

SMALL MAMMAL REOCCUPANCY OF RECLAIMED HABITAT: A POTENTIAL INDICATOR OF RECLAMATION SUCCESS¹

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Abstract: Reclamation means making mined land "...capable of supporting the uses that those lands were capable of supporting prior to any mining or higher or better uses" (82-4-203 MCA). One means of measuring successful reclamation for wildlife may be the reoccupancy of reclaimed habitat by certain species assemblages. Periodic low-effort small mammal trapping has been part of wildlife monitoring at active coal mines in Montana since the mid-1970s. Prior to the early 1990s, trapping methods were not standardized among mines; since then, methods have been standardized to include a combination of snap, live and pitfall traps placed in reclaimed habitats (grassland, sagebrush, mesic shrub and conifer) and un-mined reference areas. Due to the inherent difficulties in comparing small mammal species assemblages and population parameters at mine sites scattered over a large region, only species richness and similarity indices proved suitable to document long-term trends. These two measurements indicated that small mammals require several years to achieve the richness/similarity expected for a particular reclaimed habitat, and that the rate of reoccupancy is influenced by factors such as age and area of reclaimed habitat, and other uses of reclaimed areas, particularly livestock grazing.

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