Bat Use Of Highway Bridges In South-Central Montana[TWS]

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Bat use was evident at 78 of 130 highway structures examined during summer 2003 in Carbon, Stillwater, and Yellowstone counties, Montana; 66 were used apparently exclusively for night roosting, and 12 were day roosts. Use of highway structures was widespread among highway categories (Interstate: 73.2%, Primary: 47 .2%, Secondary: 57.1%, Local/State Maintained: 60.0%). Day roosts were found in all system categories, but relatively more so in the Local/State Maintained category, and all maternity colonies (4) were in this category. Use of bridges and intensity of use at night roosts were generally unrelated to landscapes within 3 km (1.86 mi) of structures. Only mean percent forest cover was significantly greater around day roost structures, but substantial overlap among unused, night roost, and day roost categories indicated the pattern was a trend and not the major influence on structure use by bats. All day roosts were found within 8 km (5 miles) of riparian corridors. Bats used 75.9 percent of concrete structures, 37.5 percent of steel structures, and 31.6 percent of wooden

ones. Day roosts were not found in steel structures; three of four maternity colonies were in wood bridges. Slab bridges were the least preferred concrete spans. Day roosting site in concrete bridges included accessible expansion joints between cast-in-place and T-beam bridge sections, the longitudinal slots on the underdeck of parallel box-beam structures, and the space between two abutting bridge lanes. Day roosts in wood bridges included the narrow space between parallel girders, and spaces between wood supports under the deck where railing posts were anchored.