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Amy Keighley* (keigha@rpi.edu) and **Joan Lubben** (jlubben@math.unl.edu). *Cheetah Conservation - A New Approach*. Preliminary report.

Previous cheetah population models contend that increasing the survivorship of adult cheetahs is the best conservation method to ensure long term viability of the endangered species. While sensitivity analyses indicate that perturbing the adult survivorship has the greatest affect on the population growth rate, the change in this parameter necessary to achieve a positive growth rate is higher than ecologically feasible. We present a capture/release model where we capture pregnant cheetahs, and then release them back into the wild with their cubs 6 months after birth. This alternative strategy dramatically increases the survivorship of the cubs in the initial six months of their lives and thus increases the overall growth rate of the wild cheetah population. (Research carried out at the University of Nebraska-Lincoln REU in Applied Mathematics.) (Received August 30, 2005)