**S4 Table. Supported variables (outliers excluded).** Standardized coefficient estimates for variables included in strongly supported models for analyses of building-related variables associated with bird collisions based on monitoring at a subset of 17 of 21 buildings (i.e., with exclusion of potential outliers: stadium, #3, #4, and #17) monitored in downtown Minneapolis, Minnesota, USA, 2017-2018. Analyses were conducted for total collision fatalities across all seasons and for spring and fall, for total collision fatalities for the five species most frequently observed as collision casualties, and for numbers of species colliding across all seasons and for spring and fall. For results based on all 21 buildings monitored, see Table 4.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | Prop. vegetation | |
|  | Height | Glass area | Prop. light | Area light | Footprint | Distance to river | 50 m buffer | 100 m buffer |
| *Collision fatalities (all)* |  |  |  |  |  |  |  |  |
| Total low raw counta | - | 0.042 | - | - | - | - | - | 0.026 |
| Total high adj.estimateb | - | - | - | - | - | - | - | - |
| Spring low raw countc | - | - | 0.299 | - | - | - | 0.213 | 0.249 |
| Fall low raw countd | - | 0.068 | - | - | - | - | - | 0.056 |
| *Collision fatalities (species)e* |  |  |  |  |  |  |  |  |
| White-throated Sparrow | - | 0.484 | - | - | - | - | - | - |
| Nashville Warbler | 0.830 | - | - | - | 0.587 | - | 0.977 | - |
| Ovenbird | - | 0.446 | - | - | - | - | - | - |
| Common Yellowthroat | - | 1.713 | - | - | - | - | 0.981 | 1.501 |
| Tennessee Warbler | - | - | - | - | - | - | - | - |
| *Number of speciesf* |  |  |  |  |  |  |  |  |
| All seasons | - | 0.073 | 0.075 | - | - | - | - | 0.070 |
| Spring | - | - | 0.198 | - | - | - | - | 0.252 |
| Fall | - | 0.102 | - | - | - | - | - | 0.087 |

aAnalysis response variable was raw counts of total fatal collision casualties excluding birds potentially resulting from predation events and collisions with skyways connecting buildings

bAnalysis response variable was bias-adjusted estimates of fatal collisions adjusted to account for removal of bird carcasses by humans and animal scavengers and for imperfect detection of carcasses present during surveys (this version of the bias-adjusted estimate was based on the high raw count of fatal collisions, which included birds potentially resulting from predation events and collisions with skyways connecting buildings); results not shown because statistical model did not converge (see Results in main text).

cAnalysis response variable was raw counts of spring fatal collision casualties excluding birds potentially resulting from predation events and collisions with skyways connecting buildings

dAnalysis response variable was raw counts of fall fatal collision casualties excluding birds potentially resulting from predation events and collisions with skyways connecting buildings

eAnalysis response variables were low raw counts of fatal collision casualties for individual species, excluding birds potentially resulting from predation events and collisions with skyways connecting buildings

fAnalysis response variables were total numbers of identifiable species observed as fatal and non-fatal collision casualties at each building