

Department of Natural Resources SCI-MIC Supported Research Projects 2020 Progress Reports

Wolf Population Management Project

Project Background - 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 increased and exceeded levels that required Federal and State agencies to protect wolves under endangered species statutes, wildlife managers increasingly found themselves responding to wolf-related conflicts. This prompted the Department to update the state's wolf management plan. The Department revised the management plan in 2015 and is again in the process of updating the plan in 2020. As part of the wolf management plan revision, the Division will survey the public to assess their attitudes and beliefs regarding wolves and various management options. The social science data collected as a part of this study will provide critical input to the plan's revision.

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 telemetry collars to determine their survival, cause-specific mortality, movements, and pack and territory size. Over 500 wolves have been captured and radio-collared to provide this important information. We have completed the transition from deploying outdated VHF collars to GPS collars that transmit data through satellites. The GPS collars provide more frequent and more accurate locations without the need and expense of aerial relocation flights. At the end of 2020 we were monitoring 29 GPS collared wolves.

Progress 2020 - In 2020, due to the pandemic, our field work was limited. Despite a very short trapping period, we were able to fit four new wolves with GPS collars. We also collared six new wolves incidentally captured by coyote trappers in Fall 2020.

The information collected from our sample of collared wolves also continues to be critical to our biennial wolf abundance surveys. Most importantly, the movement information and identification of pack territories allows us to interpret winter track survey data to estimate wolf abundance. Estimates of wolf abundance are the most important piece of information we collect on this population. In winter of 2020, we conducted the wolf abundance survey resulting in a minimum population estimate of 695 wolves found among 143 packs across the UP. The Division is currently developing a proposal to evaluate alternative abundance estimation techniques using occupancy modeling approaches. Any new abundance technique will still rely heavily on having collared wolves on the landscape.

Partners: Safari Club International-MIC and MDNR.

Timeframe and budget: Wolf population monitoring began in 1989 and work continues annually. Total annual costs in years without a survey are approximately \$60,000 and annual costs increase to over \$100,00 when a survey is conducted.
