

**Meeting Date:** January 27, 2022

**Agenda Item No. 7**

**Agenda Item:** 2021 Statewide Wolf Abundance Estimate

**Bureau Chief Approval:** JR

**Prepared by:** Shane Roberts, Wildlife Research Manager

**Background:**

Since 2019 the Department has used a statewide remote camera array to estimate wolf occupancy (distribution) and abundance (total number). The camera-based abundance estimation method was first developed in Idaho for use on ungulates through collaboration with the University of Montana. The methodology has since been adapted for estimation of other species, including wolves. During spring 2021, Department staff deployed a total of 737 cameras statewide for wolf monitoring purposes. Cameras captured over 9 million pictures during the June-September deployment. Through our continued collaboration with Microsoft's AI for Earth program, we used specialized image recognition software to identify which pictures contained animals (as opposed to grass or twigs blowing in the wind), and then trained staff categorized the pictures that contained animals by species. The resulting data were used in a space-to-event model to estimate average wolf density within portions of the state categorized into three levels of wolf occupancy (low, medium, high). Those density estimates, combined with information on wolf habitat, were then used to estimate wolf abundance across the entire state. This method resulted in estimates of 1,566 and 1,556 wolves statewide during the summers of 2019 and 2020, respectively.

Staff will present an overview of the methods used and the summer 2021 statewide wolf abundance estimate at the Commission meeting.

**Statutory Authority and/or Policy issues:**

The Commission is charged with administering wildlife policy, and through the Department, is responsible for preserving, protecting, perpetuating and managing the state's wildlife (IC 36-103). Abundance (number of animals) and population trend are important metrics monitored by the Department to assess population status and the effect of harvest seasons and other management actions.

**Public Involvement Process:**

The public is keenly interested in information on wolves, including population size and the affect wolves have on prey species and livestock. The Commission and the Department receive input from the public on wolves and wolf management throughout the year via social media, email, phone calls, public meetings and hearings, and other events.

**Staff Recommendation:**

None. This agenda item is for Commission information.

**Justification:**

Information will aid Commissioners as they respond to requests, recommendations, or other input from the public and will aid staff in assessment of wolf population status and effectiveness of management actions.