

Department of Natural Resources SCI-MIC Supported Research Projects 2021 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 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 2021. As part of the 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 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. To date, 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 We have completed the transition from deploying outdated VHF collars to GPS collars that transmit data through satellites.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 2021 we were monitoring 37 GPS collared wolves.

Progress 2021 - In 2021, we trapped and fit 24 new wolves with GPS collars. We also collared 5 new wolves incidentally captured by coyote trappers in Fall 2021. 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 on this population and surveys would not be possible without GPS collars. 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 intends to conduct another wolf survey in winter 2022. Also, the Division is currently developing an occupancy modeling approach as an alternative wolf abundance estimation technique, and this 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 \$100,00 in years when a survey is conducted.
