

CITIZEN SCIENCE FOR MONITORING COMMON LOONS IN GLACIER NATIONAL PARK

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Glacier National Park harbors approximately 20 percent of Montana's breeding common loons (*Gavia immer*), a Montana Species of Special Concern, with an average of 45 adults and five chicks each year. Surveys of Glacier's loon population have been conducted annually since 1988, but limited resources have restricted data collection to a one-day event known as Loon Day. In 2005, the Citizen Science Project for Common Loons was created to gain a better estimate of population health and to begin to identify factors affecting loon nesting success. Since that time, we have recruited and trained nearly 300 volunteers to monitor lakes with loons repeatedly throughout the nesting season. These volunteers conducted more than 1000 surveys of 45 priority lakes, which resulted in a robust estimate of loon population health. The large data set has also given us valuable information about Glacier's loons, such as chick hatch dates, migration dates, chick mortality, and chick detectability that would have been missed by monitoring only on Loon Day. Volunteers also helped us locate and map nest sites, areas of potential disturbance, and probable nursery areas on each of the lakes with known nesting activity for use in future monitoring and management. Challenges to using the Citizen Science model for this project include investing a substantial amount of effort to find, train and manage volunteers and to maintain data quality. The rewards include educating volunteers in depth about a resource issue, fostering stewardship, and increasing the quantity and quality of data.