Noise, generated by a growing number of recreational motorized vehicles, is of increasing concern by those tasked with management of federal lands; an understanding of the intensity of disturbance due to sound will help in planning. The CNHA supported a 1st season {2023) of our 2-yr proposal to understand how noise affects desert bighorns. Herein we request modest support for Year 2 to increase samples such that our findings will meet scientific scrutiny. Our field experiments involve manipulation of (otherwise) silent landscapes by 1) broadcasting an array of loud sounds through a speaker, and 2) comparisons across sites on the Colorado Plateau (BLM and NPS lands) that vary in recreational visitation. To date we have conducted more than 200 sound playback experiments to wild bighorn females, but to develop credible statistical models we need to double the number of playback experiments. Our very tentative findings include: (i) heightened flight by female sheep when disturbed near two-track or dirt roads with greater sinuosity; and (ii) disturbance by motorcycles lessens at distances in excess of 200-300 meters but bio-energetic costs (kilocalorie expenditures) increase some 500-1000% when there is more than a single disturbance in the same day.