

RESPONSE OF COASTAL STREAM HABITAT AND JUVENILE STEELHEAD POPULATIONS TO FIRE DISTURBANCE.

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In September 2003, lightning ignited a fire (Honeydew Fire) that eventually spread and burned 13,778 acres, approximately 20% of the acreage within the King Range National Conservation Area, Humboldt County, California. Pre-fire sampling of streams in the King Range conducted by previous graduate students in the California Cooperative Fish Research Unit provided an opportunity to assess the response of stream habitat and steelhead trout (*Oncorhynchus mykiss*) to fire-related disturbance. Three streams on the west slope of the King Range, which drain directly into the Pacific Ocean, were selected for this study. Big Flat Creek had a majority of its watershed burned, Kinsey Creek had approximately half of its watershed burned, and Spanish Creek was not burned. Data collected for comparison included habitat distribution and area, juvenile steelhead abundance, density by habitat type, and length and weight, LWD volume, and water temperature. Pre-fire data was collected in Big Flat Creek in 2000 and 2003, in Kinsey Creek in 2000, and in Spanish Creek in 1999 and 2000. Post-fire data was collected in 2004, 2005, and 2006 in all three creeks.

It was hypothesized that the fire could cause some direct steelhead mortality but that over a longer temporal scale it would have a positive effect on stream habitat and steelhead populations due to the relatively undisturbed state of the study streams from the protection provided by its National Conservation Area status.

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