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Cougar population model count:

*According to page 51 in the Oregon Department of Fish and Wildlife's 2017 cougar management plan, it states that Oregon has approximately 3300 adult cougars (ref. page copy below).

*The apparent balance, 4309, are a hypothetical cougar kitten population count, day one up to two years. Cougar kittens are a population vulnerable to high mortality (1 out of 10 survive to adulthood out of a litter of 1 to 4 kittens birthed an average every two years) and including them has lead the public to believe they are overrun with adult cougar.

*Most young mammals, including deer and cougars, do not survive their first year. Wildlife biologists including ODFW, do not include wildlife young of the first year in their population estimates because they know a high percentage will not reach adulthood. ODFW does not count the young of other game animals such as turkey, deer or elk in their population models. However, they do count the cougar kittens which creates an inflated and inaccurate population model count.

*ODFW does not count kitten mortality in their quota or harvest counts, yet kittens already dead or not yet born, are included in their cougar population model count.

***The attached triangulated and replicable cougar kitten mortality pie charts indicate that cougar kittens have a high mortality rate.** It appears ODFW are including in their count a substantial population of cougar kittens that may already be dead, or maybe not even born. The fact that the cougar killed recently was eight years old, very thin, and had only given birth once, is an indication that cougar may not be reproducing at the capacity we once thought.

*By counting an apparent hypothetical number of kittens, ODFW and the hound hunters have willingly misled the public in a blatant attempt to make it sound like Oregon is full of cougars. When in fact, Oregon has no more adult animals than any other state. Adding fear and exploiting a singular possible death by a cougar in the last 120 years for which to pass bills to kill cougar specifically with hounds, is not rational, nor is it honest. Oregonians voted twice against hound hunting. Do they need to vote again?

*Furthermore, at a Corvallis public hearing, ODFW's statistician, Dr. Jackson, stated that ODFW was surprised to learn that cougar kittens dispensing from their parent are not the conflict issues, but rather those cougar kittens that are orphaned are the conflict issues. According to his stats, more cougar kittens are orphaned from hunting than from other causes. He states that killing less cougar reduces conflict issues with humans and livestock.

*Unlike other game animals, ODFW has no defined season for cougar. This creates more conflict issues with humans and livestock. Waiting until December 1 to hunt cougar, would allow 91% of cougar kittens and their social structure to survive, reducing human and livestock conflict issues.

Cougar and the Lyme Tick Ecology:

*Reducing the killing of cougar would also reduce human and dog exposure to Lyme disease. ODFW's cougar management plan has not helped reduce the growing Lyme disease issues in Oregon, which costs Oregonians billions of dollars according to Oregon State Legislative documents. In 2015 Oregon Lyme disease total lost productivity and treatment costs were approximately \$16.5 billion. Treatment expenditures were \$3.4 billion and lost productivity were roughly \$13.1 billion.¹

Our fears have been misdirected at the cougar when they should be directed at a tiny tick.

*Cougar regulates the tick Lyme disease ecology better than chemicals and better than most other natural options. In the areas where ODFW has killed cougar are increasing reports of human exposure to Lyme disease.^{2 3} Lyme disease for dogs has also increased in these areas. Unlike the cougar, these ticks can be carried from the wilderness into your homes, your backyard, and even into your bedding. Oregonians have lost billions of dollars in our economy from tick-induced Lyme disease. Every Oregonian can be exposed to ticks that carry Lyme disease, but not every Oregonian will be exposed to a cougar, especially if we stop killing them. You need to fear that which needs to be feared, and it is a tick, not the cougar. Anyone supporting killing cougar for human safety concerns, livestock, hound hunting, or sports hunting is putting a large part of rural and urban Oregonians in harm's way.

The greatest good for the greater part of the masses is to stop killing cougar.

Funding:

Using the ODFW wolf plan for 112 wolves as an analog provides a general perspective as to the costs of managing Oregon's politically spuriousness "6,000-plus" cougars. Eighty-six percent of management operations, overhead and livestock depredation for Oregon's approximate 112 wolves are primarily funded from Pittman-Robinson and the US Fish and

¹ <https://olis.leg.state.or.us/liz/2015R1/Downloads/CommitteeMeetingDocument/58313>

² <https://www.tickcheck.com/stats/state/oregon/lyme>

³ https://www.dfw.state.or.us/resources/hunting/big_game/cougar/map.asp

Wildlife Grant Programs. Some of the grants require matching donations which are supplied by the Oregon State Lottery Fund (12.8%) and 6.6% come from ODFW license dollars. Between the years 2015 and 2017, \$793,282 was granted, covering two full-time wolf management employees, livestock wolf depredations, equipment, and ODFW's wolf monitoring program. In 2011 State Legislative process directed Oregon State Agriculture Department to pull \$100,000 from the state's general funds to implement the wolf compensation program.⁴ The math to manage livestock depredation and public safety of the computer-generated cougar model count that includes a hypothetical kitten cougar population, if compared to those needed to manage wolf numbers, would appear staggering.

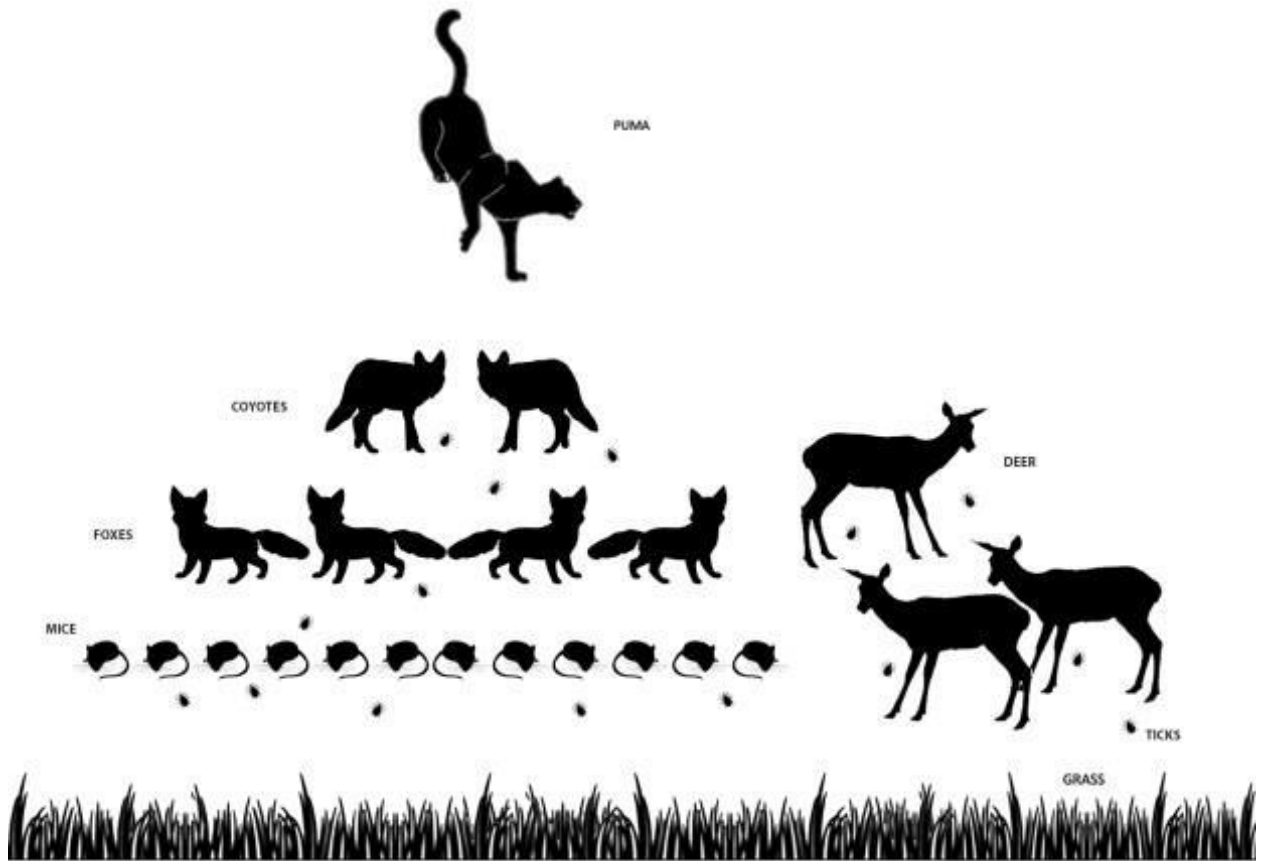
Since Oregon only has 3300 adult cougars, and if left alone would be self-regulating; where is all the extra money for the hypothetical kitten count going?

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The deterministic model includes a density-dependent factor that results in a slowing of cougar growth rates as population numbers begin to reach the maximum number the area can support (i.e. carrying capacity). That estimate of carrying capacity is the product of cougar density and habitat. The statewide maximum cougar estimate is approximately 7,609 cougars across all age classes (~3,800 adults), but this estimate could change should new information on densities or habitat become available. **The statewide model estimate for 2015 was 6,493 cougars across all age classes (~3,300 adults) (update April 2017).**

⁴ ODFW-Wolf plan 2017 pg.5



Cougar (Puma) biology tick control. <https://www.pumapix.com/project-puma-how-cougars-are-better-for-our-health/>

Figure 1. Data averaged from six studies across the West. On average about 50% of the kittens born DO NOT reach dispersal age. The range is from as high as 71.5% to a low of 21%.

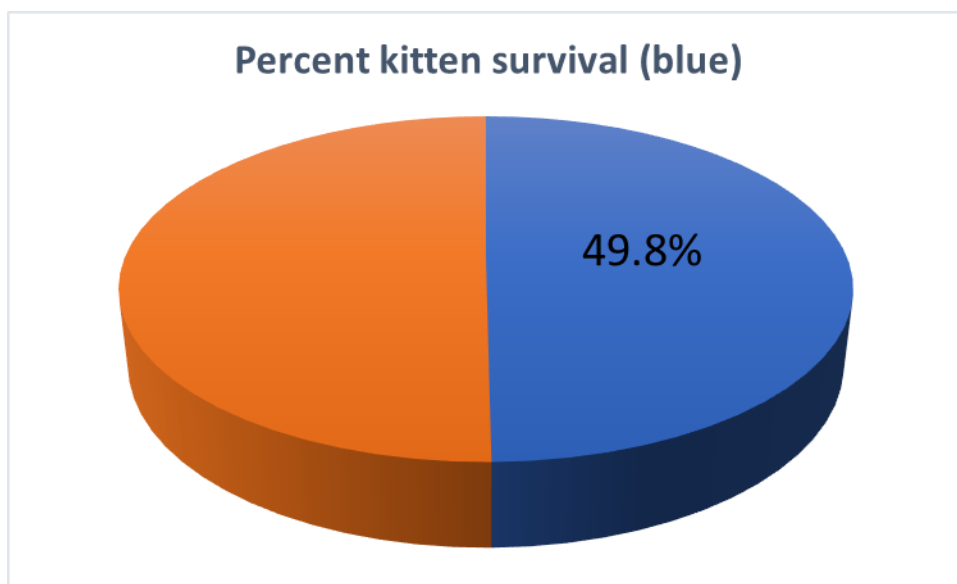


Figure 2. Three of the studies in Figure 1 come from protected cougar populations (no sport hunt). They include one from California, one from New Mexico and one from Yellowstone National Park. These can be considered to be stable populations (that is could be considered to be at carrying capacity). On average, the kitten survival is 40.3% or almost 60% of the kittens born in a saturated population (which ODFW says Oregon is approaching), will NOT reach dispersal age. ODFW is literally counting dead kittens (or soon to be) in their total population estimate.

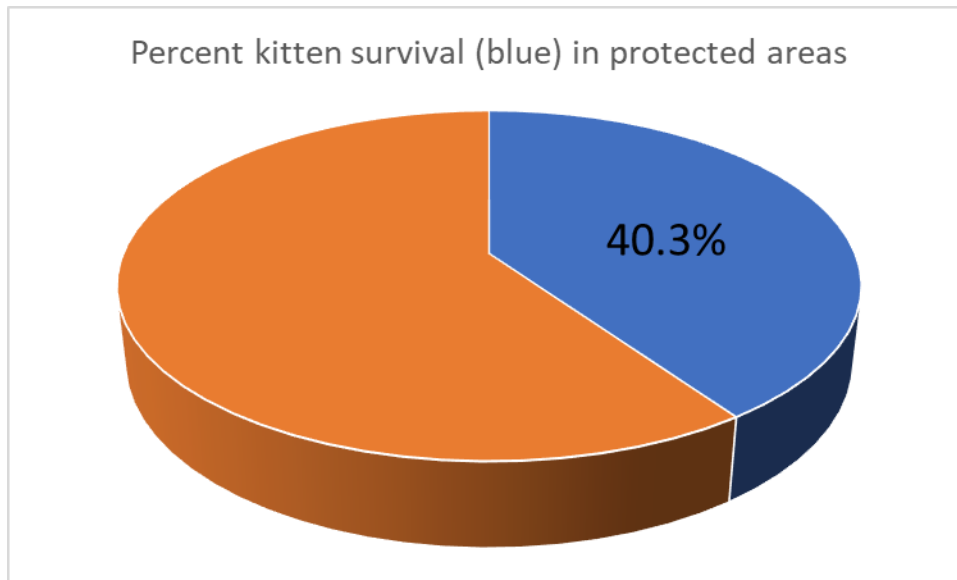


Figure 3. Of kittens that do reach dispersal age (40-50% of those born), 85% of those (90% males and 80% females) disperse from their natal area and thus should NOT BE COUNTED in the total population for that area.

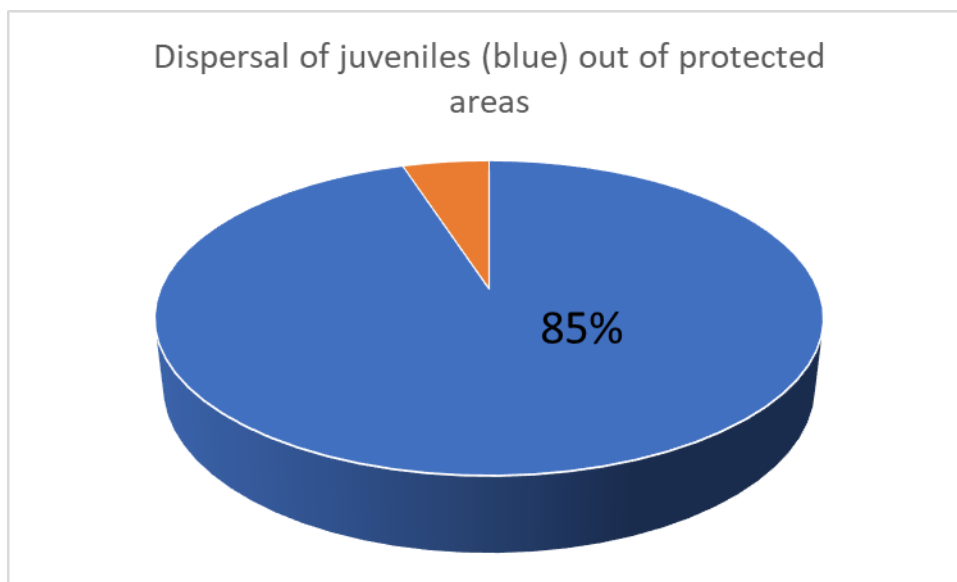
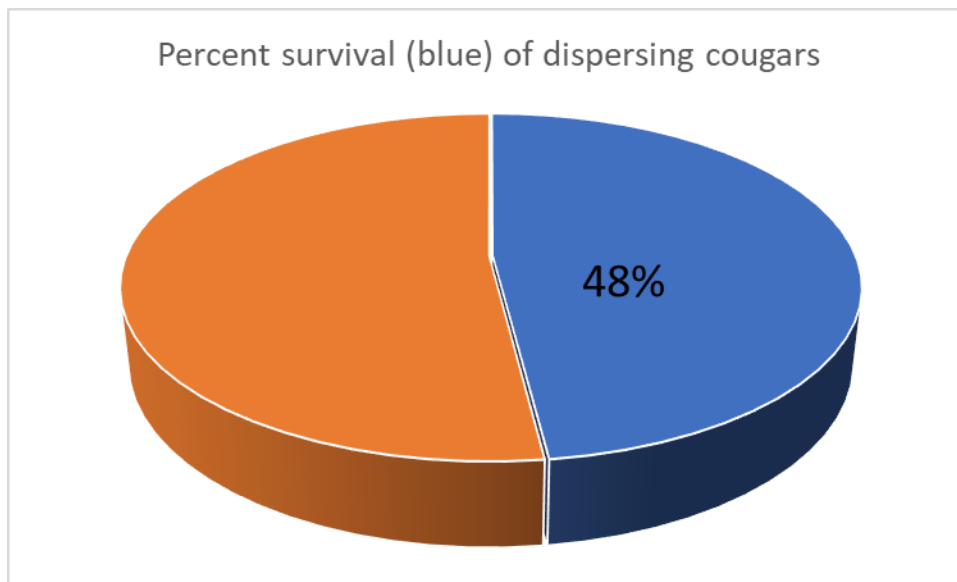


Figure 4. Of those that do disperse out of their natal area, almost 50% of them die within the first year after dispersing. This includes six studies from hunted and protected areas. In hunted areas, many of these dispersers are killed by hunters. However, hunters are actually killing “dead cougars walking” as they would probably die anyway! Of those that survive, 50% of 50% or 25%, replace those adults that would normally die. Average overall survival rate of adult cougars (male and female) in protected and unprotected areas is 79% but has been reported as low as 50%. Primary causes of non-hunting deaths are disease, interactions with other cougars, and accidents.



The conclusions to be drawn for these data from all these studies is that the ODFW estimate of the total cougar population (including resident adults, kittens, and dispersing animals) consists of approximately 50% of combined kittens and dispersing animals, 75% of which will die before becoming part of the resident population. The other 25% will basically replace normal losses of adult resident ones. As with other game animals, these expected losses should not be counted or reported as part of the actual number of cougars that are in Oregon. Based on the science, there is no reason to think that cougar populations are acting any different than any other predator population and are internally controlled by prey availability and social structure.

The data presented in the pie charts has come from Dr. John Laundre and the following sources:

Cougar population dynamics. 2010. *Chpt.5, Cougar Ecology and Conservation University of Chicago Press.*

Laundre, J.W., Hernandez, L. 2007. Numerical and demographic responses of pumas to changes in prey abundance: testing current predictions. *2007 Journal of Wildlife Management.*

Ruth, T.K. 2004. Ghost of the Rockies The Yellowstone cougar project. *Yellowstone Science.*