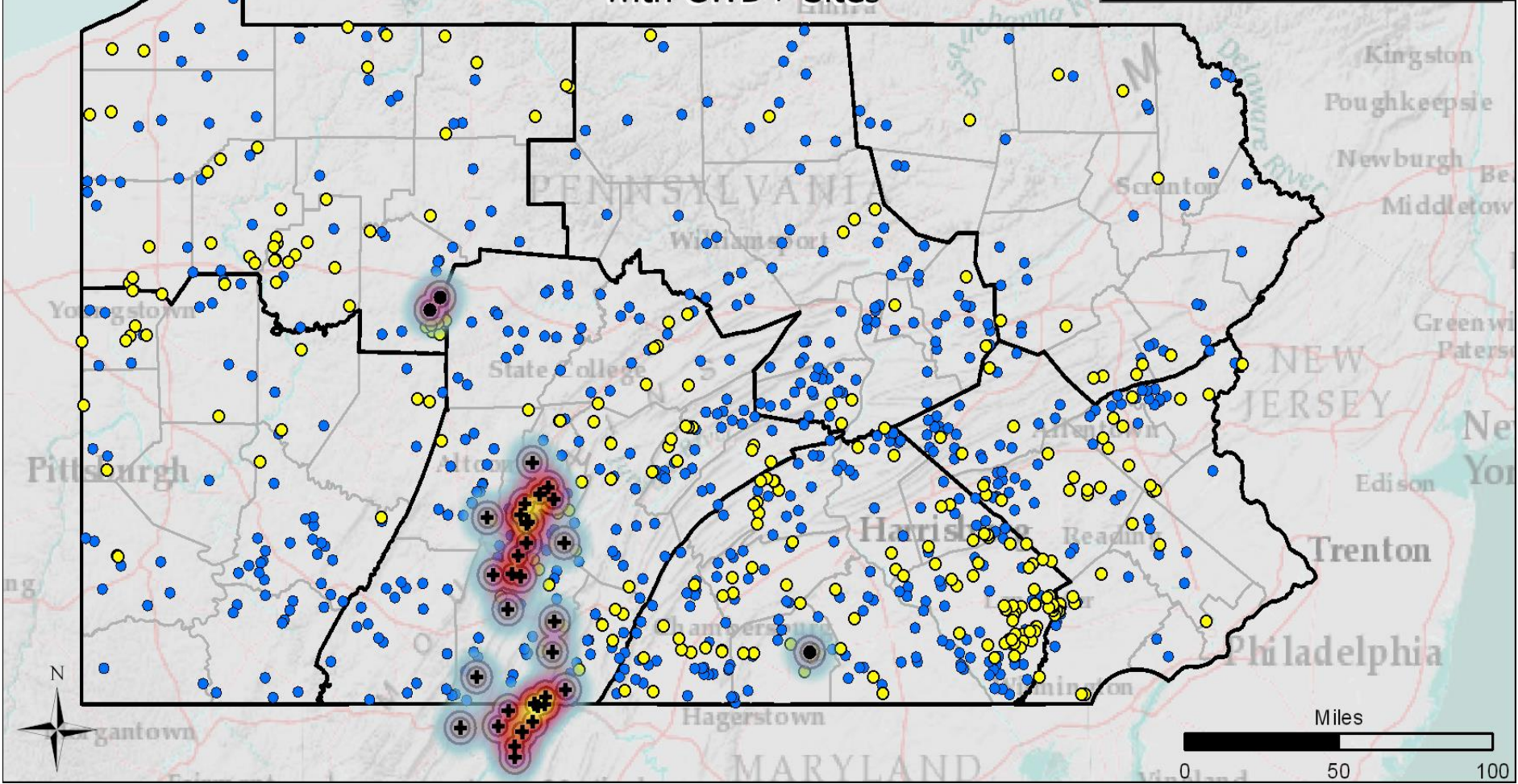
As of March 17, 2017



# HCP & HMP Premises with CWD+ Sites

● HCP ● HMP  
● Captive CWD+  
+ Wild CWD+

CWD Proximity  
  
Dense  
Sparse



# CWD Management Plan

- Together, we plan to review the 2011 response plan (2017 plan is in draft form)
- The focus is on building a strategic plan to manage CWD in PA based on risk.
- Key elements include:
  - Practical to implement
  - Uniform and consistent, whether inside or outside a fence
  - Addresses herd health
  - Public education

# Cervid Herd Health

In addition to CWD Programs:

- Tuberculosis Accreditation Program
  - 222 cervid herds fully accredited
- Brucellosis Certification Program
  - 222 cervid herds fully certified
- Regular whole herd testing by accredited veterinarians with record keeping.



# Questions?

## Contact Information

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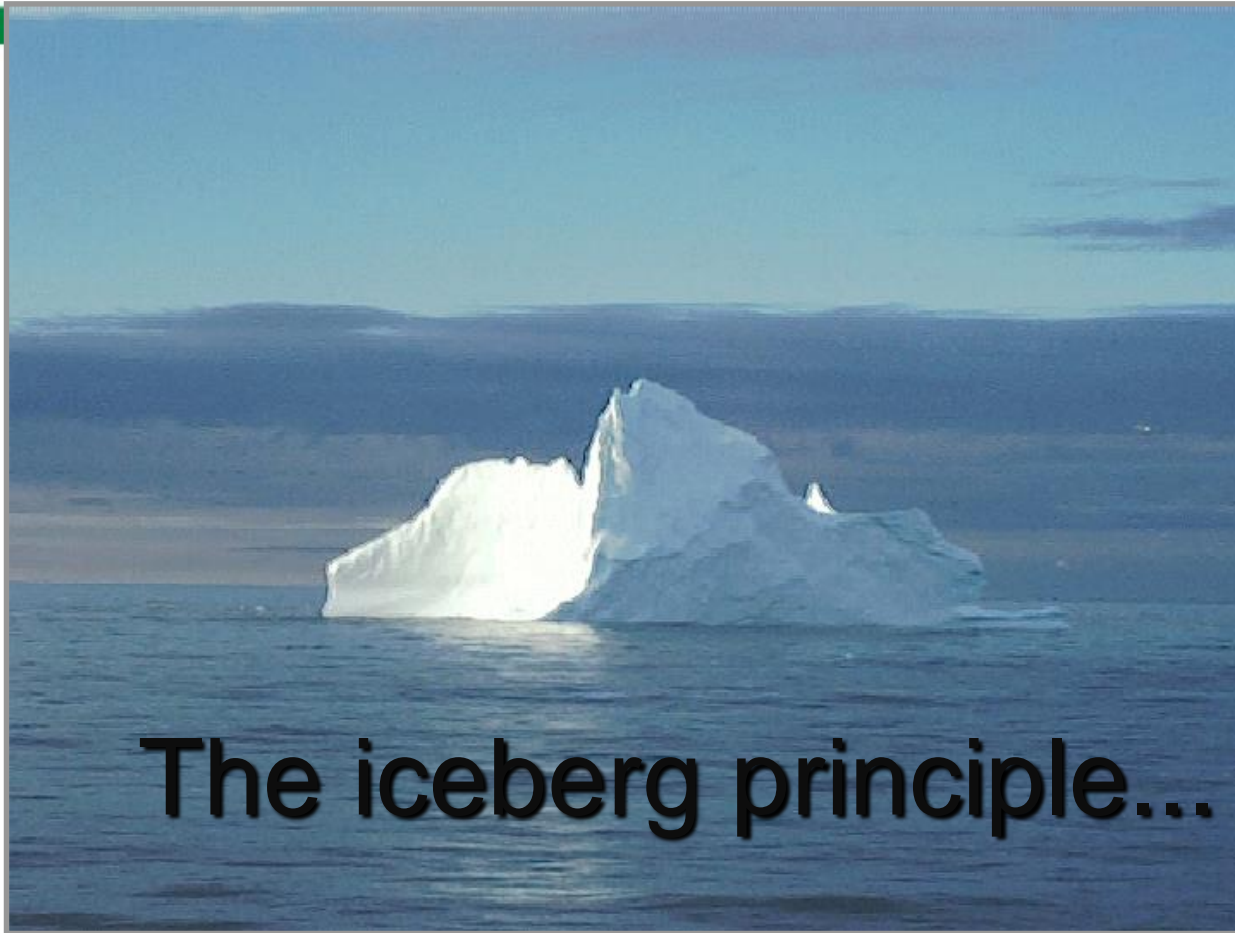
# Why is Testing and Control such an Issue for Chronic Wasting Disease (CWD)?

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# The herd picture...



The iceberg principle...

# The iceberg principle... 1%

**Age 4**



**Clinical + heavy shedding**

**Age 3**



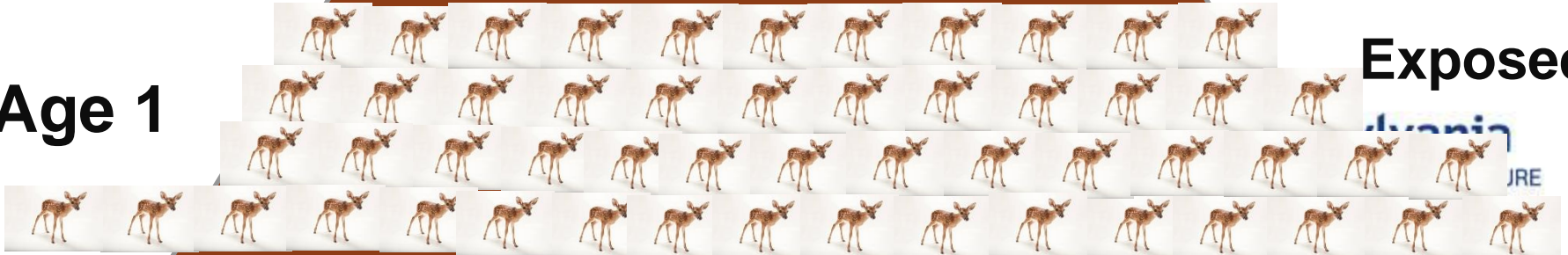
**Subclinical, ± shedding**

**Age 2**



**Subclinical, no shedding**

**Age 1**



**Exposed**



# The iceberg principle... 0.1%

**Age 4**



**Clinical + heavy shedding + 9 normal**

**Age 3**



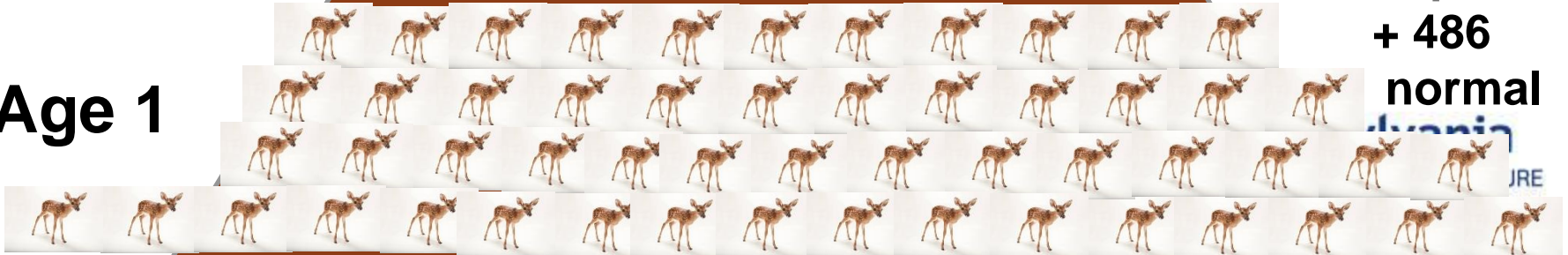
**Subclinical, ± shedding + 27 normal**

**Age 2**



**Subclinical, no shedding + 81 normal**

**Age 1**



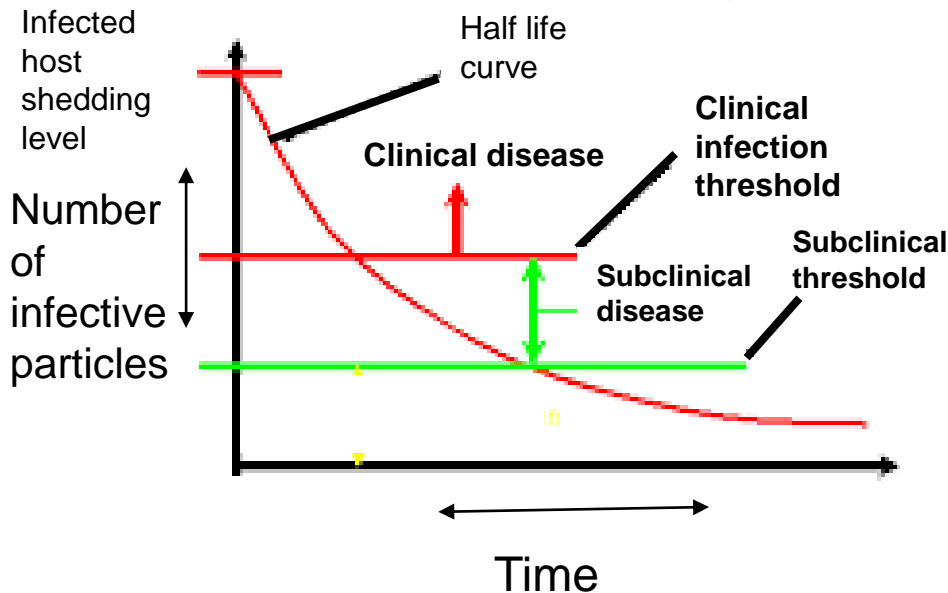
**Exposed + 486 normal**

# Statistics and Testing

Prevalence	1%	1%	1%	5%	5%	5%
Certainty	90%	95%	99%	90%	95%	99%
N=10	10	10	10	10	10	10
20	20	20	20	19	20	20
30	30	30	30	24	26	29
40	40	40	40	28	31	36
50	50	50	50	30	35	42
60	59	60	60	32	38	47
70	68	70	70	34	40	51
80	76	79	80	35	42	54
100	91	96	100	37	45	59
150	118	130	143	39	49	68
250	151	175	210	42	53	76
1000	205	258	368	44	57	86

# Reverse the Iceberg- Must change disease dynamics

## Environmental Survival Consequences



- Focus on bottom of iceberg not the top
- Minimize exposure of new animals
- Reduce shedding into the environment
- Strictly adhere to parts bans and movement restrictions

# Questions?

## Contact Information

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