

## Local landscape composition and configuration around North American Breeding Bird Survey routes

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**Abstract.** Large-scale monitoring of avian species is often conducted by observers driving rural roads and highways. Surveys along roads allow for easy and reliable access over time and the ability to survey large geographic areas in a relatively short period of time. However, if the landscape directly adjacent to these roadside transects is not representative of the greater landscape inhabited by the bird species, then estimates of abundance along the route may not be accurate for the greater landscape. Moreover, inferences regarding abundance, distribution, population trend, and habitat use in the greater landscape may not be valid. Using land cover data from the National Land Cover Database (NLCD), we recently conducted an assessment that revealed a satisfactorily high level of similarity in land cover composition between landscapes immediately adjacent to North American Breeding Bird Survey (BBS) routes (Buffer distance of 0.4 km on either side of route) and the larger landscapes (buffer distance of 10 km) in which they are embedded. Thus, local representativeness was high, as was regional representativeness (a comparison of similarity between combined local landscapes and a larger region containing the routes). Motivated by this positive outcome, we now provide a data set of land cover composition in six different-sized landscapes and land configuration in four different-sized landscapes surrounding each of 3980 BBS routes. We used a geographic information system (GIS) to produce 30 × 30 m raster maps of NLCD 2006 land cover types for each route in each of 30 Bird Conservation Regions. For each BBS route, the data set consists of pixel counts for each of 16 land cover types. These pixel counts are suitable for conversion into proportions for comparison of landscapes of different sizes. Additionally, we provide three measures of landscape configuration for each BBS route. The data set will be useful to researchers analyzing BBS bird data as it represents the first time that a vast majority of BBS routes have been individually linked to a land cover database.

**Key words:** *Bird Conservation Region; bird survey; landscape; National Land Cover Database; North American Breeding Bird Survey; road survey.*

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