

**APPENDIX 1.** All environmental and anthropogenic variables included in the global habitat model for Ferruginous Hawks in Alberta and Saskatchewan, Canada, 2005 – 2010.

	<b>Variable and units</b>	<b>Data Source</b>
Geography	Elevation (m)	Climate WNA v5.41
	Standard deviation of elevation (m)	
	Longitude	
	Latitude	
Land cover	Distance to nearest grassland (km)	Agriculture and Agri-Food Canada 2000
	Proportion of grassland within 2500m of the nest	
	Edge density (total length of edge where grass and crop interface) (km)	
	Distance to nearest water (log transformed; km)	
Human Development	Distance to nearest power transmission line (km)	IHS Energy 2013
	Transmission line density (total length of transmission line) (km)	
	Distance to nearest road (km)	
	Road density (total length of road) (km)	
	Distance to nearest pipeline (km)	
	Pipeline density (total length of pipeline) (km)	
	Distance to nearest oil or gas facility (km)	
	Total number of oil or gas facilities	
	Distance to nearest sound-producing oil or gas facility (km)	
	Total number of sound-producing oil or gas facilities	
	Distance to nearest surface oil or gas well (km)	
	Total number of surface oil or gas well	
	Distance to nearest oil well (km)	
	Total number of oil wells	
	Distance to nearest gas well (km)	
Total number of gas wells		
Soil	Proportion of eolian parent material	Soil Landscapes of Canad v3.2 Agriculture and Agri-Food Canada.
	Proportion of lacustrine parent material	
	Proportion of fluvial parent material	
	Proportion of till parent material	
	Proportion of colluvial parent material	
	Proportion of fluvioeolian parent material	
	Proportion of fluviolacustrine parent material	
	Proportion of lacustro-till parent material	
	Proportion of residual parent material	
	Proportion of glaciofluvial parent material	
	Proportion of glaciolacustrine parent material	
	Proportion of undifferentiated bedrock parent material	
	Proportion of undifferentiated organic parent material	
	Proportion of brunisolic order soils	
	Proportion of luvisolic order soils	
	Proportion of vertisolic order soils	
	Proportion of chernozemic order soils	
	Proportion of gleysolic order soils	
	Proportion of regosolic order soils	

Proportion of solonetzic order soils  
Categorical soil texture, from 1 (fine) to 7 (coarse)  
Proportion of clay  
Proportion of silt  
Proportion of sand  
Proportion of carbon  
Proportion of very fine sand

Climate

Minimum spring temperature (°C)  
Minimum summer temperature (°C)  
Maximum spring temperature (°C)  
Maximum summer temperature (°C)  
Average spring temperature (°C)  
Average summer temperature (°C)  
Average spring precipitation (mm)  
Average summer precipitation (mm)

Climate WNA v5.41  
(years = 1960-  
2000)