

# BOBCAT ECOLOGY IN NORTHERN WISCONSIN

Wisconsin Department of Natural Resources, Office of Applied Science



Office of  
Applied Science

Photo Credit: Michele Woodford

# Bobcat (*Lynx rufus*)



## Commonly Mistaken For...



Bobcat (*Lynx rufus*)



Canada lynx (*Lynx canadensis*)

# Commonly Mistaken For...



Bobcat (*Lynx rufus*)



Cougar (*Puma concolor*)



Domestic Cat (*Felis catus*)

# Bobcat Management in Wisconsin

- No protection prior to 1970
  - 1970-Harvest by permit only
  - 2014-Southern Zone Open
- Period 1: Oct 15- Dec 25
- Period 2: Dec 26-Jan 31
- Population Monitoring
  - Annual Surveys
  - Age and reproductive status



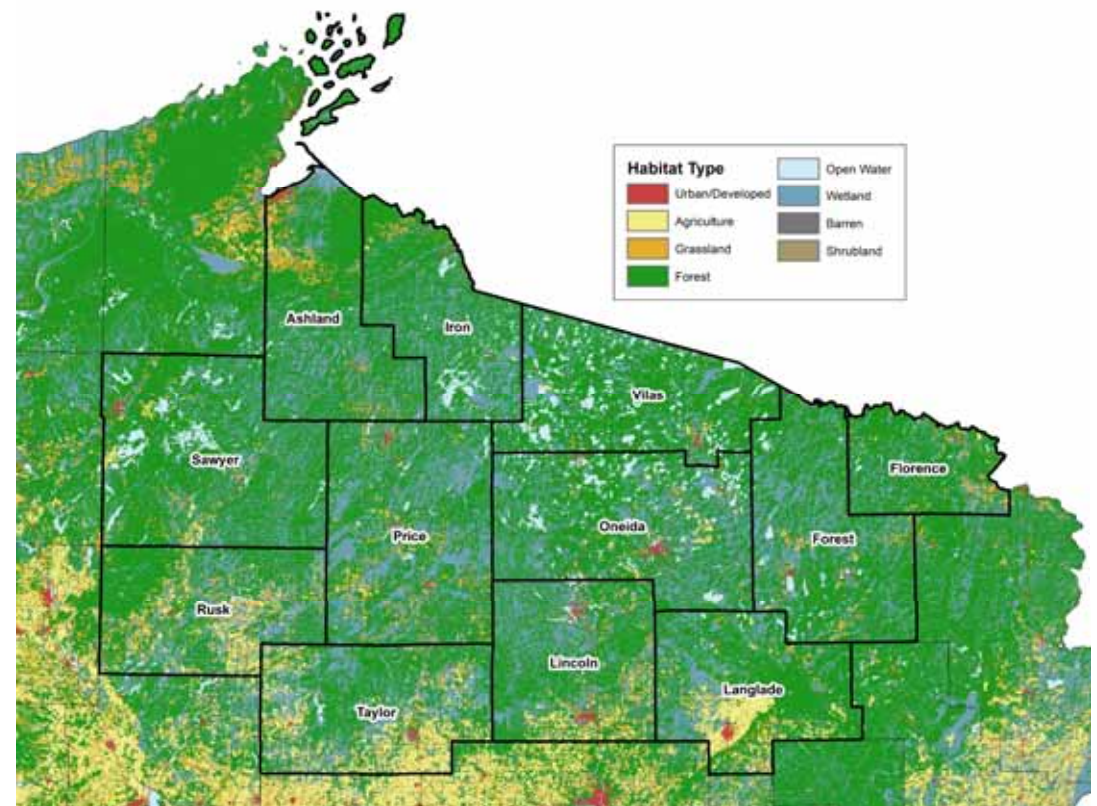
# Northern Wisconsin Bobcat Research Project

- Objectives
  - Refine population estimates for Northern Zone bobcat
  - Estimate survival
  - Determine suitable bobcat habitat



# Northern Wisconsin Bobcat Research Project

- 12 Counties Northern Forest
- Habitat is comprised mostly of forest, wetland, and agriculture



# Capture and Collaring



COVERT

P 08.28.2017 07:02:52 07 014°C 057°F 5 Not Set

## Attention Northern Zone Trappers!

The DNR needs your help to understand bobcat populations



Wisconsin DNR furbearer scientists have teamed together with trapper volunteers to radio-collar 36 bobcats in the Northern Zone the past two years. We are asking for continued help during the upcoming 2016-2017 season. If you catch a bobcat in Ashland, Florence, Forest, Iron, Langlade, Lincoln, Oneida, Price, Rusk, Sawyer, Taylor, or Vilas counties that you cannot keep, or do not wish to keep, please contact us at (715) 401-1051 - even if it has a collar. If the animal is suitable for a collar, or needs a collar replaced, we may be able to collar your incidental captures prior to release. Radio-collared bobcats will help us re-evaluate bobcat population models and status. ALSO, please remember that any hunter or trapper with a valid and unfilled bobcat kill tag can take a collared bobcat.



Northern Zone Bobcat Research Area 2016

Your assistance and involvement helps with furbearer management. For questions, or to report a bobcat, please contact:

Nathan Roberts  
DNR Furbearer Research Scientist  
[NathanM.Roberts@wisconsin.gov](mailto:NathanM.Roberts@wisconsin.gov)

(715) 401-1051



Scan code to create contact in phone





# Capture and Collaring



# Capture and Collaring



# Estimating Age



033656  
Adult Female



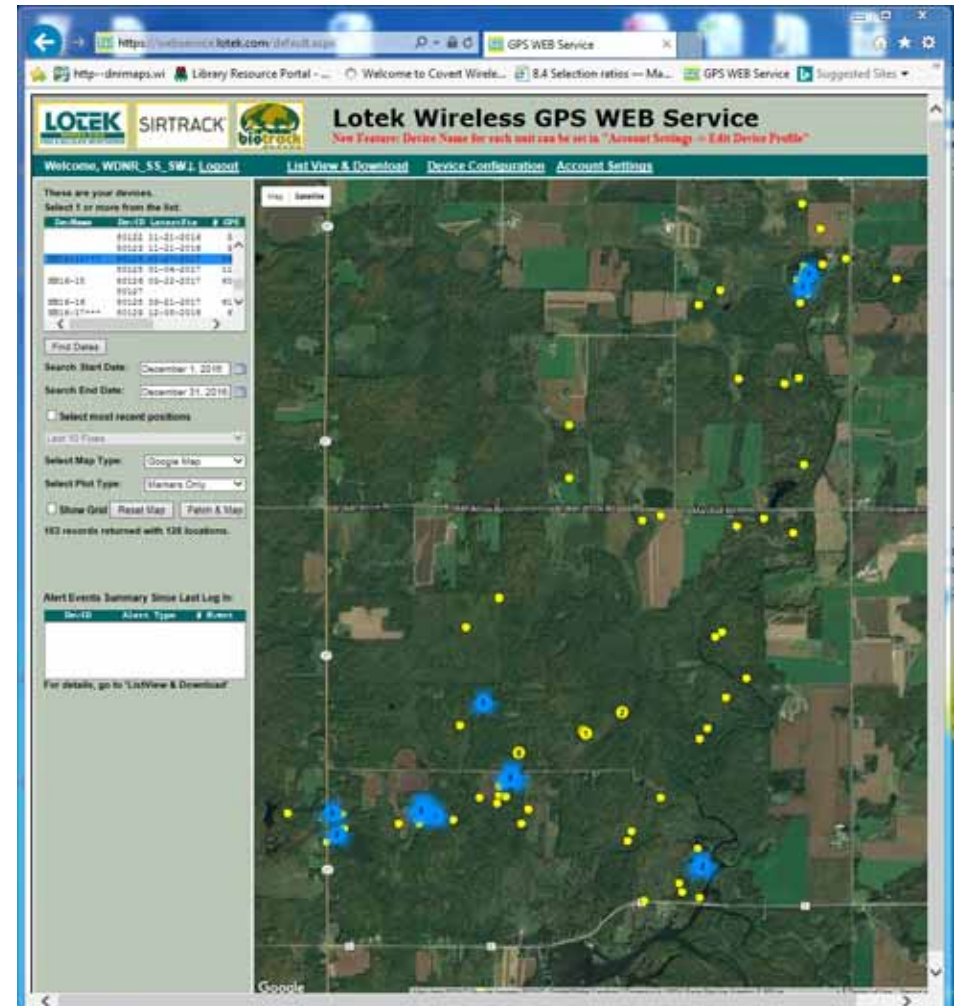
033655,  
Adult Female

# Capture and Collaring



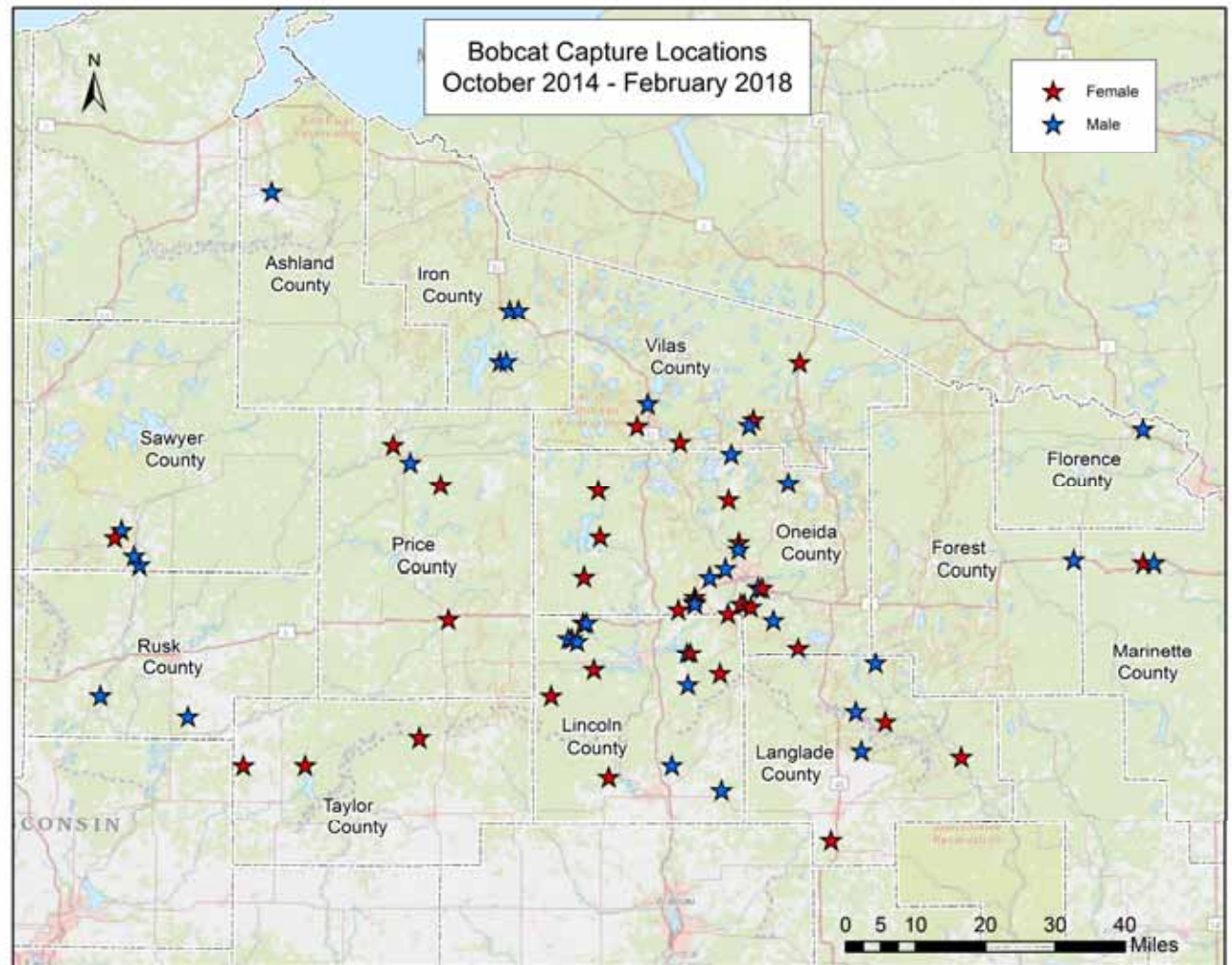
# Capture and Collaring

- GPS collars
  - Receive GPS location data via Iridium Satellite
  - Collect 1 location every 4 hours
  - Upload to satellite 1-2 times/day
  - Mortality alerts if inactive for >12 hrs



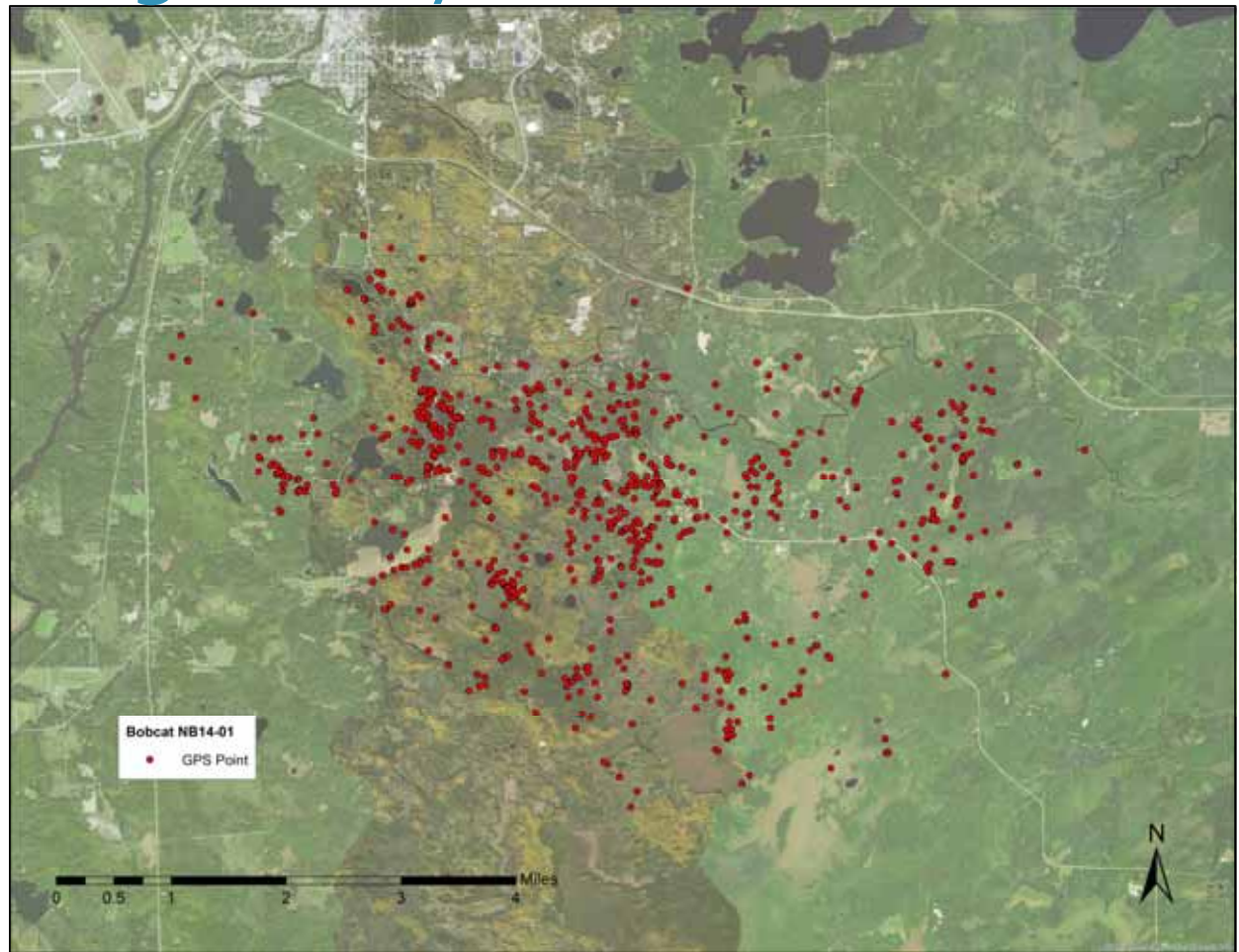
# Capture and Collaring

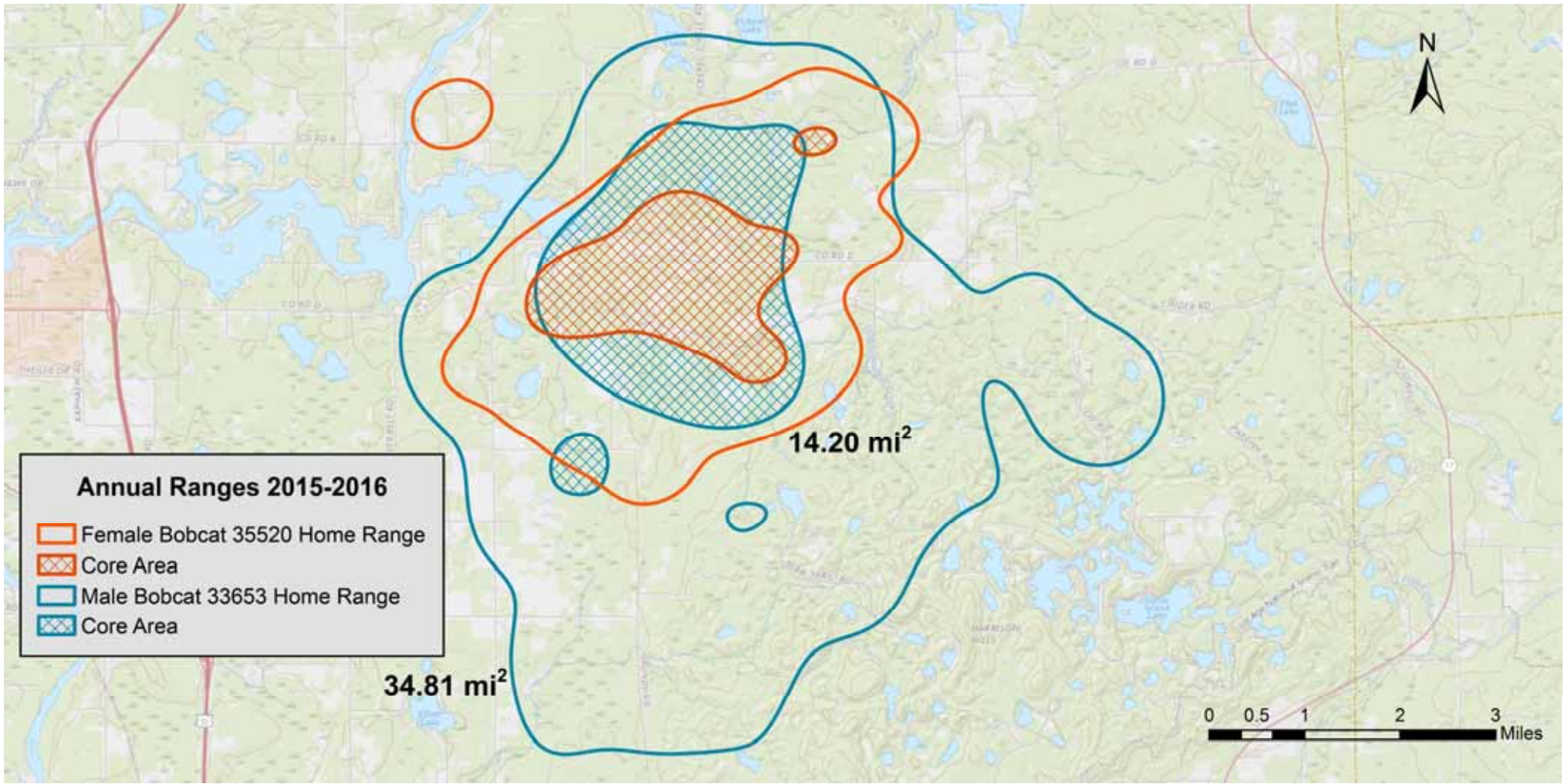
- Oct. 2014 – Dec. 2017
- 65 bobcats collared
  - 31 female, 34 male
  - 5 ear tag only
  - 51 for this analysis
- Average of 240 days monitored



# Methods – Home Range Analysis

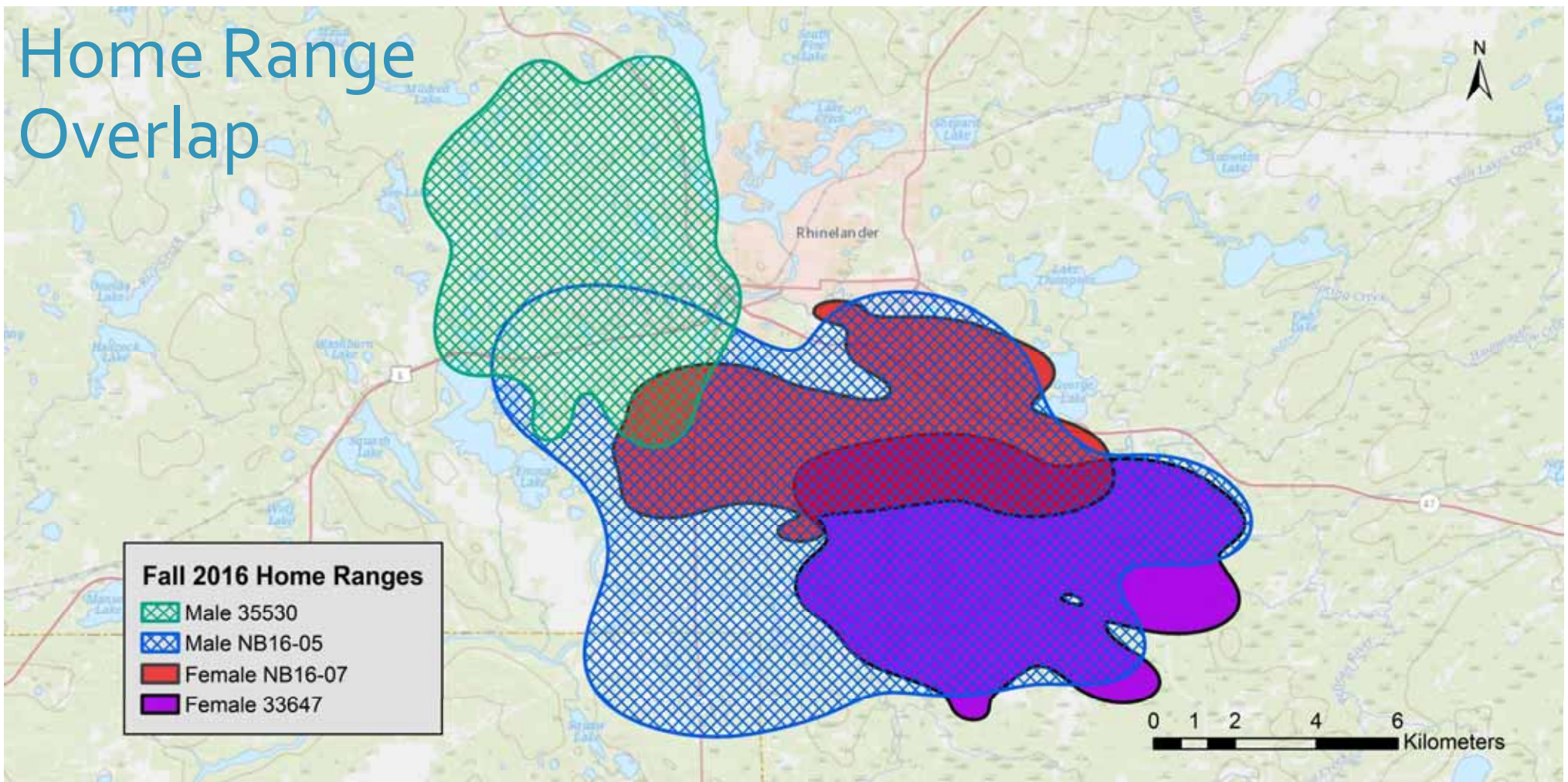
- Annual home range (Sept.-Aug.)
- Seasonal home range
  - Fall (Non-denning): September – December
  - Winter (Courtship/Denning): January – April
  - Summer (Kitten Rearing): May- Aug
- Percent overlap





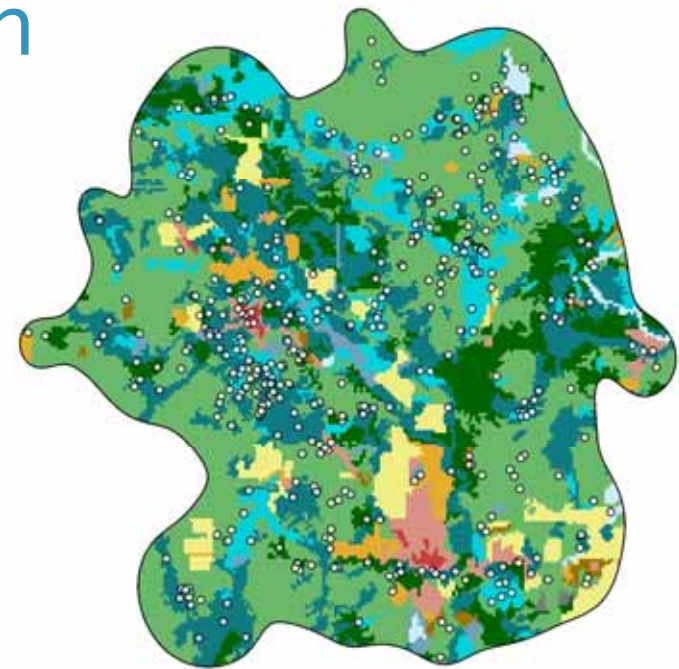


# Home Range Overlap



# Methods: Habitat Selection

- Annual and Seasonal Habitat Use
- Calculated for males and females
- Habitat Used: Habitat value at each GPS point
- Habitat Available: Proportion of each habitat type in home range
- 3 Factors
  - Landcover type from Wiscland
  - Distance to road
  - Distance to water



# Habitat Selection

- Selected for
  - Females selected for forested wetland year-round
    - Areas nearest to open water (0-250 meters) during summer months
  - Males and Females selected for areas nearest to road (10-500 meters) but not on road
- Avoided
  - Males avoided areas furthest from water (>1km) during all seasons
  - Males and females avoided grassland, crop rotation, and deciduous forest habitats
  - Males and females avoided areas farthest from road (>1km)

# Research Applications

- Informed Management Decisions
  - Manage for sustainable use
  - Provide recreation opportunities
- Estimating bobcat density
  - Home range size/overlap—How many animals are using a given area?
  - Habitat Selection—How many animals can the environment support? How does it change with available habitat?



# Going Forward...

- Continue collaring in 2018
- Southwest Wisconsin CWD Deer and Predator Research Project

## Attention Southern Wisconsin Trappers!

The DNR needs your help to understand predator populations



Wisconsin DNR will begin a new project this year investigating factors that impact the deer herd in southwestern Wisconsin. A large part of this research will focus on monitoring bobcats and coyotes with GPS collars. We have had great success in northern Wisconsin the past two years, teaming up with trapper volunteers to collar 36 bobcats. **We are asking for your help in Southwest Wisconsin during the upcoming 2016-2017 season.** If you catch a bobcat or coyote in parts of Iowa, Grant or Dane counties (see map below) **that you cannot keep, or do not wish to keep, please contact us at (715) 577-6288.** If the animal is caught within 1 to 2 miles of the study area and is suitable for a collar, we may be able to collar your incidental capture prior to release. ALSO, be aware that any hunter or trapper with a valid and unfilled bobcat permit can take a collared bobcat. Those with trapping or small game licenses can also take collared coyotes.



Southwestern Wisconsin Deer and Predator Project study area (coyote and bobcat), Southern Bobcat Study (bobcat only)  
Your assistance and involvement helps with furbearer management. For questions, or to report a bobcat or coyote, please contact:

Nick Forman  
DNR Furbearer Research Scientist  
Nicholas.Forman@wisconsin.gov  
(715) 577-6288



# Acknowledgments

- Trappers and landowner volunteers
- DNR staff and volunteers
- Wisconsin Trappers Association
- Funded by Pittman-Robertson funds and bobcat application fee funds



# Questions

