

# Wolf damage management in Minnesota



John Hart  
USDA-APHIS  
Wildlife Services  
Grand Rapids, MN



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# MN Wolves “Relisted”

- June 2009 Wolves in MN returned to Endangered Species List as “Threatened”
  - Wolves can only be killed to protect human life
  - No provisions for individual protection of livestock or pets
  - Killing of depredating wolves limited to authorized agency personnel (WS & DNR)



# Wolf-Livestock Conflicts 2009-2010

2009

97 complaints verified

85 involved livestock

83 sites affected

199 wolves taken

2010

130 complaints verified

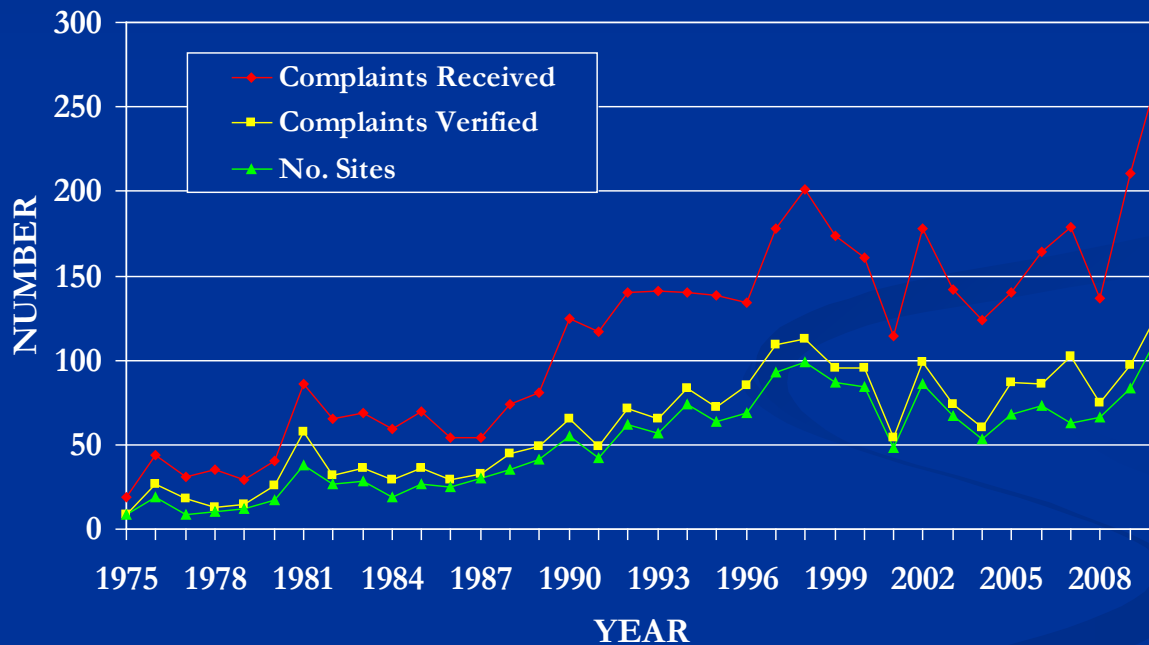
106 involved livestock/poultry

116 sites affected

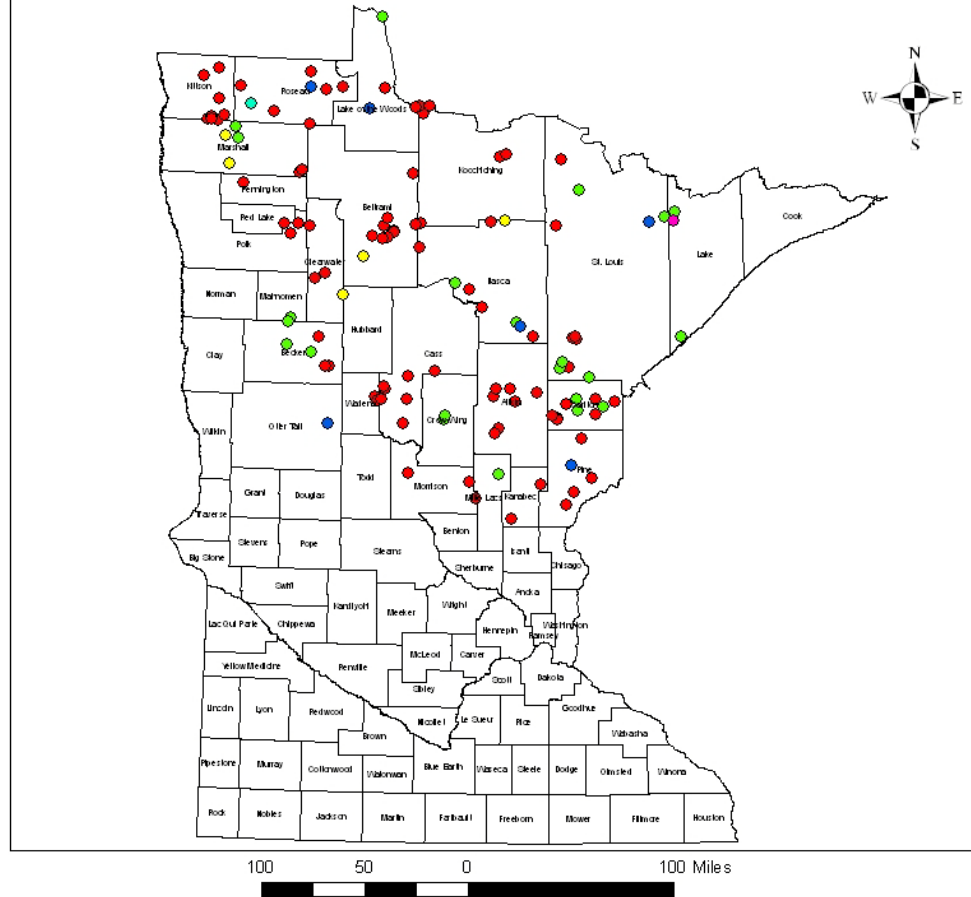
192 wolves taken

# Indices to Wolf-Livestock Depredation in Minnesota

2010 up 31% from 5 year average



## 2010 VERIFIED WOLF COMPLAINTS BY TYPE



### 130 TOTAL VERIFIED COMPLAINTS OF DAMAGE

- 93 VERIFIED CATTLE COMPLAINTS
- 23 VERIFIED DOG COMPLAINTS
- 6 VERIFIED OTHER COMPLAINTS (RABBIT, DEER, CHICKEN, ETC.)
- 6 VERIFIED SHEEP COMPLAINTS
- 1 VERIFIED TURKEY COMPLAINT
- 1 VERIFIED HHS COMPLAINT

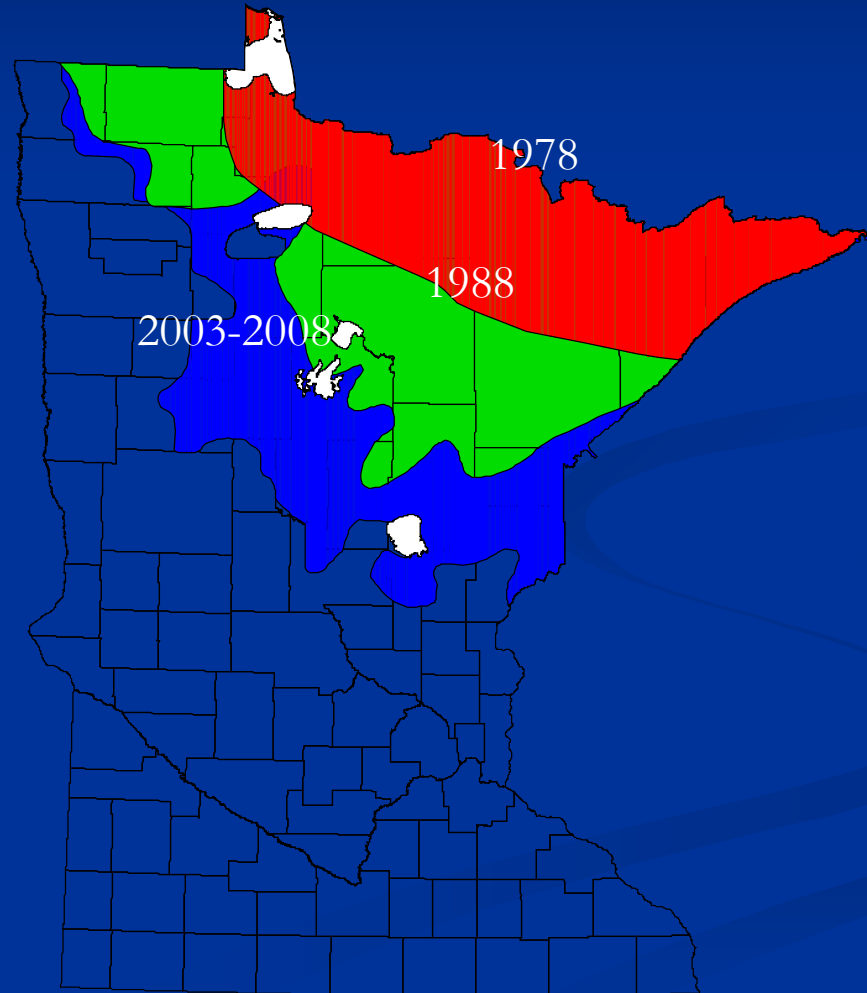
Cartographer:  
 Jeff Grabarkewitz  
 USDA-APHIS-WS  
[jeffrey.p.grabarkewitz@aphis.usda.gov](mailto:jeffrey.p.grabarkewitz@aphis.usda.gov)

Source:  
 USDA-APHIS-WS  
 34912 US HWY 2  
 Grand Rapids, MN 55744  
 2183273350

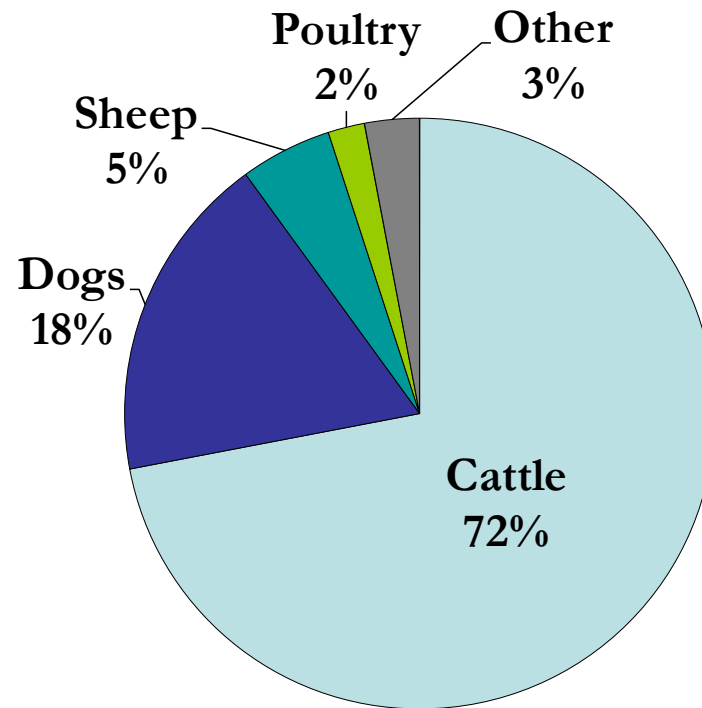
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# Minnesota's Wolf Range Expansion, 1978 - 2008

Currently 3,000+ wolves in Minnesota



# 2010 Verified Wolf Damage





# Domestic animals verified killed by Wolves in MN in 2010

- 7 cows
- 80 calves
- 15 sheep
- 15 dogs
- 1 horse
- 24 turkeys



# Depredation on Calves





# Cow Killed by Wolves



# Minnesota Beef (2007)

## ■ Statewide

- 15,000 cow/calf beef producers (13<sup>th</sup> in nation - 2007) avg. 30 cows/producer
- 400,000 cows

## ■ Wolf range counties

- ~5,400 producers
  - 165,000 cows
  - 1.7% producers in wolf range counties impacted annually
- 275 producers in wolf range counties with herds 100 head or larger totaling 48,500 cows



# Magnitude of the Problem

Number of MN beef  
producers verified wolf  
depredations - 2010

Number of beef  
operations in Wolf  
Range - 5400

1-2% beef  
producers  
affected annually



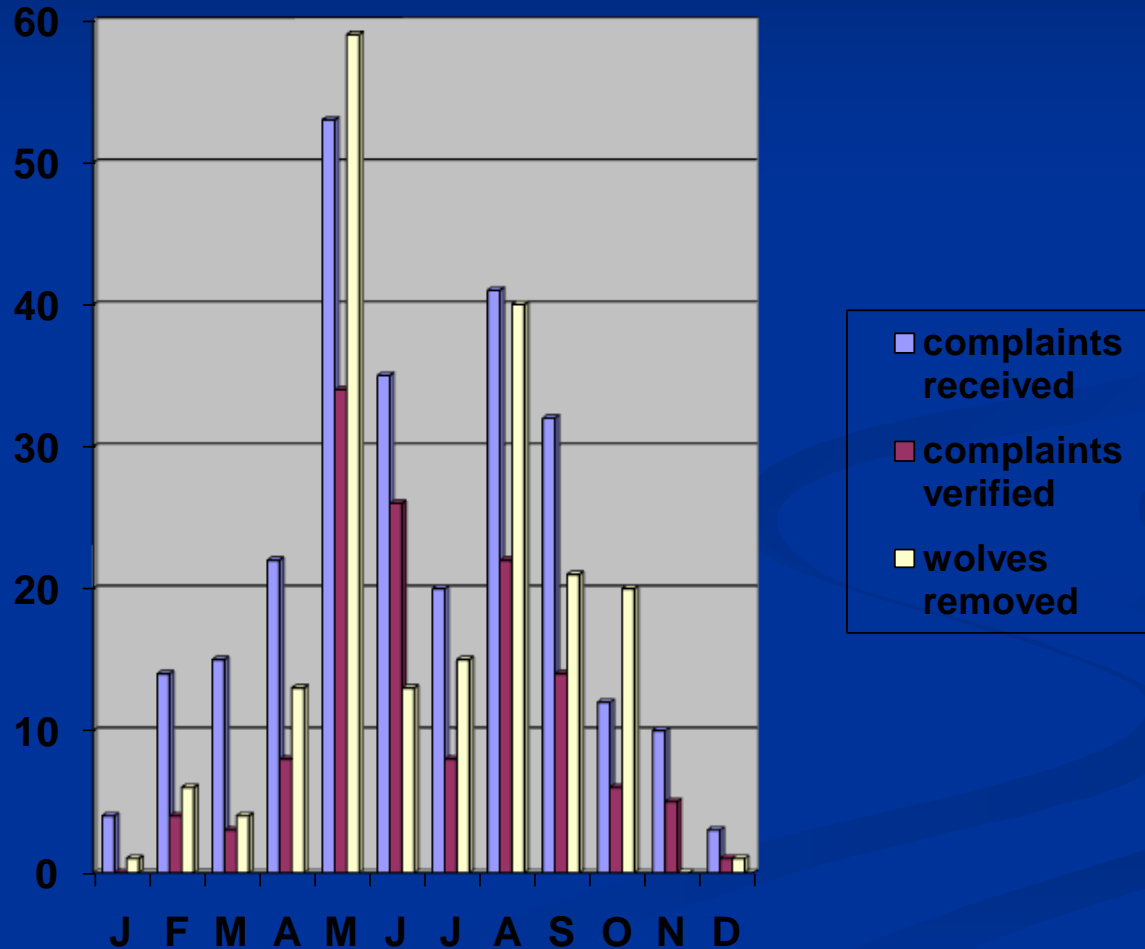
# Depredation on Domestic Dogs



# Surplus Killing of Livestock by Wolves

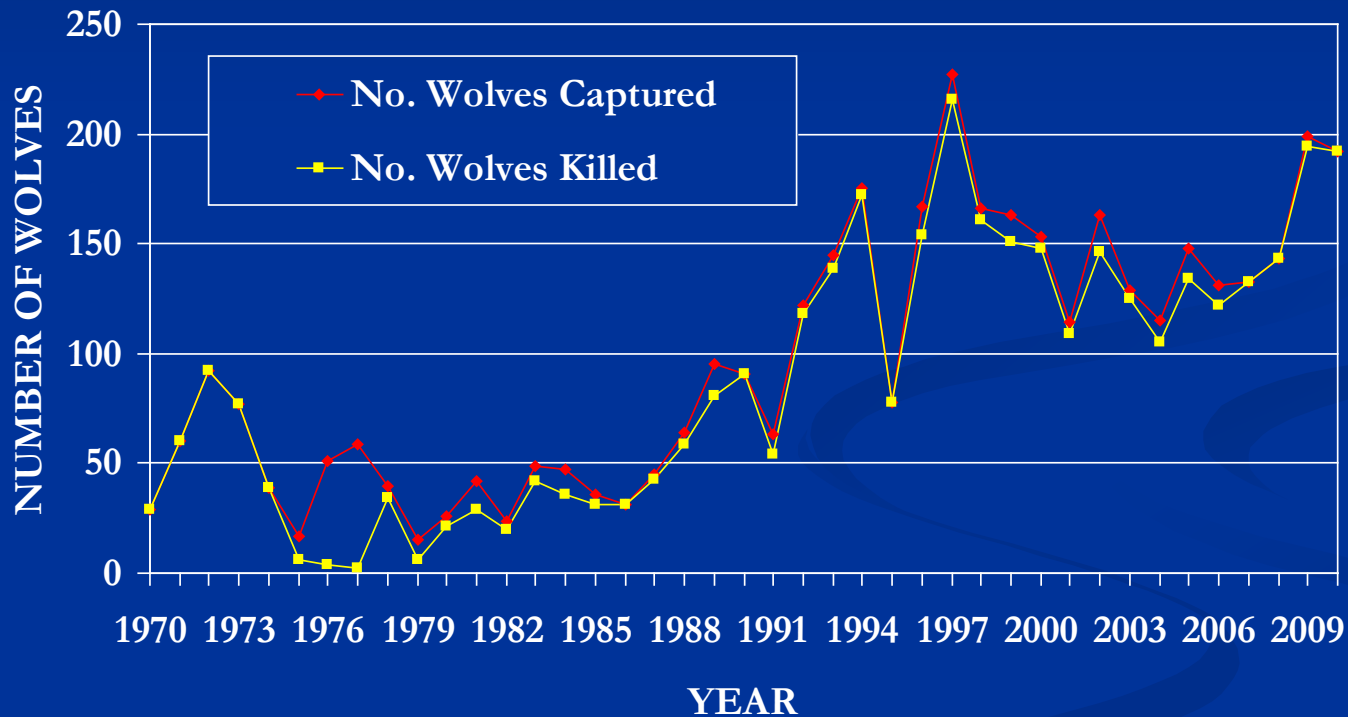


# Seasonal Distribution of Wolf Depredations 2010





# Wolves Captured and/or Removed in Minnesota



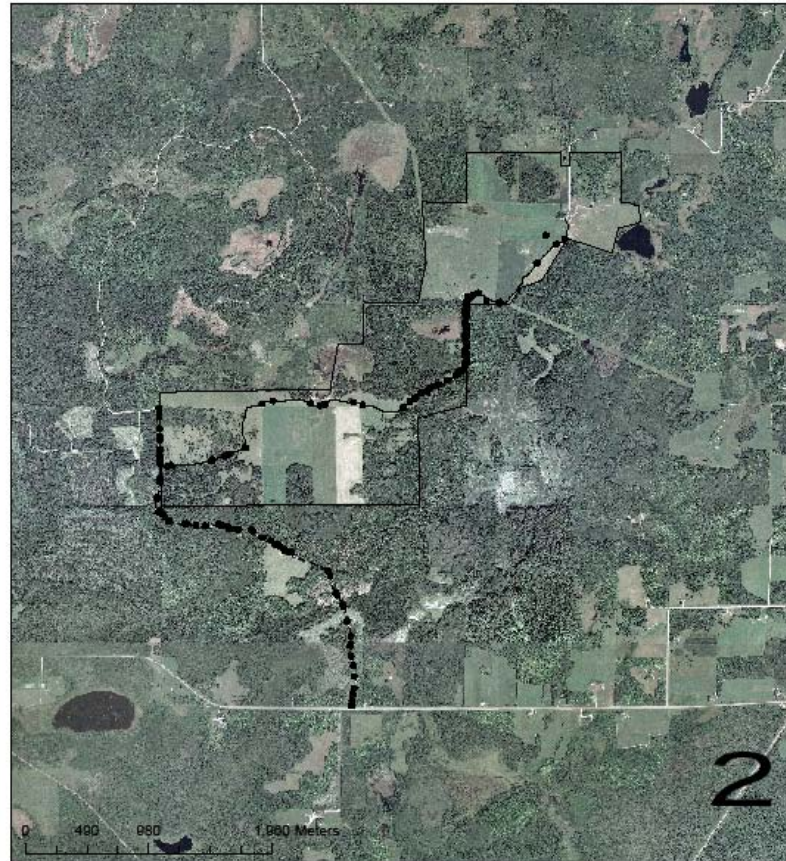
# Minnesota Wolf Compensation Program

- Compensation is paid by the Minnesota Department of Agriculture (state funds).
- Livestock producers are currently compensated at full market value for livestock killed by wolves.
- “Missing” livestock are not paid for – a sore point with producers.
- No compensation paid for pets, including guarding dogs.
- 2010 \$106,615, 104 claims
- 2010 highest on record



# Farm Location Factors

2006-2007 Predator Sign Locations  
Plotted Over Orthophoto Coverage



## Legend

- Track Locations
- On-Site Track Survey
- - - Off-Site Track Survey
- Farm Boundary

# Three main types of depredation locations

- Farm/Ranch as “island” of agriculture in high density wolf habitat (~10-15% of damage sites)
- Mixed agricultural/forested (~70-80% of damage sites)
- Wolf habitat “island” surrounded by agriculture (10-15% of damage sites)

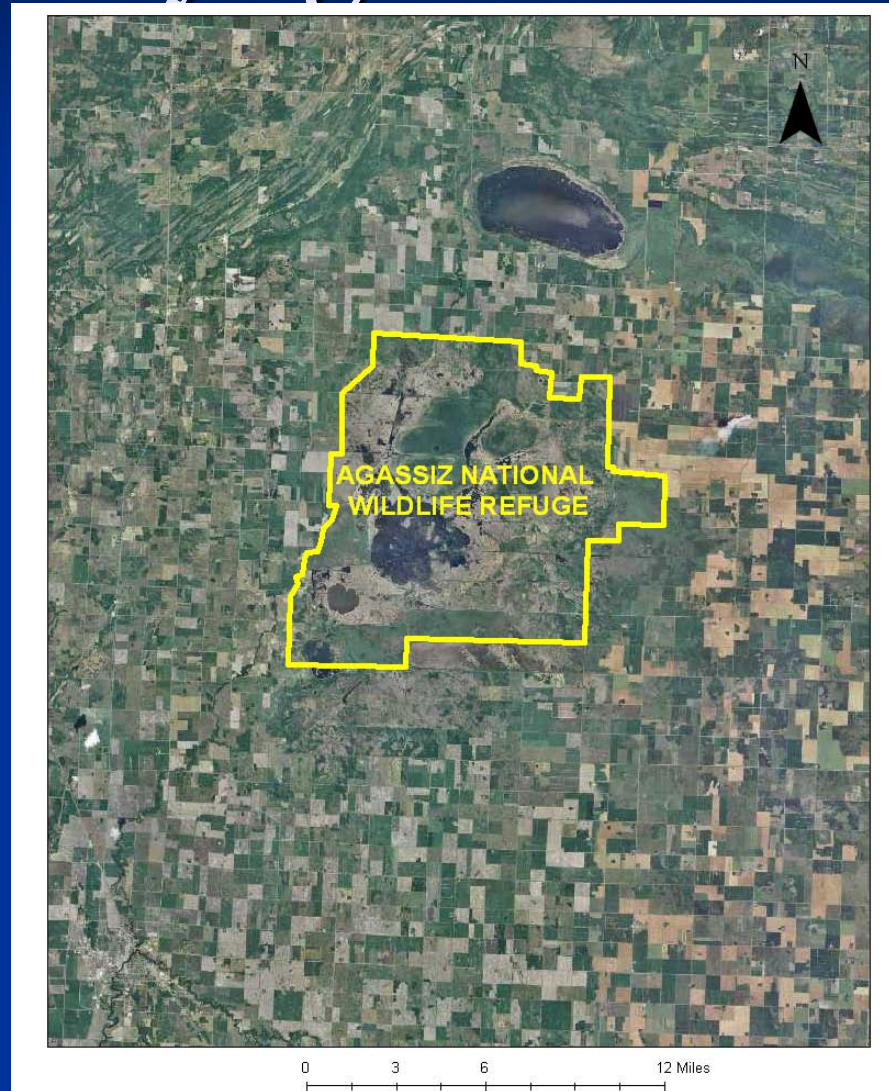
# Farm/Ranch as “island” of agriculture in high density wolf habitat







# Wolf habitat “island” surrounded by agriculture





# Animal Husbandry Practices – Proper Disposal of Dead Livestock





# Deer Feeding

- Artificially concentrates deer, often around human-occupied areas.
- Wolves are also attracted to concentrations of deer and may conflict with domestic animals.
- Winter feeding may disrupt normal migration patterns and winter deer yards.
- Deer distribution and numbers in wolf pack territories may be altered.



# Typical Wolf Complaint Scenario

- Receive complaint (DNR ,WS, County SO).
- Investigate within 24 hours if possible (coordinate WS/DNR).
- Determine whether wolf predation
- Determine if lethal removal is necessary.
- Set traps and/or snares within 1/2 mile of property.
- Timely reporting/response leads to better trapping success – wolves still active in area
- Continue trapping until wolves frequenting farm are removed.
- Follow-up (compensation, wolves removed etc.)



# Lethal Control Methods Utilized



# Capture of Depredating Wolves





# Non-lethal methods



# Donkeys





# Wolf sampling for DNR

- 12 morphological measurements
- Heartworm
- *Brucella canis*
- *Leptospira* (6 serovars)
- *Neospora*
- *Toxoplasma* *Borrelia*
- Canine distemper
- Canine adenovirus 1 and 2
- Canine parvovirus
- Infectious canine hepatitis
- Fecal parasitology
- West Nile virus
- Eastern equine encephalitis



# Sarcoptic Mange

- Sarcoptic mange, resulting in hair loss, may cause short-term, localized declines in wolf numbers.
- Occurs in 5-10% of Minnesota wolves. 8% in 2010
- Density dependent.
- Cold winters can limit transmission by killing severely affected individuals before mange can spread.
- Wolves may recover from mange.





# Dog Louse (lice)

- Affects 5-10% of Minnesota wolves. 11% in 2010.
- Loss of guard hairs, greasy, matted underfur.
- Eggs (nits) may be visible.
- Commonly affects belly, groin and shoulder blade area.
- Usually not direct cause of mortality, but can predispose to other mortality sources.



# Changes

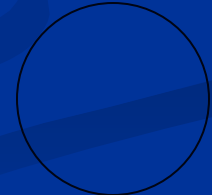
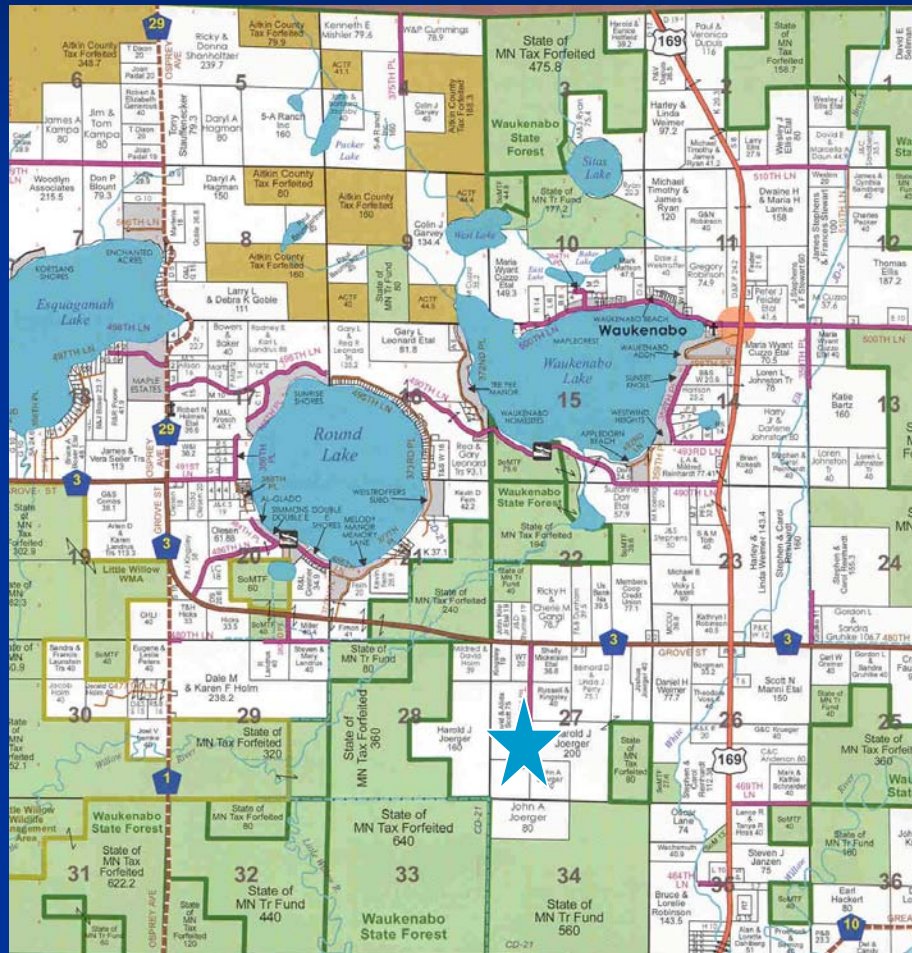


# Rising wolf control costs

- Increased calls from populated areas: towns, rural residences, bus-tops, daycares, schools
- Increased landowner coordination
- Is the public willing to pay for increased costs?
  - Wolf damage management assistance
  - Compensation



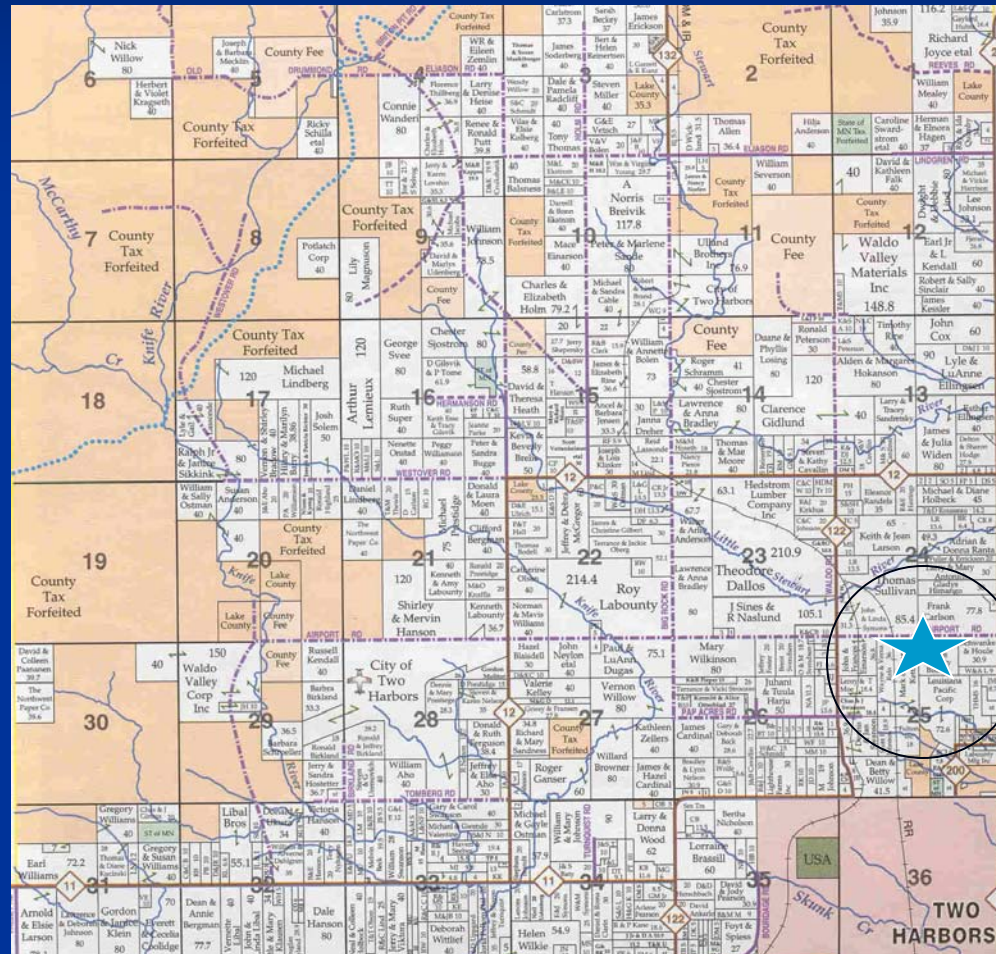
# Historic wolf damage site





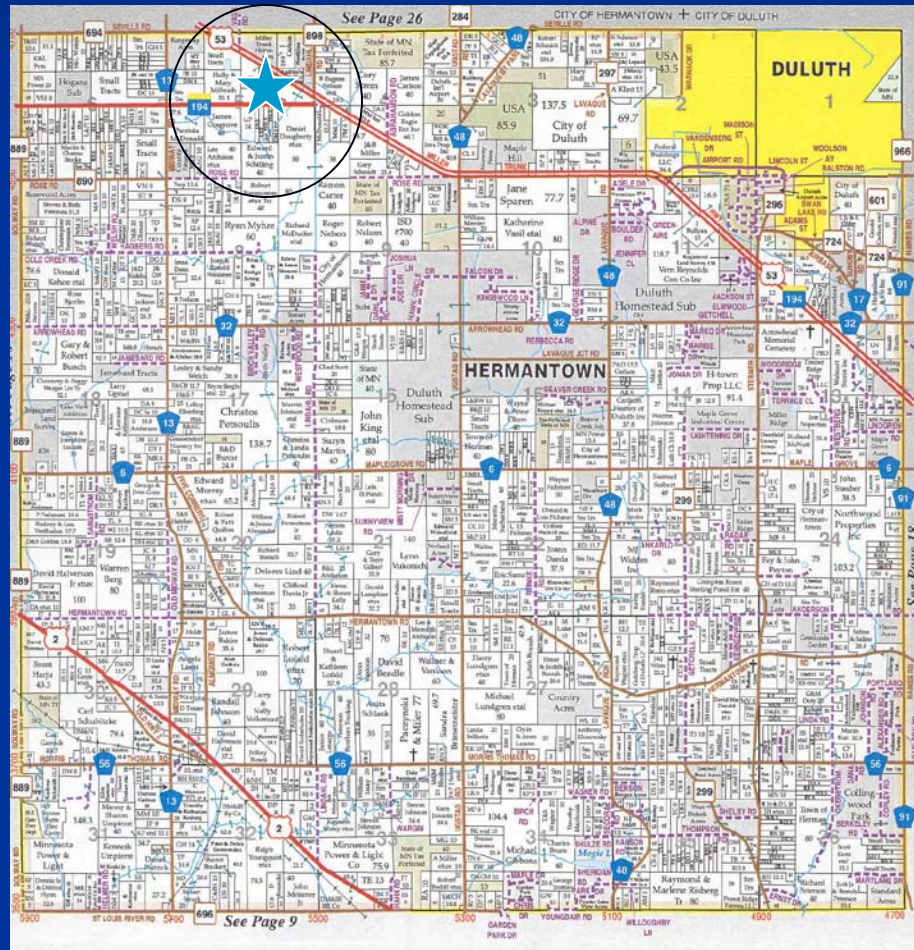
# 2010 wolf damage site

35 different landowners in 1 square mile section around  
depredation site



# 2011 wolf damage site

Outskirts of largest city in wolf range and 4<sup>th</sup> largest city in MN





# Questions?



**John Hart**  
USDA-APHIS-WS  
34912 U.S. HWY 2  
Grand Rapids, MN 55744  
(218) 327-3350  
[john.p.hart@usda.gov](mailto:john.p.hart@usda.gov)