**TITLE: UNDERSTANDING THE VALUE OF MICHIGAN'S STATE GAME AND WILDLIFE AREAS**

Michigan's state game area (SGA) system provides habitat for a diversity of wildlife species, while simultaneously offering a space for wildlife-related recreation, including hunting, trapping, fishing, and wildlife viewing. While designated to provide for wildlife conservation and associated forms of wildlife-related recreation, prior assessments of the SGA system have found that these areas are also used for a diversity of non-wildlife related recreation as well, including but not limited to hiking, berry picking, mushroom hunting, cross-country skiing, camping, bicycling, and kayaking. Results of past assessments highlight the seasonal variability in recreational uses, as well as a potential tension between the intended use of the system for wildlife-related recreation and the additional diversity of recreational activities ostensibly not related to wildlife, particularly during the spring and summer months.

This research seeks to (1) characterize annual recreational use on SGAs by season, including estimating magnitude of visits, assessing primary and secondary purposes, assessing satisfaction of visitors, identifying distance traveled, and characterizing any recreational conflict between users, with special emphasis on potentially competing wildlife-dependent and non-wildlife dependent recreation ; (2) solicit user input on SGA management, including management goals, programs, amenities, and relevant good governance practices; and (3) develop a protocol for assessing recreational use so data may be efficiently collected by field staff and analyzed by researchers.

This study is a pilot effort aimed at developing a protocol that may be used by managers desiring future game area use assessments. Two game areas will be selected for this study, with data collection for one beginning in March of 2019 through March 2020 (Rose Lake State Wildlife Area) and data collection for the second beginning in June 2020 through July 2021 (location TBD). The approach will include a combination of camera monitoring supplemented with in-person intercept surveys, administered via tablets with a fillable PDF as well as windshield mail back surveys. Results of this research will help game area managers to understand the value of the game area to users and to more effectively align management with user needs. In addition, through piloting the camera monitoring and survey protocol, we will be able to determine feasibility of the approach or modified approach as a protocol for future game area use assessments.

*Progress (2019)*. Camera monitoring for the Rose Lake State Wildlife Area began in March 2019 and will run through March 2020, with survey sampling procedures occurring concurrently and developed to allow for use assessments across four seasons: spring (March-May), summer (June-August), fall (September-November), and winter (December-March). Site days for sampling were stratified according to high use (weekends and holidays), season openers and closers, and low/moderate use (weekdays) days, with time periods for sampling from 8AM-12PM and 12PM-4PM, with an additional sampling period of 4PM-8PM in the summer. We sampled 1/3 of high use dates, 1/3 of season openers/closer dates, and 1/5 of low/moderate use dates, for approximately 20-25 dates per season. A total of 71 survey dates occurred in 2019 with 2153 total surveys distributed. Current response rates for returned surveys is 25%. Coding of camera data will begin in early 2020, and analysis of survey responses for Rose Lake SWA will also begin in early 2020 when data collection and entry has been completed. In early 2020, a second game area will be identified for the study. Consideration of alterations to camera and survey protocol will occur prior to data collection, scheduled to begin in June 2020. We intend to use the 2019 SIC-MIC allocation to purchase a computer that will allow us to process and code photos from our camera data. The camera data will be used to remotely capture recreational use. Cameras have been used to effectively classify recreational use in several contexts, but in low-use areas field observations may be more accurate, so the use of cameras on our game areas is a pilot effort. Using camera monitoring in combination with in-person intercept surveys will allow us to determine the most efficient and effective method for assessing use on our game areas to better tailor our management to use.

PARTNERS: MDNR and SCI-MIC.

TIMELINE and BUDGET: This research will span 3 fiscal years and began in FY19. This is an internal MDNR project with a total estimated cost of $17,000**.** FY 2019 cost were $10,000, with $2,500 dedicated to survey administration and $7,500 dedicated to supplies. No funds are requested from SCI-MIC for this project in FY2020.