

actions that will be applied to the landscape in relation to implementation of regulatory planning documents, State plans, etc. and the effect those regulatory actions will have to the main threat factors. Non-regulatory conservation actions will need to be categorized based on their certainty of implementation, for example legislative actions to guarantee funding for localized fire management while, not regulatory, provides a level of certainty that would be similar. Second, the Service must evaluate the adequacy of the all the actions in terms of strength of the agency action, legal support etc. This second evaluation will likely occur later and will involve less quantitative methods but must be done in the context of the effect of these actions on abundance and distribution at different population scales.

Changes in threats, conservation actions, and regulatory actions will be projected into the future using the analytical framework to provide a greater degree of resolution than was portrayed in the 2010 finding. This level of analysis will likely be at a greater level of detail than the most recent proposal on Bi-state. All of this will be cast in the form of abundance and distribution both now and into the future. The exact metric has yet to be developed but examples might be percent of populations persisting over time or percent distribution or possibly some index of habitat fragmentation in to the future. We do not recommend that the metric take the form of number of birds.

Implementation of the guiding principles will be accomplished with the use of an analytical framework. The analytical framework will involve varying levels of analysis depending on the importance of the factor being evaluated as well as its relative importance to the conservation status of the species. For example, the Service anticipates a much higher level of analysis for the small number of threats described above that the Service has determined to be the most important.

The Service anticipates deploying a number of analytical methods including spatially explicit models, expert elicitations on specific subjects, internal decision analysis frameworks as well as other methods that may arise in the process. The spatially explicit modelling will focus on current and future changes to threats and conservation actions, using the COT spatial geography and population data to project various outcomes, as measured by abundance and distribution. The Service anticipates that this will be the highest level of effort and will be used on those threats that have been identified as the most important drivers for the conservation of the species (long-term persistence). These include at a minimum; invasive species and fire, energy development and associated infrastructure (including oil, gas, and extractable minerals), and habitat conversion due to tilled agriculture. This will allow the Service to look at risk to the highest concentrations of birds in the most important landscapes and begin to put anticipated biological outcomes into the context of the policy framework relative to the definitions of threatened and endangered.