Table 2. Land and Water Management Activities and Practices for Habitat Maintenance or Enhancement		
Land/Water Management Activity Type	Possible Practices for Habitat Maintenance or Enhancement	
Livestock Grazing Management	 Where necessary, install fencing (wildlife friendly permanent, temporary, electrified or virtual fencing) to exclude livestock from riparian areas, or to allow short-term prescribed grazing. Provide water gaps along the stream, as needed, to allow livestock to access water while protecting the majority of the riparian area. Install livestock water tanks for alternative water sources away from the stream. Place mineral stations and supplemental feeding away from streams and drainages. Implement NRCS prescribed grazing or regenerative grazing practices that mimic natural systems and foster riparian health and function, and higher forage stubble height: Vary the seasonal timing, duration, and intensity of grazing within riparian/stream channel habitat, specifically: Vary the season of grazing each year between the growing season (April-Sept) and the dommant season (Oct-March). This varies the impact to grass and forb clipping (grazing) between cool and warm season species and leads to stronger and more diverse plant growth over time. Vary the <u>duration of grazing</u> each season. In particular, aim to shorten the length of grazing periods away from longer periods to shorter, controlled periods where the impact for forage resources may be more intense, but long recovery periods allow regrowth and recovery. Vary the <u>intensity of grazing</u> so that short term grazing pressure and forage preference have less inpact on preferred species. Livestock allowed to graze over large areas for long periods of time (aka 'season long grazing') will selectively regraze preferred species, an increase of less palatable ones, leading to lower amounts of preferred species, an increase of less palatable ones ("increaser species" or species that increase in response to grazing pressure), and lower biodiversity and forage yields over time. Pay sp	
Haying	 Increase distance of haying activity/cutting away from the riparian/stream system. Increase cutting height of residual grass cover near riparian zone and uplands adjacent to riparian zone. Avoid nighttime haying operations. Defer mowing or haying near the riparian/stream system until later in the season to allow for undisturbed Preble's mouse use. 	

Dam Removal or Modification	 Explore potential for dam removal or modification to allow for natural or more natural flows and river hydrology for riparian habitat improvement. Modify river channel or bank; riparian vegetation enhancement and revegetation after dam removal or modification.
Residential and Agricultural Infrastructure (e.g., presence of homes/ranch infrastructure, activities, and pets, etc. along streams)	 Locate infrastructure outside the riparian zone as much as practicable. Minimize infrastructure footprint in uplands in Preble's habitat or adjacent to riparian habitat. Manage activities to maintain or increase native vegetative cover and native vegetation plantings in Preble's habitat. Manage non-native animals and control non-native plant species. Provide limited or restricted (e.g., water gap fencing) watering access on the stream and riparian habitat, as needed. Install off-channel water development/tanks to preclude need for water access on stream and riparian habitat.
Lack of water in the stream	 Explore use of in-stream flow rights to allow water flows in high-priority streams. Implement stream channel design projects to reconnect stream channels to floodplain. Use Low-Tech Process-Based Restoration of Riverscapes design manual to install projects that raise stream levels, reconnect floodplains, disperse water flow, and decrease stream erosion. Identify projects that will improve stream function and health and apply for grants for watershed, streambank, and/or wetland improvement made available by: Colorado Water Conservation Board Colorado Parks & Wildlife, National Fish & Wildlife Foundation USDA/NRCS_Streambank_Shoreline_Protection and USDA/NRCS_EQIP Program.
Road crossings	 Use road crossing designs that provide multi-grade passages for mice and other small wildlife during normal and low flow conditions. Utilize appropriate guidebooks on road crossings with wildlife and vegetation in mind such as <u>Resilient Crossings Handbook (2017)</u> and <u>USACE Stream Crossings BMPs (2015)</u>.
Flood disturbance impacts	 Provide upslope buffers of 300' along riparian areas as refugia from seasonal flooding and extreme weather events. In areas dominated by grasslands, plant upland shrubs such as three leaf sumac to create refugia sites within 50' or 100' of stream bank. Revegetate degraded creek banks with native shrub species and native grasses. Incorporate rest and recovery periods into grazing management plans that allow regrowth of willows and other shrubs and grasses along riparian areas. Plant new willows and other riparian-dependent vegetation along stream and creek reaches where little to no shrubs currently exist such as upper Stonewall Creek. Identify sites in streams where stream improvement projects can minimize the erosive actions of strong flow events and apply for funding to implement these projects. Install appropriate upslope erosion control structures to stabilize upland areas, reduce soil loss, and reduce the movement of sediment into creeks and streams. These could include check dams, beaver dam analogs, process-based stream enhancement, and Zeedyk structures.

Potential subdivision/ land use development
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