Department of Natural Resources
SCI-MIC Supported Research Projects
2014 Progress Reports

Wolf Population Management Project

The gray wolf has returned to its former range in the Upper Peninsula of Michigan (UP). Since 1989, the Department has monitored wolf population growth and range expansion. As Michigan's wolf population size increased and exceeded levels that required Federal and State agencies to protect the wolves under endangered species statutes, wildlife managers increasingly found themselves responding to wolf-related conflicts. This change in focus prompted the Department to update the state's wolf management plan (currently underway).

As the wolf population increased, the Department developed a program of research to aid in monitoring their recovery and management. An important component of this work has been the capture and tagging of wolves with radio collars to determine their survival, cause-specific mortality, movements, and pack and territory size. Over 400 wolves have been captured and radio-collared to provide this important information. Given the intense public debate over wolf hunting, decision-makers will request predictions on the effect of various harvest scenarios on Michigan's wolf population. Biologists can use a population modeling approach to develop these predictions. However, population modeling requires inputs of wolf population vital rates. Important inputs needed include estimates of survival rate, mortality factors, and dispersal dynamics. Biologists commonly estimate these rates and factors by monitoring the fates of radio-collared individuals. In addition, biologists need to understand causes of mortality and dispersal dynamics in order to consider their relative effects and determine which factors management might be able to manipulate to cause desired changes in wolf populations. This past year, in cooperation with Michigan Technological University, we have initiated a comprehensive analysis of our wolf movement and survival data to provide the needed information.

The information collected from our sample of radio collared wolves also continues to be critical to our population surveys. Most importantly, the movement information and identification of pack territories allows us to interpret our winter tracks surveys to estimate wolf abundance. Without a doubt, estimates of wolf abundance are the most important piece of information we collect on this population. In FY 2014, we conducted a population survey and estimated there were at least 636 wolves in the UP. This estimate was slightly below the estimate of 658 in 2013 although the confidence limits of the survey estimates overlap indicating that statistically we cannot conclude the population declined.