

Sauer, J.R., W.A. Link and J.D. Nicholas. 2003. Estimation of changes in populations and communities from monitoring and survey data. (<http://www.nebirdmonitor.org/tools-resources/methodspdfs/saueretal03/view>).

Monitoring surveys provide fundamental information for use in environmental decision making by permitting assessment of both current populations (or community) status and change in status, by providing a historical context for the present status, and by documenting response to ongoing management (Williams and Johnson 1995). Conservation of species and communities has historically been based upon monitoring information (Caughley 1994), and prioritization of species and habitats for conservation action often requires reliable, quantitative results (e.g., Carter et al. 2000). Although many monitoring programs exist for populations, species, and communities, as well as for biotic and abiotic features of the environment, estimation of population and community change from surveys can sometimes be controversial (Link and Sauer 1998a), and demands on monitoring information have increased greatly in recent years. Information is often required at multiple spatial scales for use in geographic information systems, and information needs exist for description of regional patterns of change in populations, communities, and ecosystems. Often, attempts are made to meet these needs using information collected for other purposes or at inappropriate geographic scales, leading to information that is difficult to analyze and interpret.