As the human population approaches 8 million, nearly every place on Earth has been anthropogenically altered. Humans have modified the environment in numerous ways primarily through changes in land use, which, together with climate change, have led to unique shifts in wildlife habitat use and population demographics. The Fritts lab focuses on using modern technology both in the field and in analysis to better understand vertebrate population variability over space and time. Our work is applied; thus it is our goal to design practical solutions to guide wildlife management and conservation efforts that balance the needs of humans and wildlife. My talk will concentrate on ongoing research pertaining to bat conservation on human modified landscapes. Specifically, I will discuss projects focused on reducing bat fatalities at wind turbines, white-nose syndrome across Texas, mercury pollution in bats, and bat use of residential versus protected areas.