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Abstract Title: Climate change and other stressors change modeled  
population size and hybridization potential for  
San Joaquin kit fox

The San Joaquin kit fox was once widely distributed across the southern San Joaquin Valley, but agriculture and development have replaced much of the endangered subspecies habitat. We modeled impacts of climate change, land-use change, and rodenticide exposure on kit fox populations using an individual-based population model. Our study indicates that climate change will impact kit foxes via several independent pathways. Climate-change induced vegetation shifts increase the total available habitat and could reduce barriers between the endangered San Joaquin kit fox and the more widely distributed desert kit fox in the Mojave. Increased climate extremes will increase the probability of the population dropping below critical levels. Modeled land use change reduces kit fox populations, as does exposure to pesticides. Finally, 55% of the best kit fox habitat also has high potential for solar installations, which could lead to additional impacts for kit fox populations.