

**Appendix O.** Research, survey, and monitoring needs that would enhance conservation efforts for key terrestrial habitats and associated SGCN in New Mexico. Detailed research, survey, and monitoring needs are located in the Assessments and Strategies for Species of Greatest Conservation Need and Key Habitats Chapter.

Habitat Associations	
CG	- Chihuahuan Semi-Desert Grassland
ME	- Madrean Encinal
MF	- Madrean Pine-Oak Conifer-Oak Forest and Woodland
MC	- Rocky Mountain Montane Mixed Conifer Forest and Woodland
SP	- Western Great Plains Shortgrass Prairie
SS	- Western Great Plains Sandhill Sagebrush Shrubland
IB	- Intermountain Basins Big Sagebrush Shrubland
AM	- Rocky Mountain Alpine-Montane Wet Meadow
RP	- Riparian

Research, Survey, and Monitoring Needs	CG	ME	MF	MC	SP	SS	IB	AM	RP
Assess the impacts of livestock grazing on habitat composition and structure and determine how the timing, intensity, and duration of grazing affect SGCN	X	X	X	X	X	X	X	X	X
Assess the impacts of logging and fuelwood harvesting on the structure of habitat types and their affect SGCN		X	X	X					
Conduct research to enhance knowledge of the natural history, population biology, and community ecology of SGCN within key habitats, including SGCN distribution, abundance, habitat use, and population trend information	X	X	X	X	X	X	X		X
Consistent landscape health and condition descriptions or protocols, and monitoring standards need to be identified or developed	X				X	X	X		X
Determine conditions that limit populations of SGCN and SGCN response to human disturbances	X	X	X	X	X	X			X
Determine how climate change or drought will affect vegetation patterns and community and ecosystem-level dynamics	X	X	X	X	X	X			X
Develop collaborative survey and monitoring protocols for invertebrate SGCN that are not currently being monitored	X	X	X	X					X
Examine type, extent, and structural characteristics of habitat fragmentation and how such habitat alterations influence patch size, edge effect, and use by SGCN	X	X	X	X	X	X	X		X
Identify wildlife travel corridors, and determine habitat connectivity for SGCN		X	X	X	X				

Appendix O Cont.

<b>Research, Survey, and Monitoring Needs</b>	<b>CG</b>	<b>ME</b>	<b>MF</b>	<b>MC</b>	<b>SP</b>	<b>SS</b>	<b>IB</b>	<b>AM</b>	<b>RP</b>
Investigate early detection methods that indicate when habitats are shifting to another habitat type and indicators of biological integrity	X								X
Investigate hydrologic relationships in key habitats	X	X	X	X				X	X
Investigate invasive species early detection protocols and estimate vectors and pathways of potential invasive species. Determine invasive species affects to key habitats and SGCN	X			X	X	X	X		X
Investigate the extent to which Military or Borderland Security Activities affect SGCN	X								
Investigate the extent to which off-road vehicle use affects SGCN	X					X			X
Investigate the impacts, benefits or detrimental effects of habitat restoration practices, such as tree and shrub removal, reseeded, fire, etc..., and determine effective restoration methods					X	X	X		X
Investigate the role of natural fire and the effectiveness of prescribed fire in reducing the potential for catastrophic stand-replacing fires and maintaining habitats		X	X	X					X
Quantify the effects of energy exploration and development on habitats and SGCN	X				X	X	X		