

What is the surgical sterilization process?

White Buffalo Inc. has developed a technique for surgical sterilization of white-tailed deer. This technique removes the deer's ovaries and is similar to, but less invasive than a cat or dog spay. The animal is typically in and out of surgery in less than 20 minutes, and the mortality rate is less than 2%. The technique begins with deer capture via tranquilizer dart. The deer is then transported to a surgical bay. The surgical prep and surgery take approximately 20 minutes. After surgery, the deer is returned to the field, a reversal agent is administered and the animal is observed from a distance to ensure all is well.



When would this technique be used?

The appropriate technique to manage deer depends on a variety of considerations, ranging from the goals of the community to legal restrictions. The population impact of this technique is still being evaluated, but we are conducting trials in areas where there are high densities of deer, people and road networks. The two most important site criteria are animals that are easy to access with a dart projector and a road network that allows us to access the deer.

What is the status of this technique?

We are actively conducting sterilization projects to gain an baseline on what can be expected with a "fertility control only" approach. We want to determine what can be accomplished under the best case scenario with very high percentage treatment rates in "real" suburban settings (e.g., population demographics, reduction rates, immigration effects, cost, etc.).

Our present research is focused on the relative effort of sterilization versus vaccine delivery to treat high percentages of local populations. Our hypothesis is that the extra effort/cost per deer to retrieve and sterilize females is significantly less than the cost of repeatedly retreating the same female during its life, particularly when combined with the reduced efficacy of the vaccines (~10% do not respond - 100% effectiveness of surgical sterilization).



Pros

- Only handle the animal once.
- Can use a variety of volunteers to reduce costs.
- 100% effective for all animals.
- Removal of the ovaries reduces movement in landscape due to breeding behavior.
- Perceived as a humane solution.
- Very low mortality rates.

Cons

- Deer persist in landscape, giving a delayed population reduction.
- Cost is higher than other methods.
- This is not a permitted management option in most States, it is still only permitted as research.



Our Surgical Sterilization Projects

East Hampton, NY

Area Description

- 5 miles² open suburban community

Total Numbers Treated (% of Population Treated)

- 114 does sterilized in Year 1 (Jan. 2015)
- ~60% with 46 does sterilized in Year 2 (Nov. 2015)

Surgical/Capture Mortality

- <2%

Results

- Initial density - 115 deer/square mile (Nov. 2015)

National Institutes of Health, Bethesda, MD

Area Description

- 0.5 miles² federal research campus

Total Numbers Treated (% of Population Treated)

- 24 does sterilized in Year 1 (Dec. 2014)
- 5 does sterilized in Year 2 (Dec. 2015)

Immigration

- ~3 females/year

Surgical/Capture Mortality

- <10%

Results

- Initial density - 90 deer/square mile (Dec. 2014)
- ~33% decline in Year 1
- Current density - 60 deer/square mile (Dec. 2015)

City of Fairfax, VA

Area Description

- 6 miles² open suburban community

Total Numbers Treated (% of Population Treated)

- ~40% with 18 does sterilized in Year 1 (Jan. 2014)
- ~85% with 18 does sterilized in Year 2 (Jan. 2015)
- ~93% with 6 does sterilized in Year 3 (Nov. 2015)

Surgical/Capture Mortality

- < 2%

Immigration

- Unknown

Results

- Year 2 density - 10.5 deer/square mile
- ~20% decline from Year 2 to Year 3
- Current density - 8.4 deer/square mile

Cincinnati, OH

Area Description

- 1 miles² open suburban community

Total Numbers Treated (% of Population Treated)

- ~90% with 41 does sterilized in Year 1 (Dec. 2015)

Surgical/Capture Mortality

- <5%

Results

- Initial density - 100 deer/square mile (Dec. 2015)

Our Surgical Sterilization Projects

Villages in San Jose, CA

Area Description

- 700 acres fenced (only 6-7 ft high) with open front gate

Total Numbers Treated (% of Population Treated)

- ~90% with 103 does sterilized in Year 1 (Jan. 2013)
- 100% with 12 does sterilized in Year 2 (Oct. 2013)
- 115 total does sterilized
- 30 deer “relocated” outside the fence, 55% returned

Surgical/Capture Mortality

- 1%

Immigration

- 0 females/year

Results

- Initial density -154 deer/square mile (Oct. 2012)
- ~20% decline after Year 1 (includes relocation)
- ~20% decline after Year 2
- 0% decline after Year 3
- Current density - 93 deer/square mile (Nov. 2015)

Town and Country, MO

Area Description

- 10 miles² open suburban community

Total Numbers Treated (% of Population Treated)

- 100 does sterilized in Year 1 (Dec. 2009)
- 30 does sterilized in Year 2 (Dec. 2010)

Surgical/Capture Mortality

- <1%

Immigration

- Unknown

Results

- Due to low housing and road densities in much of the city, sterilization only could not achieve management objectives.
- Culling (non-sterilized deer only) followed to reduce total population by ~60%

Phoenix, MD

Area Description

- Single point of access on 14 acres

Total Numbers Treated (% of Population Treated)

- ~50% with 33 does sterilized in Year 1 (Feb. 2011)
- ~75% with 17 does sterilized in Year 2 (Feb. 2012)
- ~80% with 9 does sterilized in Year 3 (Feb. 2013)
- ~90% with 10 does sterilized in Year 4 (Feb. 2014)
- ~90% with 11 does sterilized in Year 5 (Feb. 2015)
- 80 total does sterilized

Surgical/Capture Mortality

- <1%

Immigration

- ~3-4 females/year

Annual Mortality

- ~10%

Results

- Population stable at 90 deer/square mile

Village of Cayuga Heights, NY

Area Description

- 1.8 miles² open suburban community

Total Numbers Treated (% of Population Treated)

- ~95% with 134 does sterilized in Year 1 (Dec. 2012)
- ~100% with 15 does sterilized in Year 2 (Dec. 2013)
- 149 total does sterilized

Surgical/Capture Mortality

- <1%

Immigration

- ~3 females/year

Results

- Initial density - 125 deer/square mile (Jan. 2013)
- ~20% decline after Year 1
- ~20% decline after Year 2
- 76 deer/square mile (Jan. 2015)
- WBI managed hunt harvested an additional 48 deer.
- Current density - 50 deer/square mile (March 2015)