

Department of Natural Resources SCI-MIC Supported Research Projects 2022 Progress Reports

Project Title - Wolf Population Management

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, protections under Federal and State laws for wolves changed necessitating action in wildlife managers response 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 again in 2022. As part of the 2022 wolf management plan revision, the Division surveyed 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 provided 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. To date, over 700 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 We have completed the transition from deploying outdated VHF collars to GPS collars that transmit data through satellites.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 2022 we were monitoring 29 GPS collared wolves.

Progress 2022 - In 2022, we trapped 20 new wolves and fitted them with GPS collars. We also collared 6 new wolves incidentally captured by coyote trappers in Fall 2022. 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 one of the most important pieces of information we collect for this population and surveys would not be possible without GPS collars. In winter of 2022, we conducted the wolf abundance survey resulting in a minimum population estimate of 631 wolves found among 136 packs across the UP. The Division intends to conduct another wolf survey in winter 2024. Also, the Division is currently developing two occupancy modeling approaches as potential alternative wolf abundance estimation techniques, and these will be evaluated against the existing abundance estimator. 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 \$100,000 in years when a survey is conducted.
