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## USE OF HIGH-RESOLUTION AERIAL IMAGERY TO IMPROVE A GIS HABITAT MODEL (POSTER)

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For many species, land cover is the most important input variable for a GIS habitat model. Yet, coarse-resolution satellite imagery provides the foundation of many available land cover datasets. With low-resolution imagery, habitats such as shrublands and narrow or small riparian elements typically remain invisible to digital image analysis software and to the naked eye. Habitat misclassification often occurs and land cover accuracy rates may range from only 60% to 80%. We ran a sharp-tailed grouse (*Tympanuchus phasianellus*) habitat model, originally developed by Montana FWP, using a current land cover layer based on 30-meter resolution satellite imagery. From the results, we chose a subset of areas with high potential to contain the most suitable habitat. We then updated each area's land cover by "ground-truthing" it against high resolution imagery (NAIP, 1 meter and Esri, 6 inch). We corrected misclassified habitats of interest and then reran the model. Although time consuming, we believe this manual "ground-truthing" process greatly improved the accuracy of the model and made the on-ground habitat surveys more efficient. We also believe this approach would improve habitat modeling efforts for other species.