
EXPLORING ADAPTIVE MANAGEMENT FOR GREATER SAGE GROUSE IN NORTHERN MONTANA IN THE FACE OF CLIMATE CHANGE

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A collaboration has begun in Montana among several state and federal agencies and non-governmental organizations interested in the management of greater sage grouse (*Centrocercus urophasianus*) in a > 5,000,000-ac (> 20,234-ha) landscape including the Charles M. Russell National Wildlife Refuge. The first step was conducting personal interviews with field biologists and managers in the general area to assess what management actions they are making. Using this information, we conducted an on-line survey to further identify those actions and how they are made. Finally, almost 40 managers and scientists met to discuss whether an adaptive management approach might be useful to gain an understanding of the interaction among habitats and management actions and how this will be affected by annual weather and climate patterns. A conceptual model of how these factors affect the life cycle of grouse has been drafted, and we are gathering comments on it. The intent is for that to be used as an ecological response model for assessing the effects of possible climate change scenarios. Future work will entail: (1) further delineation of management actions and the social networks associated with them, (2) building and evaluating a working model using rapid prototype methods, (3) conducting futures analyses of associated landscapes, (4) continuing to foster collaborative effort, and (5) working one-on-one with managers to evaluate model and adaptive management applicability using such tools as LCMAP (Landscape Conservation Management and Analysis Portal).