Amplified bird-strike risks related to population increases of large birds in North America

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Bird-aircraft collisions (bird strikes) are an increasing safety and economic concern to the civil aviation industry. The U.S. Federal Aviation Administration has developed airworthiness standards using a single 4-lb bird mass as the maximum that must be tested for most engines and other components. However, most of the 36 bird species in North America with body masses greater than 4 lbs, including 13 of the 14 species over 8 lbs, have shown substantial population increases in the past 40 years. As one example, the resident Canada goose (10 lbs) population has increased 20-fold from 1970 to 2008; 43% of the reported strikes with this species involve multiple birds. Airworthiness standards should be reevaluated to address the threat posed by increased populations of large flocking birds, especially since current standards do not require an engine to maintain power after ingesting a 4-lb bird. Also, increased research and development is needed in the deployment of bird-detecting radar to warn pilots of flocks of birds and in techniques to make aircraft more visible to birds. Finally, wildlife biologists should increase efforts to reduce or disperse populations of these large birds in airport environments. For resident Canada geese, management programs may be needed to reduce populations in many urban areas.