

The Farmington Bay region of the Great Salt Lake is fringed with an array of wetland complexes providing critical avian habitat. Land use and hydrological changes resulting from projected urban population increases and combined with the low topographical relief of the lake basin could have a significant effect on the areal extent and habitat quality of these wetlands. An Avian Wetland Habitat Assessment (AWHA) model was developed as part of a larger Alternative Futures decision support framework for Farmington Bay. The AWHA is a geographical information system-based (GIS) model for spatially assessing changes to avian wetland habitat suitability. Key variables for ranking wetland habitat suitability were developed by regional bird experts for three bird groups classified as migratory shorebirds, migratory waterfowl, and migratory water birds. Bird groups were organized by the references of member species for similar habitat features. Habitat suitability is calculated by ranking variable strengths to reflect the influence of each variable on bird group presence. Results are spatially displayed for each bird group indicating areas of high and low habitat value. Two alternative future land use scenarios were developed and compared to evaluate development policies. The Conversation scenario protected the greatest amount of wetland acreage and highest category of wetland habitat. The Plan Trend scenario showed the greatest decline in the highest category of wetland habitat. The AWHA model can be modified to assess habitat suitability in varying environmental conditions, geographical locations, and species specific investigations. Key features and recommendations for improving the model will be presented.