# Supporting Information

Table S1. Predictors used in models.

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| Predictor variable name | Definition | Source |
| effort\_length | Length of survey (km) | Survey data |
| effort\_time | Duration of survey (hr) | Survey data |
| time\_of\_day | Time of survey | Survey data |
| conservation\_easements\_presenceabsence | Presence (1) or absence (0) of a conservation easement | (USDA/NRCS - National Geospatial Center of Excellence 2010) |
| conservation\_easements\_CalcArea | Area of the conservation easement in which a given pixel exists (acres) |
| nlcd\_ok\_utm14\_okmask | NLCD2011 Landcover Classes | (USDA/NRCS - National Geospatial Center of Excellence 2011)  Neighborhoods modified from NLCD landcover classes. |
|  | NLCD 2.25 ha (5x5 cells) and 20.25 ha (15 x 15 cells) neighborhoods: proportion of neighborhood with the named land cover classes (values range from 0 to 1). Definitions described the land cover type and list the category numbers included in each neighborhood. |
| undevopenspace\_5cell\_okmask  undevopenspace\_15cell\_okmask | Undeveloped open space (11, 31, 71, 81, 82, 95) |
| openwater11\_5cell\_okmask  openwater11\_15cell\_okmask | Open water (11) |
| dev\_openspace21\_5cell\_okmask  dev\_openspace21\_15cell\_okmask | Developed open space (21) |
| dev\_low22\_5cell\_okmask | Low intensity development (22) |
| dev\_med23\_5cell\_okmask | Medium intensity development (23) |
| dev\_high24\_5cell\_okmask | High intensity development (24) |
| barren31\_5cell\_okmask  barren31\_15cell\_okmask | Barren (31) |
| forest41to43\_5cell\_okmask | Forest (41, 42, 43) |
| scrub52\_5cell\_okmask | Scrub and shrubland (52) |
| grasslands71\_5cell\_okmask | Grasslands (71) |
| pasturehay81\_5cell\_okmask | Pasture and hay (81) |
| croplands82\_5cell\_okmask | Croplands (82) |
| woodywetlands90\_5cell\_okmask | Woody wetlands (90) |
| herbwetlands95\_5cell\_okmask | Herbaceous wetlands (95) |
| census\_utm\_30m | Human population density in number per km2 | (U.S. Department of Commerce/U.S. Census Bureau 2010) |
| bio1\_12\_OK | BIO1 = Annual Mean Temperature | Bioclim variables from Worldclim (Hijmans *et al.* 2005) |
| bio\_12\_OK | BIO2 = Mean Diurnal Range (Mean of monthly (max temp - min temp)) |
| bio3\_12\_OK | BIO3 = Isothermality (BIO2/BIO7) (\* 100) |
| bio4\_12\_OK | BIO4 = Temperature Seasonality (standard deviation \*100) |
| bio5\_12\_OK | BIO5 = Max Temperature of Warmest Month |
| bio6\_12\_OK | BIO6 = Min Temperature of Coldest Month |
| bio7\_12\_OK | BIO7 = Temperature Annual Range (BIO5-BIO6) |
| bio8\_12\_OK | BIO8 = Mean Temperature of Wettest Quarter |
| bio9\_12\_OK | BIO9 = Mean Temperature of Driest Quarter |
| bio10\_12\_OK | BIO10 = Mean Temperature of Warmest Quarter |
| bio11\_12\_OK | BIO11 = Mean Temperature of Coldest Quarter |
| bio12\_12\_OK | BIO12 = Annual Precipitation |
| bio13\_12\_OK | BIO13 = Precipitation of Wettest Month |
| bio14\_12\_OK | BIO14 = Precipitation of Driest Month |
| bio15\_12\_OK | BIO15 = Precipitation Seasonality (Coefficient of Variation) |
| bio16\_12\_OK | BIO16 = Precipitation of Wettest Quarter |
| bio17\_12\_OK | BIO17 = Precipitation of Driest Quarter |
| bio18\_12\_OK | BIO18 = Precipitation of Warmest Quarter |
| bio19\_12\_OK | BIO19 = Precipitation of Coldest Quarter |