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# PRELIMINARY RESULTS OF OCCUPANCY SURVEYS FOR MODELING HABITAT SELECTION OF SYMPATRIC BIGHORN SHEEP AND MOUNTAIN GOATS IN THE GREATER YELLOWSTONE AREA

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Introduced and expanding mountain goat (*Oreamnos americanus*) populations in the greater Yellowstone area (GYA) have generated significant concern regarding impacts to natural communities, and especially to native and restored bighorn sheep (*Ovis Canadensis*) populations. To provide natural resource managers with useful and applicable information for managing and conserving these species, occupancy surveys based on rigorous field studies were implemented in 2011 and 2012 to develop summer habitat models for bighorn sheep and mountain goats in the GYA. To enhance the applicability and accuracy of these models, occupancy probabilities obtained from presence and absence observations are integrated with detection probabilities gained from double independent-observer sampling. Between the two field seasons, a total of 361 surveys were performed over 350 observer-days, capturing spatially-precise locations of 80 bighorn sheep groups and 138 mountain goat groups. Preliminary analyses of the data obtained to date were performed for each species to gauge the utility of the field studies and to provide insights for improved study design and implementation of future field work. This presentation reports on the accomplishments from the first two field seasons, including what we have learned from preliminary analyses and the plans for an additional field season for summer 2013.