
USING SPATIAL MODELS TO MAP BIRD DISTRIBUTIONS ALONG THE MADISON RIVER

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The Avian Science Center developed predictive maps of species distributions for the Madison River based on newly available riverine system data from the National Wetlands Inventory (NWI) and the Natural Heritage Program's Landscape Integrity Model. We used a maximum entropy model (MaxEnt) to predict species distributions using species occurrence

locations collected from 2003-2010. Models performed well for 13 species, demonstrating that available environmental data layers, including NWI, can be used to successfully predict species distributions along the Madison River for a number of important riparian bird species. These models allow fine-scale mapping of habitat suitability for riparian birds, which fills gaps in current data on species distributions, and can be used to prioritize riparian conservation and restoration projects.