

- **ISSUE YNP:**

- The estimated population inside the park, “approximately 150 with home ranges wholly or partially in the park” (www.nps.gov/yell/learn/nature/grizzlybear.htm) means that current bear numbers in the park are less than or barely exceed numbers estimated in 1975 (126-312 “restricted largely to the confines of Yellowstone National Park and some surrounding areas”).

There are several important considerations regarding the comparisons of the number of grizzly bears in Yellowstone National Park during the 1970s and based on recent data:

- 1) The estimates from the 1970s should be interpreted with caution because no formal population estimator was used at that time. Additionally, the estimates reported for the 1970s were for the entire population and were not restricted to Yellowstone National Park only.
- 2) Contemporary estimates of the grizzly bear population in the Greater Yellowstone Ecosystem are not broken out by different agency jurisdictions so there is no official estimate for Yellowstone National Park only; the estimate of 150 grizzly bears in Yellowstone National Park provided by the National Park Service is based on extrapolation of ecosystem-wide data and is likely an underestimate because the population estimator currently used by the Interagency Grizzly Bear Study Team (“Chao2 estimator”) has been demonstrated to be biased low (Cherry *et al.* 2002, Schwartz *et al.* 2008).
- 3) Despite these cautions, IGBST data support the notion that annual population growth (“lambda”) within Yellowstone National Park has been relatively low compared with areas beyond the National Park but within the Recovery Zone (Harris *et al.* 2006; IGBST 2012). Additionally, estimates for number of unique females with cubs-of-the-year observed within the boundaries of Yellowstone National Park have been relatively constant from the 1970s through the 2000s (IGBST, unpublished data, see figure below). A likely explanation for these observations is that occupied grizzly bear range during the 1970s was concentrated within Yellowstone National Park and much closer to carrying capacity than areas beyond the park boundaries. As a result, after the 1970s, the most robust population growth occurred in areas beyond the park boundaries, which gradually expanded over time in a process that continues to date.



