

CONSERVING AND RESTORING NATIVE TROUT IN THE FACE OF CLIMATE CHANGE, INVASIVE SPECIES AND DEVELOPMENT

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Evidence suggests that factors such as climate change and a century of fire suppression are altering fire regimes in some vegetation types of the western USA, and the probability of large stand-replacing fires has increased in those areas. For example, over 100 million acres have been burned by wildfire in the West during the last 20 years. It appears, however, that even in the case of extensive, high-severity fires, local extirpation of fishes is patchy, and recolonization is often rapid. Lasting detrimental effects on fish populations have been limited to areas where native populations have declined and become increasingly isolated because of anthropogenic activities. Unfortunately, this situation is exacerbated by decreasing water availability at a time when demand is increasing. Furthermore, the potential of invasive species to expand under these altered habitat conditions is poorly understood. Despite incomplete knowledge of the effects of climate change in aquatic systems, it is apparent that managers must begin to develop a broad-based management strategy that focuses on protecting remaining native fish populations and associated habitat from further anthropogenic degradation and restoring degraded habitat and connectivity. Such a strategy will require a watershed-scale approach that integrates conservation and restoration activities throughout the stream network.