



Photo by Gigi Charters

# WHITE-TAILED DEER AND FOREST HEALTH IN NORTHERN VIRGINIA



# Deer are becoming more plentiful



Photo by Donna Owen

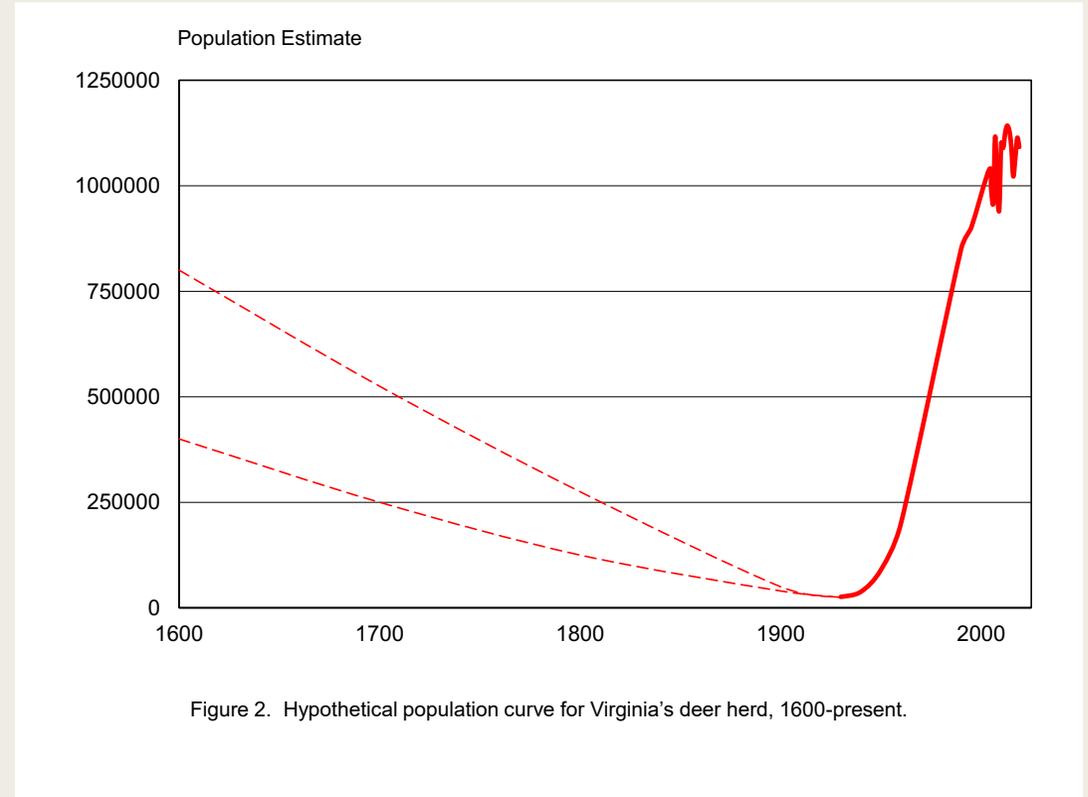


Figure 2. Hypothetical population curve for Virginia's deer herd, 1600-present.

Estimated Virginia deer population curve.

Source: Department of Wildlife Resources.

- Hunting and suburban development have been factors in population fluctuations.

# Adult Deer Are Eating Machines

Adult deer daily consumption



*Photo: Sandy Minners*



*Photo: Bill Browning*



*Photo: shutterstock.com*

- Deer eat 5-7 lbs of vegetation per day or about one ton per year
- In winter they eat buds, bark and plant shoots.
- In warmer months they eat fruits, nuts, acorns, leaves, plant buds & flowers.



*Photo: shutterstock.com*

# Deer Browse Changes the Forest Structure



Forest with healthy understory.

Photos by Charles Smith



Over-browsed forest cannot regrow.

# Deer Browse Reduces Nutritional Variety

Eleven species of lepidoptera depend on this plant.  
Many birds eat the fruit; deer love eating it too.



Strawberry bush (*Euonymus americanus*)

Photo: <https://www.carolinanature.com/trees/euam.html>



Photo: Deb Parker/Flickr

Thirty three species of birds  
and hundreds of species of  
insects depend on this plant



Black cherry (*Prunus serotina*)

Photo: Missouri Botanical

Deer often eat the saplings of these two important bird & insect food sources before they can grow.

# Deer Still May Not Have Enough Food



Photo by David Howell

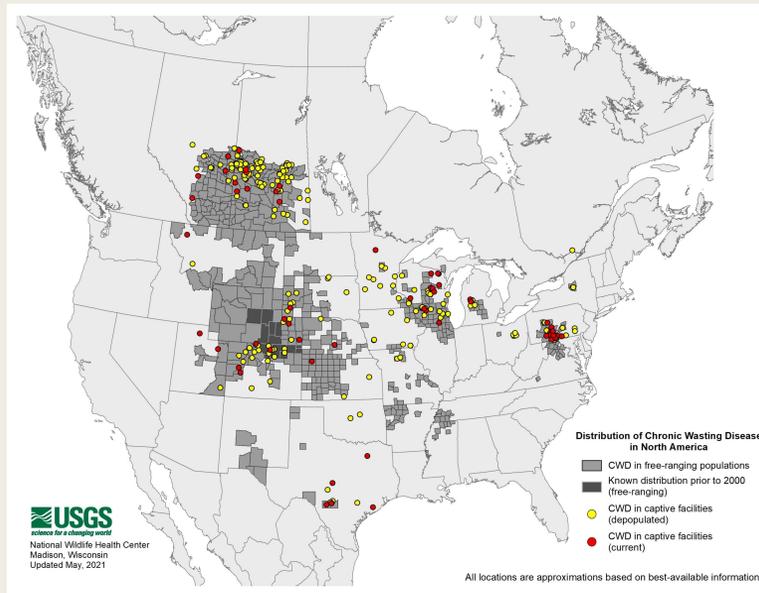


Photo by Steve Young

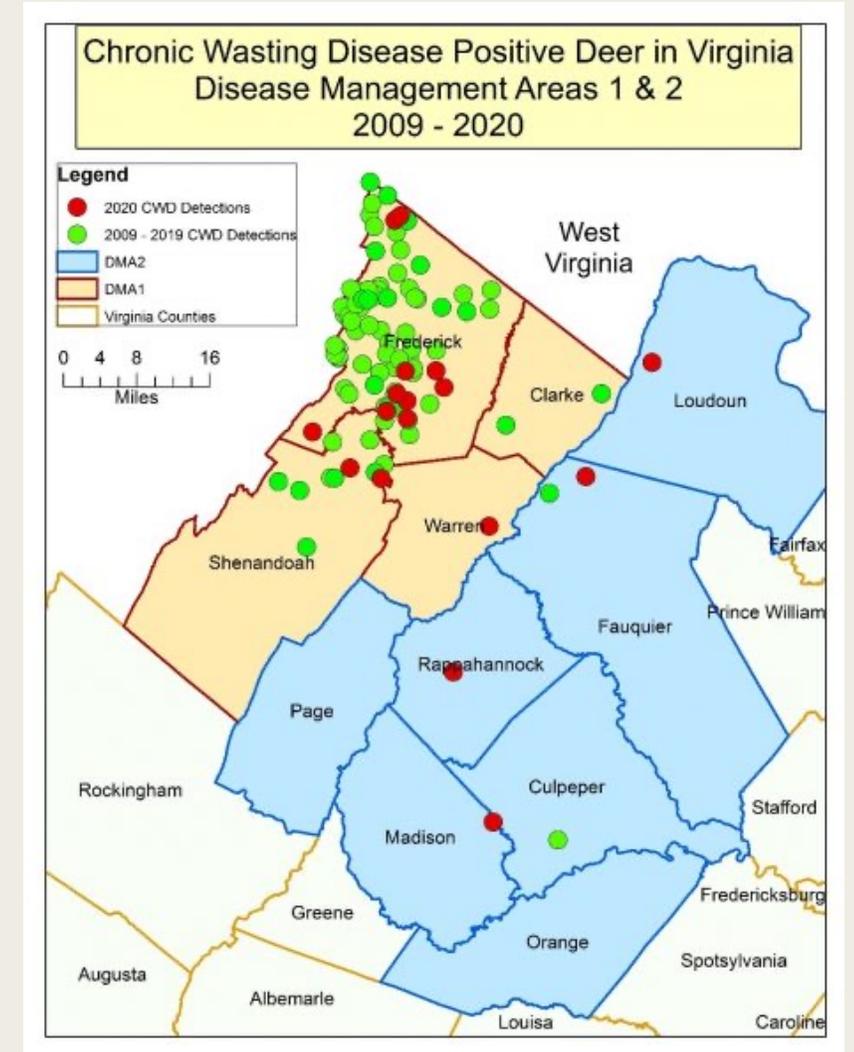
# Overpopulation Hurts the Deer Themselves

- High deer density exacerbates spread of diseases such as chronic wasting disease (CWD), a transmissible neurological disease.
- Characterized by weight loss and frothing at mouth.
- 100% fatal.

*Distribution of Chronic Wasting Disease*



Source: USGS



Source: Virginia DWR

# Options for Balancing the Deer Population

- Natural predators
- Medical options
  - Contraceptives
  - Sterilization
- Hunting options
  - Private
  - Government-managed

# Humans Have Eliminated Effective Deer Predators in VA



Eastern Cougar



Gray Wolf

Photos: [Pixabay License](#)

# Contraception and Sterilization Methods are Costly and Unproven

- Immunocontraceptives
  - *PZP*
  - *GonaCon*
- Neither effective in open herds
- Expensive—about \$1,000 per deer per year
- Deer are susceptible to capture myopathy



[Pixabay License](#)

# Government-managed Methods for Hunting Deer

## In Larger Parks

- Professional sharpshooting
- Controlled shotgun hunts with trained volunteers

## In Restricted/Urban areas

- Controlled archery hunts with trained volunteers
  - very low non-lethal wounding rates when done properly
  - can be done safely in tight spaces



# Fairfax Program

- Deer management began in 1998
  - Proven safety record
  - Includes archery, managed shotgun hunts, and police sharpshooting
  - Venison donated
  - Operating in 100 parks covering more than 80% of county parkland
- Significant county oversight
  - Implemented by police
  - Collaborate with park authorities
- Hunters must prove themselves
  - Pass qualifications and frequently to pass requalification requirements
  - Complete educational courses



# Montgomery Program

- County program to manage began in 1996
  - Culled more than 1,100 deer in 2019/20
  - Cover more than 50 percent of county parkland
  - Donate more than 20,000 pounds of venison per year
  - Archery and sharpshooting used in more restrictive areas
- Supplemented by private organizations able to hunt on lots as small as 1/5 acre
- Zero public safety incidents



# National Park Service Approach

- Rock Creek Park
  - Before 1960, there were no deer sightings in park
  - By the 1990s, there were so many that they stopped counting
  - Public process resulted in management plan in 2012
    - Recently have removed 30-90 deer per year
    - Using trained firearms experts from USDA
    - Tree seedling density has more than doubled
- Active in other nearby parks, such as C&O Canal, Manassas Battlefield, Catoctin Mountain

# Deer Management Programs in our Region

- Fairfax County (since 1998)
- Montgomery County, MD (since 1996)
- National Park Service (since 2012)
- Prince George's County, MD (since 2016)
- Prince William County (since 2017)
- Arlington started the process (2021)

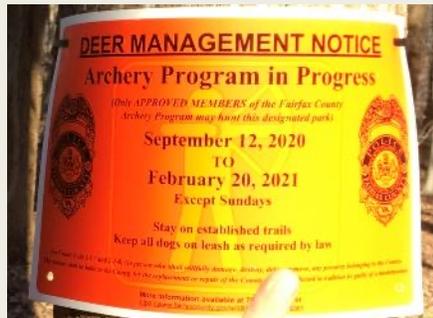


Photo: Todd Minners

**0** bystanders injured by an archer in Virginia in over 60 years 

**42** Virginia cities, towns, and counties, like Fairfax County & Richmond, with deer management archery programs

**1 MILLION**  servings of venison donated to community organizations through Hunters for the Hungry

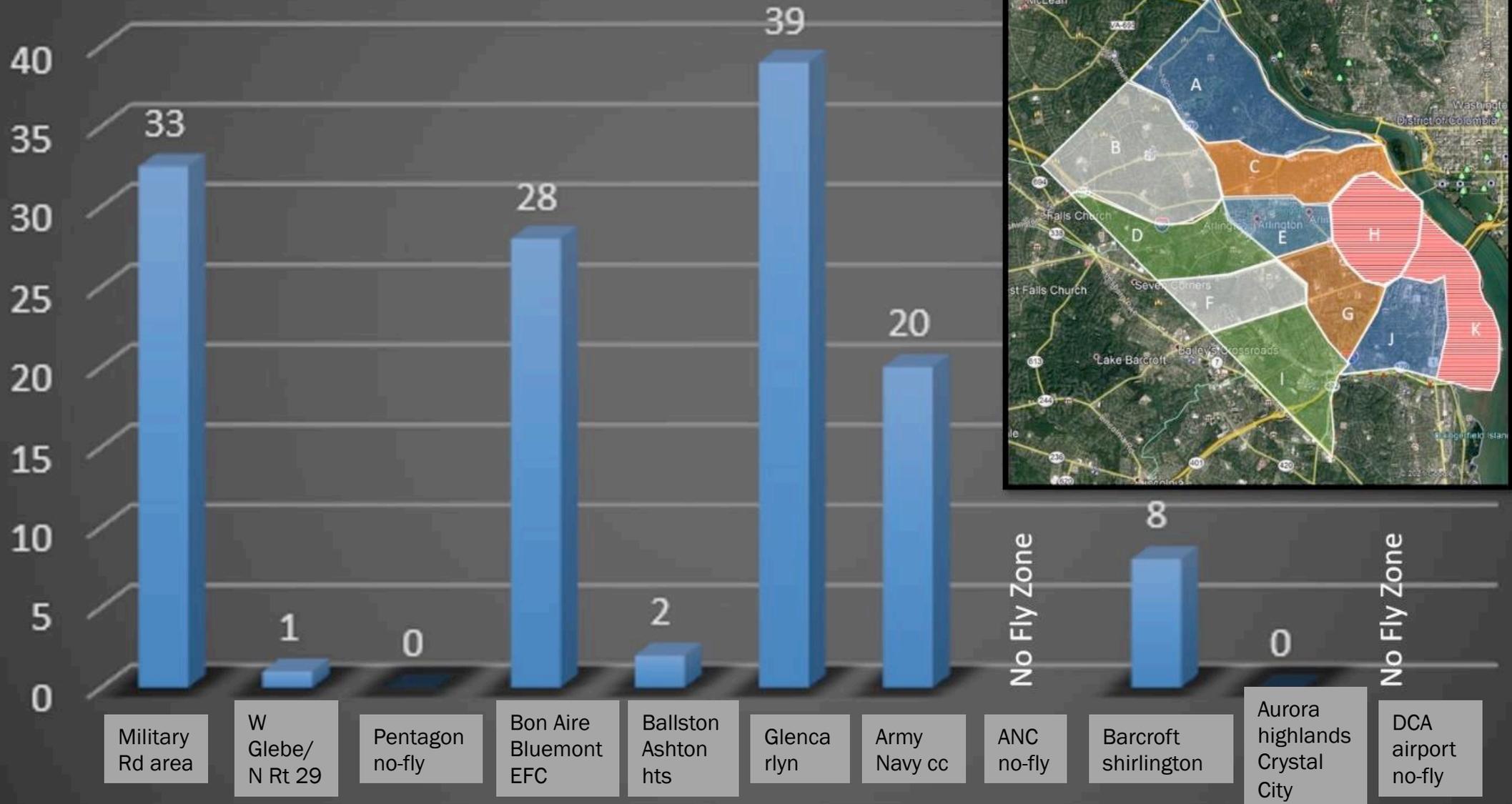
# Arlington County Progress

- Independent contractor completed drone survey in April 2021
- Counted deer using infrared heat signatures during daylight
- 65 flights, 22 sq mi, but excluded federal properties (NPS, Pentagon, ANC, airport)

## Results:

- Minimum 290 deer on Arlington non-federal properties
- Four sections showed higher deer counts than experts agree is healthy for regeneration of native plants
- Highest concentrations in wooded and natural areas, including all seven Natural Resources Conservation Areas
- Contractor recommends aggressive deer management

# Deer/mi<sup>2</sup> per section



# Arlington's Current Plan

Hire a consultant to conduct a Deer Management Assessment

- Interpret the completed survey
- Include public engagement and benchmarking with other local areas
- Determine if a deer management strategy should be implemented
- As necessary, develop an implementation plan
- Present recommendations to commissions, leadership, and seek public comment
- Final Report to County Board in summer 2022

# Key Takeaways

- Doing nothing
  - means favoring deer over other species of mammals, birds, and reptiles
  - allows deer to continue to jeopardize our forests and landscapes
  - allows deer to undermine county investments, and staff and volunteer efforts to care for our parks
- Human intervention is needed to restore balance as reintroducing a natural predator is not feasible
- Deer management is a long-term task

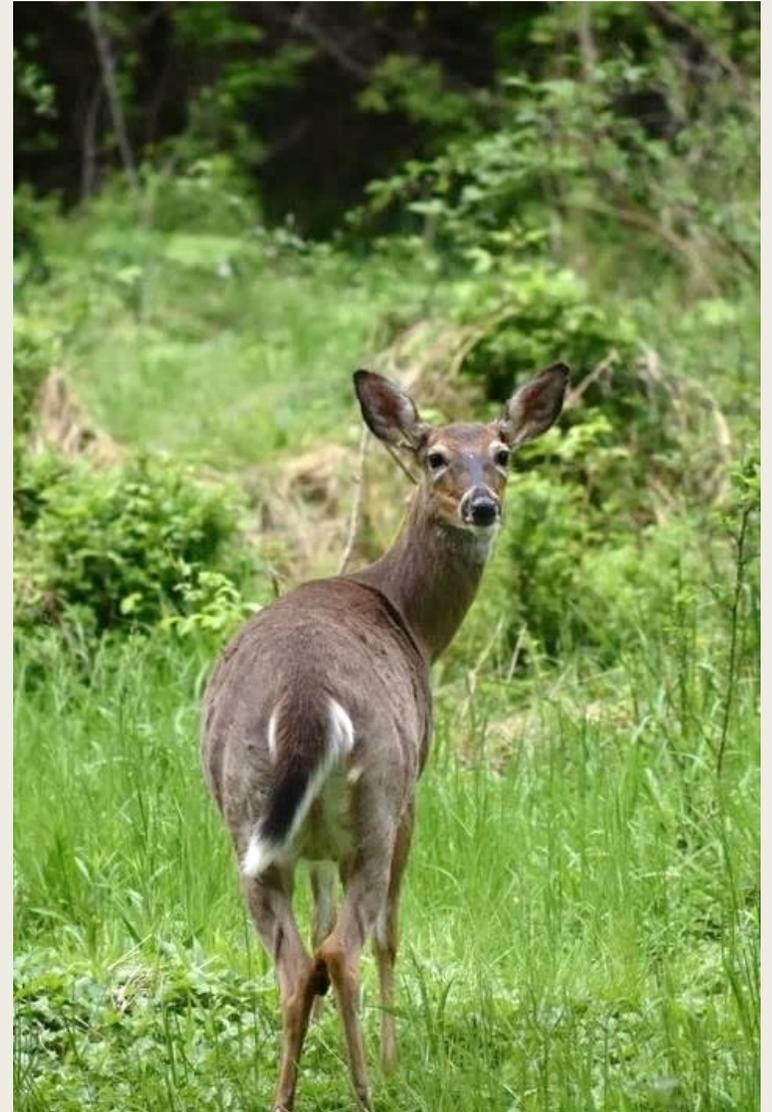


Photo by Gigi Charters

# Individual Actions You Can Take

- Learn about the importance of healthy forests and habitat
- Keep your distance from deer; don't feed deer or encourage them to approach
- Educate friends and neighbors about impact of deer in our area
  - *Additional resources at <https://armn.org/deer-management/>.*
  - *Questions or comments? Please contact us after the presentation or go to “<https://armn.org>” and click on “Contact us.”*
- Talk to (or email) your local representative about the importance of maintaining a healthy balance of wildlife

*“...just as a deer herd lives in mortal fear of its wolves, so does a mountain live in mortal fear of its deer...for while a buck pulled down by wolves can be replaced in two or three years, a range pulled down by too many deer may fail of replacement in as many decades.”*

*-Aldo Leopold, Thinking Like a Mountain*

