

****Wildfire Extends the Shelf-Life of Elk Nutritional Resources Regardless of Fire Severity**

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Large-scale, high severity wildfires are increasingly frequent across the western United States. Fire severity affects the amount of vegetation removed and helps dictate what, where, and how many plants can regenerate postfire, potentially altering the available habitat and nutritional landscape for wildlife including elk (*Cervus canadensis*). To evaluate the effects of fire severity on the Blackfoot-Clearwater elk population's summer nutritional resources, we collected field data and remotely sensed information in years two and three after the Rice Ridge wildfire to compare forage quality across multiple forest types and fire severities and developed spatiotemporal predictive landscape nutrition models. We used these models to predict forage quality across the landscape and compared the observed landscape of nutrition to an unburned landscape to assess nutritional consequence of the Rice Ridge wildfire. Wildfire increased summer forage quality in both mesic and dry mixed conifer forests regardless of fire severity. Based on our predictive models, we found that wildfire extended the duration in which elk can access high quality forage in the summer. Therefore, shortly after a large-scale wildfire, elk may be better able to meet their requirements which may positively impact elk body condition, reproductive performance, and survival. Fire has frequently been shown to increase summer nutritional resources for elk, however, to our knowledge, this is the first study to analyze the immediate impacts of fire severity on elk nutritional resources.