

SUPPLEMENTAL MATERIAL 1

NEST DISTRIBUTION OF FOUR PRIORITY RAPTOR SPECIES IN COLORADO

KEVIN AAGAARD, REESA YALE CONREY, AND JAMES H. GAMMONLEY

Colorado Parks and Wildlife, 317 W Prospect Road, Fort Collins, CO 80526 USA

Table S1. Covariate layers, dates, and the aggregation resolution used in raptor distribution models for Colorado, USA.

Variable	Date	Aggregation	Root Source	Resolution
BT prairie dog colony	2016	distance-to	Howlin and Mitchell 2016	3.2 km
GU/WT prairie dog colony	2012	distance-to	CPW*	3.2 km
distance to water	2012	120 m	McKay et al. 2012	30 m
distance to cliff/bluff/rocky outcrop	2012	120 m	McKay et al. 2012	30 m
grassland landcover	2011	120 m	Homer et al. 2011	30 m
shrub-steppe grassland mix landcover	2011	120 m	Homer et al. 2011	30 m
forest landcover	2011	120 m	Homer et al. 2011	30 m
cottonwood landcover	1999-2001	120 m	Gergely et al. 2019	30 m
riparian landcover	2016	120 m	US FWS 2016	30 m
developed landcover	2012	120 m	USGS 2013	30 m
terrain ruggedness index	2012	30 m	Riley et al. 1999	30 m
50 m DEM	2012	50 m	Gesh et al. 2018	50 m
temperature (degree days > 5°C)	1961-1990	120 m	Crookston 2014	1 km
Interstates, highways, major, county rtes	2012	distance-to	CDOT*	1 m
Bird Conservation Regions	2014	N/A	Bird Studies Canada and NABCI 2014	N/A

* Available by request only.

BT, GU, and WT = black-tailed, Gunnison's, and white-tailed prairie dogs, respectively. CDOT = Colorado Department of Transportation, NABCI = North American Bird Conservation Initiative.

Literature Cited

- Bird Studies Canada and NABCI. 2014. Bird Conservation Regions. Published by Bird Studies Canada on behalf of the North American Bird Conservation Initiative. <http://www.birdscanda.org/research/gislab/index.jsp?targetpg=bcr> Accessed: 07/10/2020.
- Crookston, N. L. (2014). Climate-FVS Version 2: Content, users guide, applications, and behavior. Gen. Tech. Rep. RMRS-GTR-319. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 38 p.
- Gergely, K. J., K. G. Boykin, A. J. McKerrow, M. J. Rubino, N. M. Tarr, and S. G. Williams (2019). Gap Analysis Project (GAP) terrestrial vertebrate species richness maps for the conterminous U.S.: U.S. Geological Survey Scientific Investigations Report 2019-5034, 99 p., <https://doi.org/10.3133/sir20195034>.

- Gesch, D. B., G. A. Evans, M. J. Oimoen, and S. Arundel (2018). The National Elevation Dataset. American Society for Photogrammetry and Remote Sensing. 28 p.
- Homer, C. G., J. A. Dewitz., L. Yang, S. Jin, P. Danielson, G. Xian, J. Coulston, N. D. Herold, J. D. Wickham, K. Megown, (2011). Completion of the 2011 National Land Cover Database for the conterminous United States—Representing a decade of land cover change information: Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345–354, <http://www.ingentaconnect.com/content/asprs/pers/2015/00000081/00000005/art00002>
- Howlin, S., and J. Mitchell (2016). Monitoring black-tailed prairie dogs in Colorado with the 2015 NAIP Imagery. Western Ecosystems Technology, Inc. Cheyenne, WY, USA.
- U.S. Department of Interior, Geological Survey (USGS) (2013). LANDFIRE: LANDFIRE Existing Vegetation Type layer. (2013, June - last update). [Online]. Available: <http://landfire.cr.usgs.gov/viewer/> [2020, July 10].
- McKay, L., T. Bondelid, T. Dewald, J. Johnston, R. Moore, and A. Rea (2012) NHDPlus Version 2: User Guide.
- Riley, S. J., S. D. DeGloria, R. Elliot (1999). A terrain ruggedness index that quantifies topographic heterogeneity. Intermountain Journal of Sciences 5:23–27.
- U. S. Fish and Wildlife Service (US FWS) (2016). National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. <http://www.fws.gov/wetlands/>