Hemorrhagic Disease 2012

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Hemorrhagic Disease Outbreak 2012

- Basic Information about hemorrhagic disease
- Specifics of this year's outbreak
- Conclusions and recommendations

Hemorrhagic Disease (HD)

- Viral Disease
- Frequency and severity of outbreaks vary regionally and annually
- Outbreaks generally occur from July - October
- Not a result of the herd being “overpopulated”

Types of Hemorrhagic Disease

Epizootic Hemorrhagic Disease (EHD)

- EHD – 1
- EHD - 2

Blue Tongue Virus (BTV)

- BTV – 2
- BTV – 10
- BTV – 11
- BTV – 13
- BTV - 17

Transmission Vector

- Biting flies in the genus *Culicoides*
  - Biting midges
  - Sand gnats
  - Sand flies
  - No-see-ums

Susceptible Animals

- Wildlife
  - White-tailed deer, mule deer, bighorn sheep, elk, pronghorn antelope
- Livestock
  - Cattle - rarely show clinical signs
  - Sheep – more affected by BTV than EHD

Forms of Hemorrhagic Disease

- Three categories based on clinical signs and development of the disease
  - Peracute – very rapid
  - Acute – rapid
  - Chronic – long term

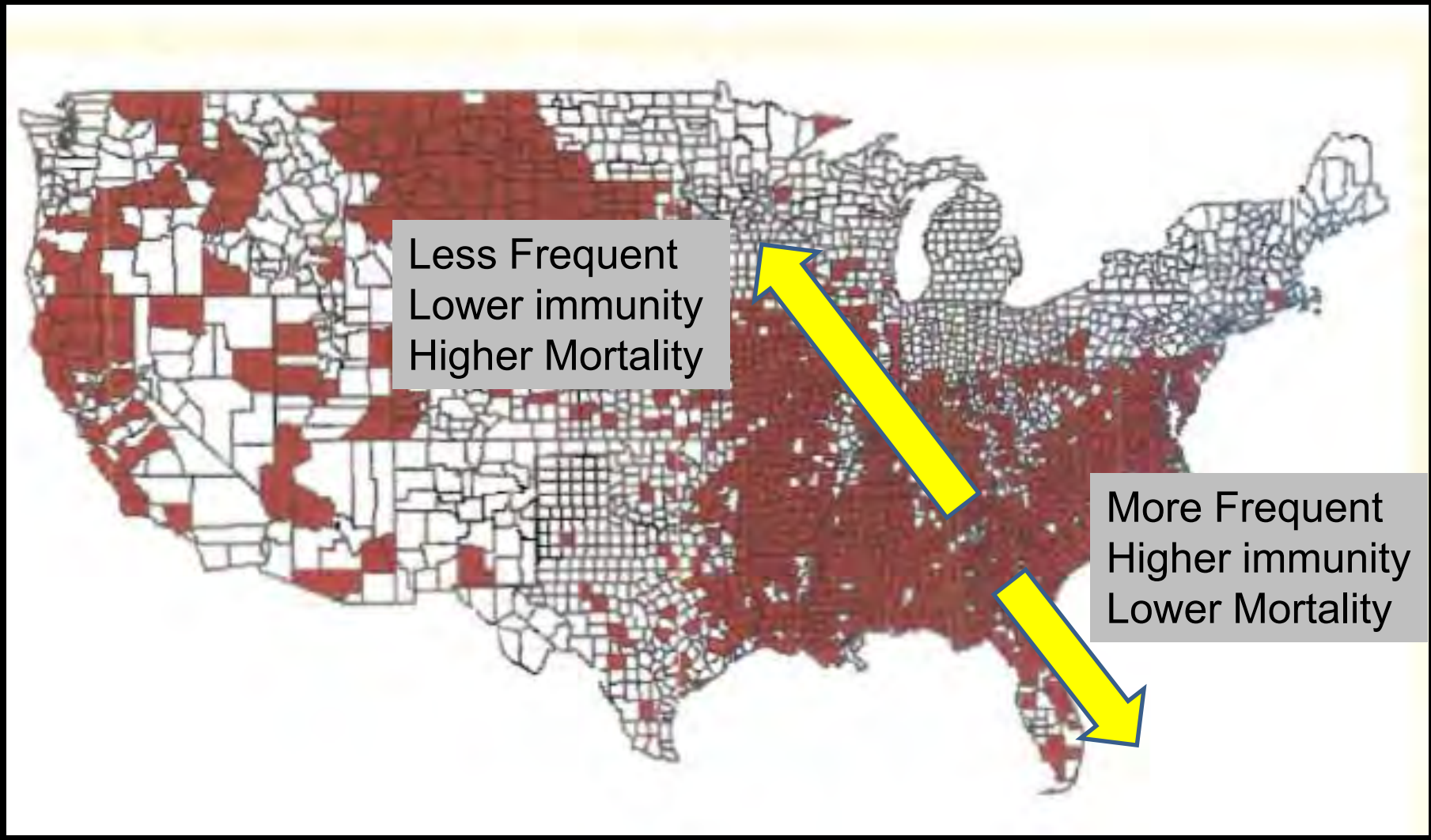
Peracute and Acute HD

- Swelling in head, neck, tongue, eyelids, lungs
- Hemorrhages and lesions in heart, mouth, stomach
- Fever, inactivity, lameness, difficulty breathing

Chronic Hemorrhagic Disease

- Lameness
- Sloughing off hoof walls
- Stomach ulcers
- Weigh loss and emaciation

Nationwide Distribution of HD



Principal Factors of an Outbreak

1. Deer herd's level of immunity from previous exposure

2. Virulence of the particular strain of virus

3. Abundance of *Culicoides* insects

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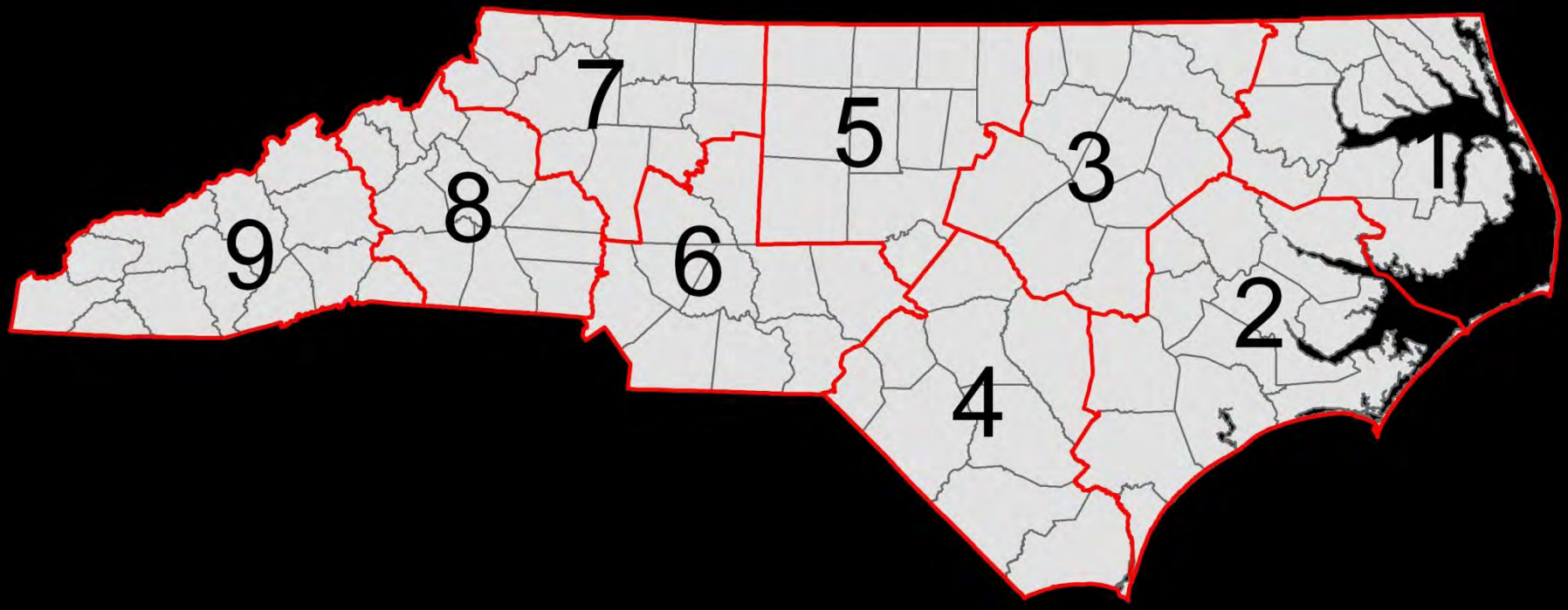
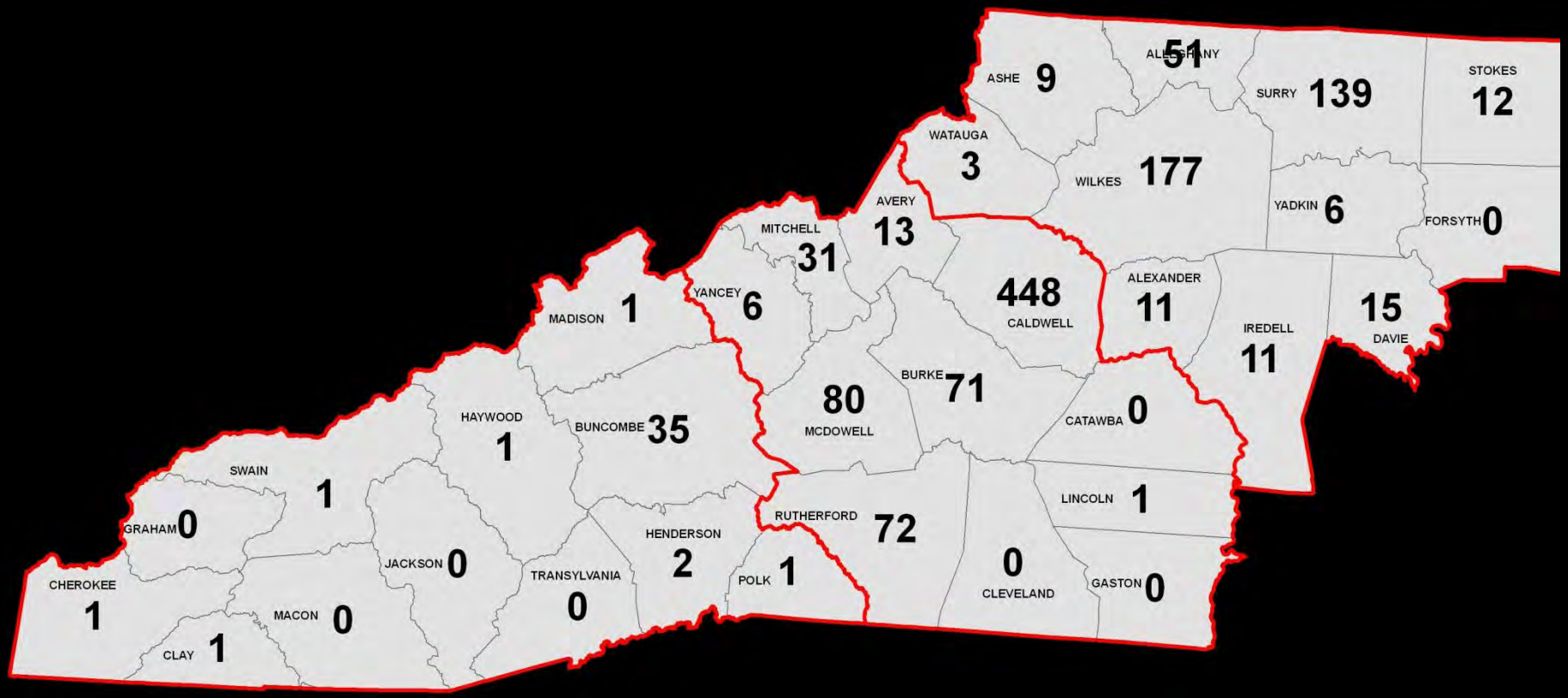
NCWRC Wildlife Districts



Reports of Hemorrhagic Disease 2012



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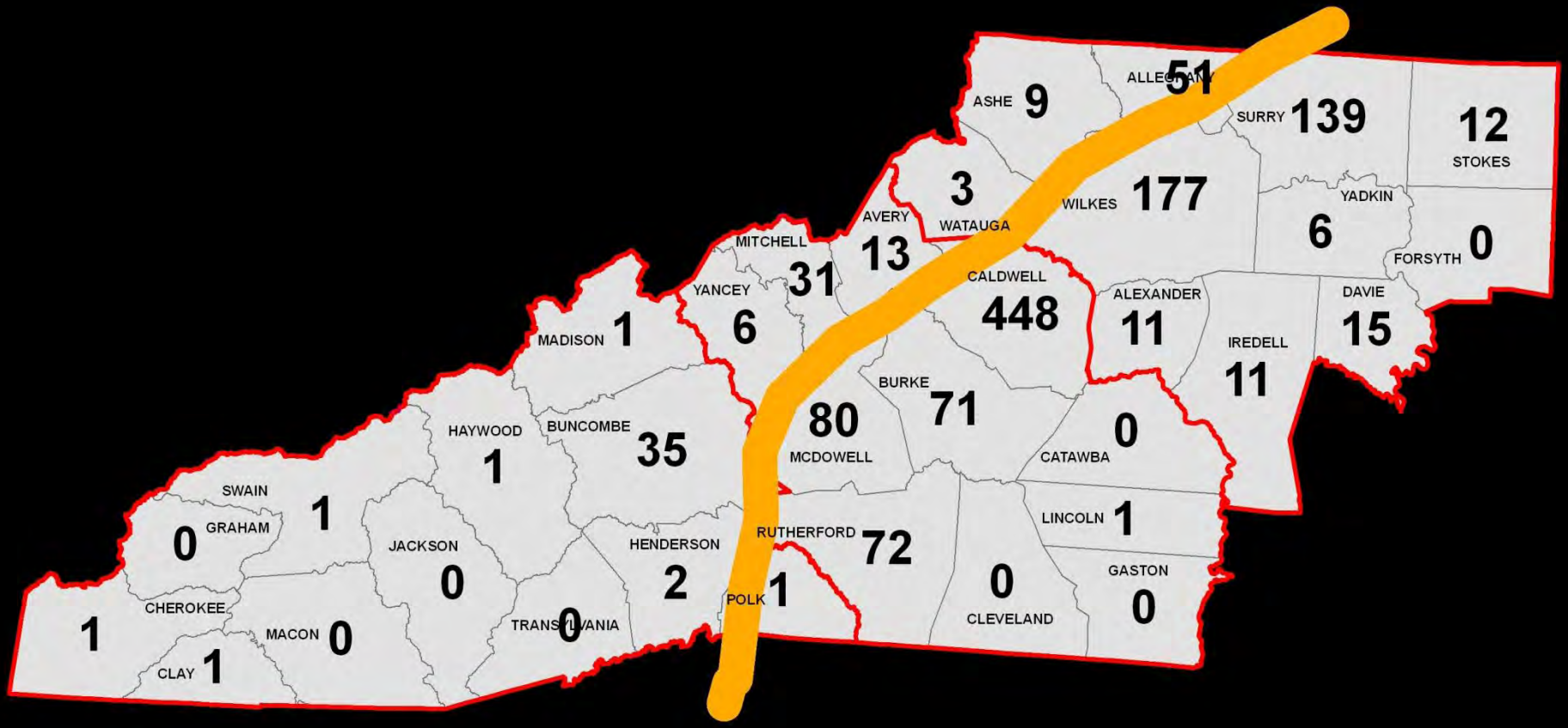
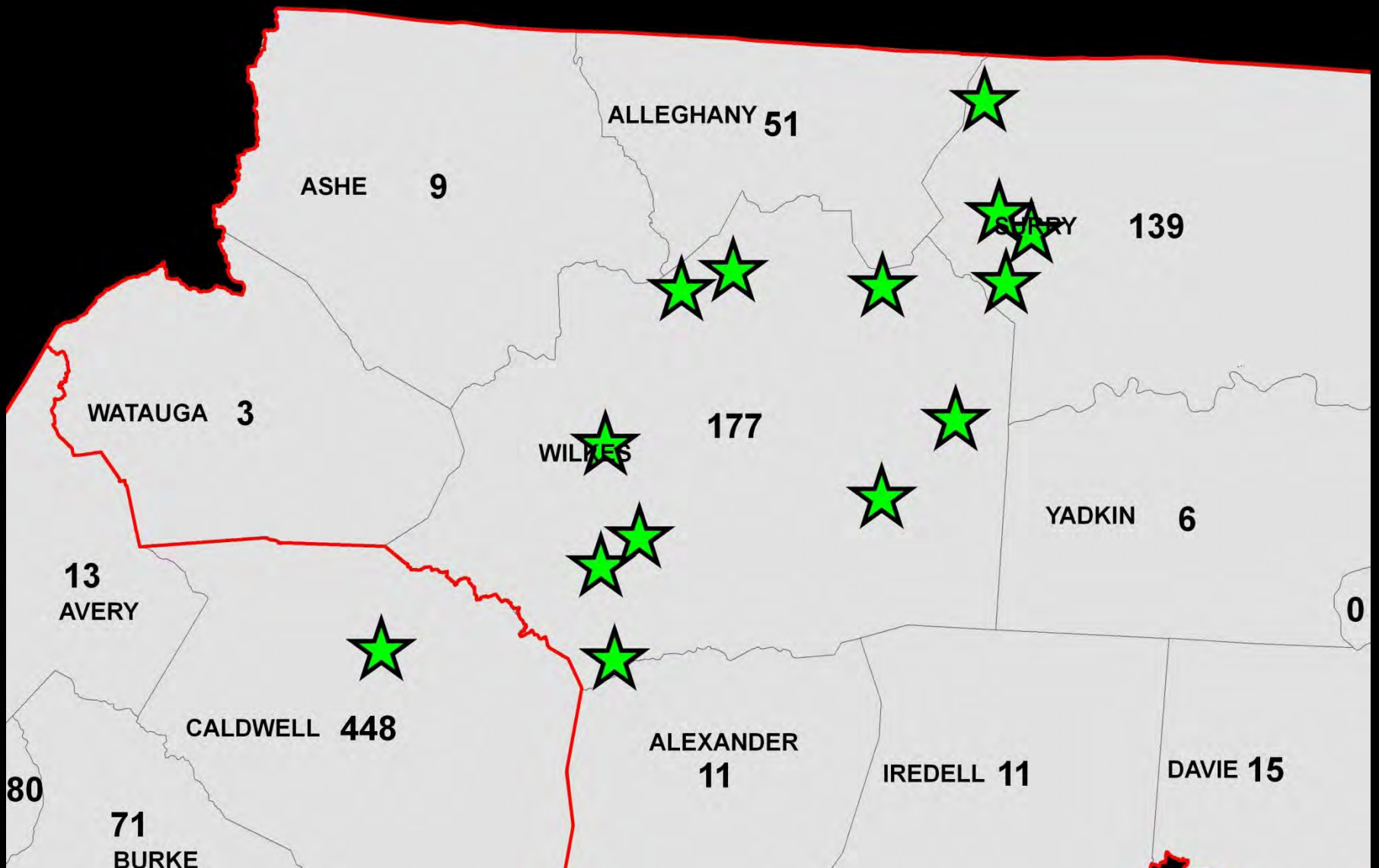
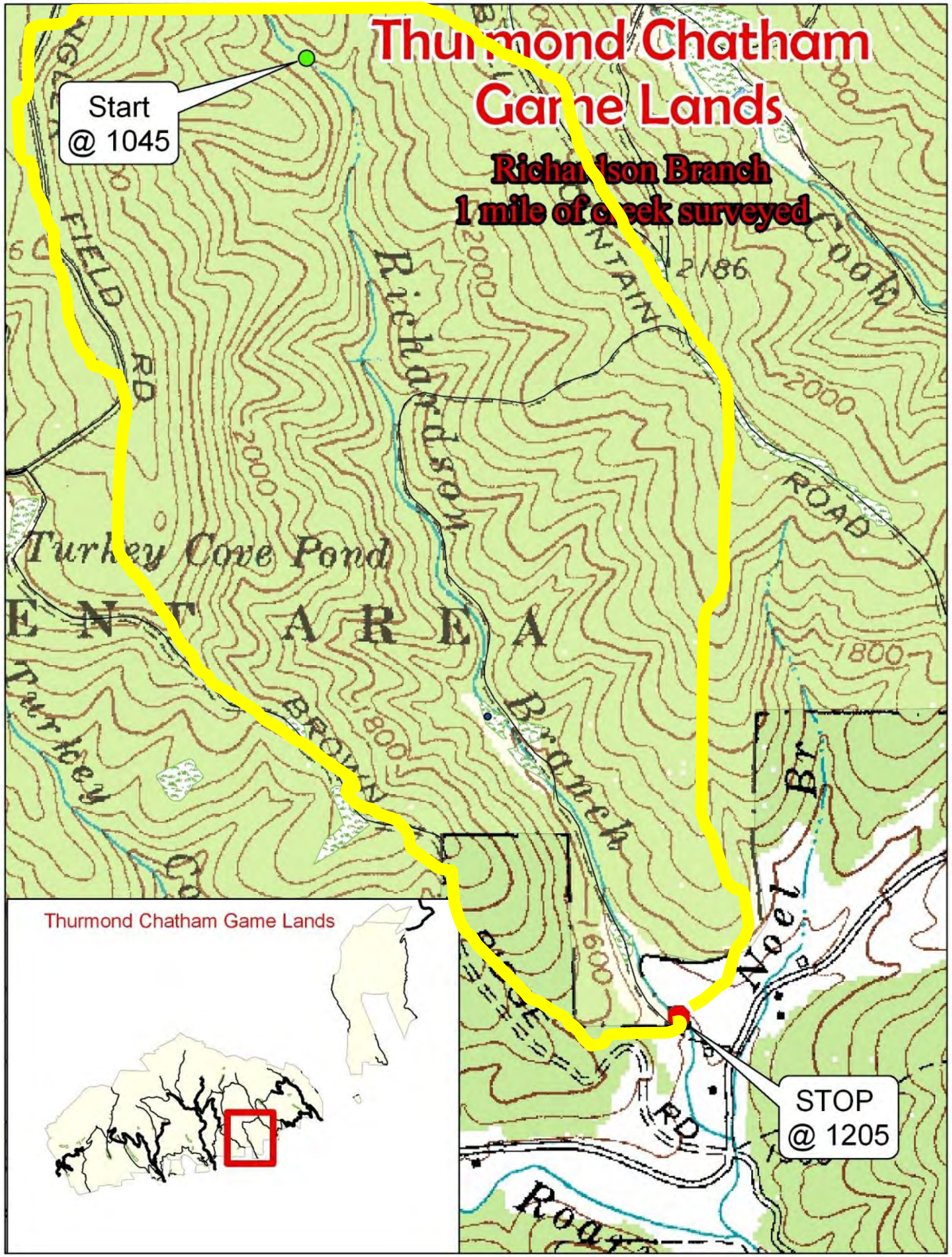


Areas Surveyed for Hemorrhagic Disease





Thurmond Chatham Game Lands
Richardson Branch
1 mile of creek surveyed
Start @ 1045
STOP @ 1205
Richardson Branch
Turkey Cove Pond
Thurmond Chatham Game Lands

Estimating Mortality

- 13 areas searched
- 18 miles of creeks
- 4,133 acres
- 91 Man-hours
- Found 80 dead deer

Survey Results

- Total of 80 HD deer found
- Averages:
  - 0.9 deer / hour of searching
  - 4.5 deer /stream mile
  - 12.4 deer / sq mile

Impact of Mortality

- Surveys
  - 4.5 deer/stream mile
  - 12.4 deer/square mile
- Est. Population Density
  - Wilkes: 45 deer/square mile
  - Surry: 30 deer/square mile
- Average annual hunting mortality
  - Wilkes: 9.7 deer/square mile
  - Surry: 6.8 deer/square mile
- Direct comparison of these number is like comparing apples to oranges

Early Archery Season Deer Harvest

- Deer Harvest by Telephone and Internet during first 7 days of archery season

Deer harvest reported by phone/internet during first 7 days of archery season

County	3-Year Average	2012	Percent Change
Wilkes	81	35	-57%
Surry	42	23	-45%
District 7	483	375	-22%

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Conclusions and Recommendations

- Impacts of the disease outbreak are greatest on the east slope blue ridge escarpment and foothills

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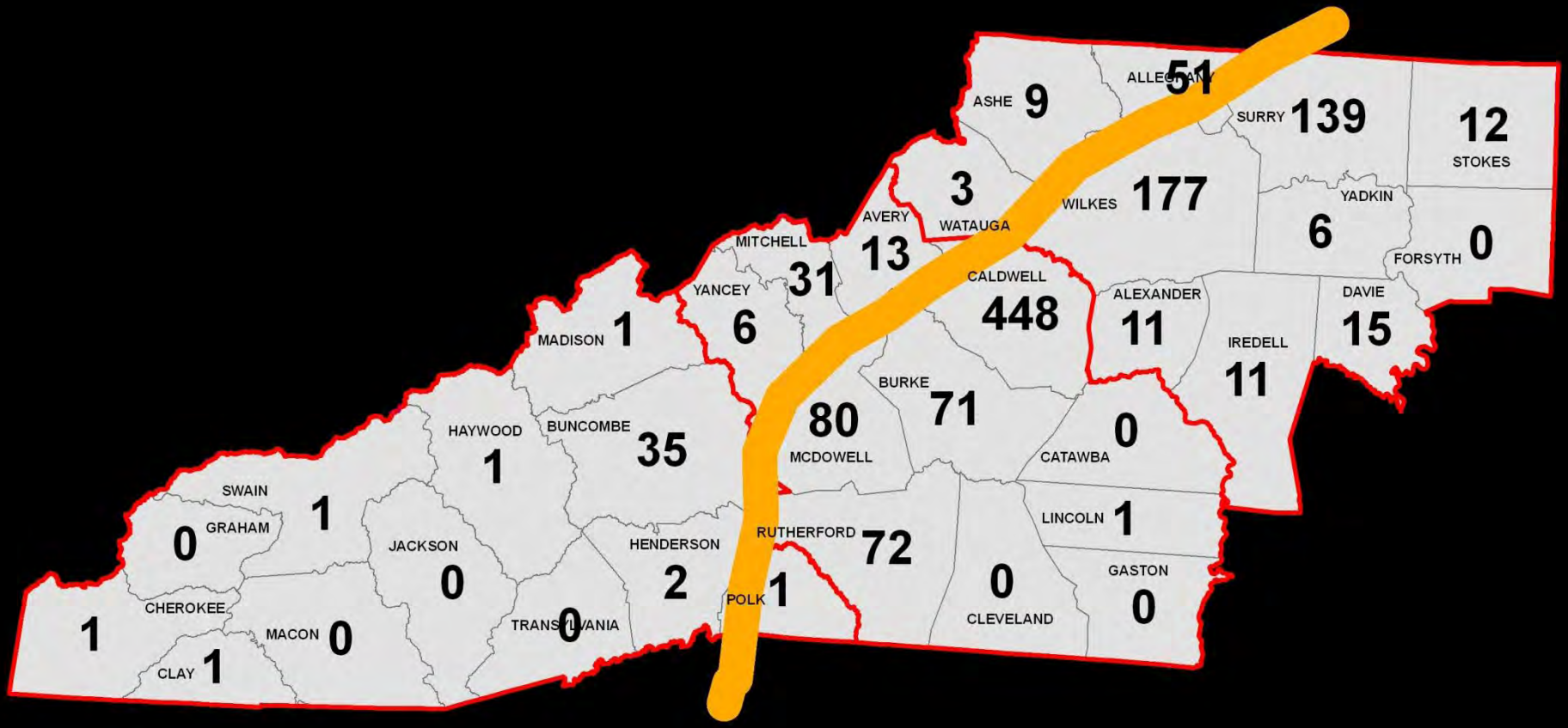


Conclusions and Recommendations

- Exact mortality percentage unknown, but likely similar to other outbreaks where mortality rate is 30-50% or greater

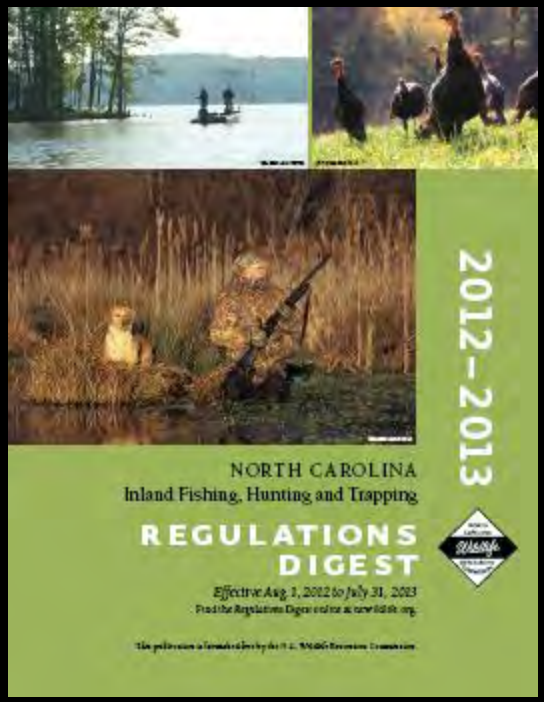
- While this is a large impact, the deer herd is expected to rebound

Conclusions and Recommendations

- In some areas, the disease mortality is likely 1-2 times more than mortality expected from the entire hunting season
- We expect this to largely be compensated by:
  - Less desire for hunters to harvest deer
  - Less opportunity for hunters to harvest deer

Conclusions and Recommendations

- Complete understanding of impact of disease will require:
  - Evaluate hunter harvests
  - Evaluate sex/age ratios of herd
  - Continue to document reports of mortality



- Adjustments to deer hunting regulations may be appropriate in future years

Conclusions and Recommendations

- Individual property owners and hunt clubs
  - Be aware that significant mortality has occurred and adjust doe harvest accordingly

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For more information

http://www.ncwildlife.org/Hunting