

# COUGAR STATUS AND TREND REPORT STATEWIDE

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## Distribution and abundance

Cougar (*Puma concolor*) occur throughout most of the forested regions of Washington State, encompassing approximately 88,497 km<sup>2</sup> or 51% of the State (Figure 1). No reliable estimate of statewide cougar abundance is available for Washington. However, cougar population size has been estimated in three project areas in Washington. Currently, the best available estimate of statewide abundance is from an extrapolation from those projects, corresponding to about 1,900 to 2,100 animals (excluding kittens).

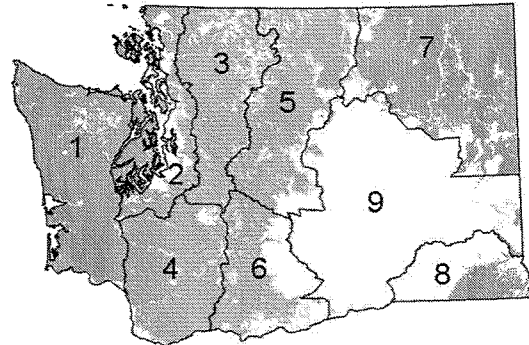


Figure 1. Distribution of cougars (gray) and cougar management units in Washington.

## Population objectives and status

The statewide cougar management goal is to maintain healthy, self-sustaining cougar populations within each cougar management unit (CMU; except CMUs 2 & 9), while minimizing the number of negative human-cougar interactions. Within the context, the population objective CMU 2 is to manage cougar populations at a level that increases public and protection of private property (Table 1; see Game Management Plan 2009-2015).

The methods for assessing cougar populations are in transition in Washington, largely due to better scientific data becoming available and relatively recent changes in hunting methodologies in portions of the State. The status of regional cougar populations in western and southeastern Washington are assessed using hunter effort and success data, median age data from harvested cougar, and percentage of females in the harvest. These are not ideal methods for assessing cougar populations

because harvest information can be misleading and generally are not sensitive to small-to-moderate changes in population levels, particularly over a short period of time (<3 years). Nevertheless, these parameters suggest cougar populations are relatively stable in western and southeastern Washington. In 2008, a cougar research project was initiated in the southeastern Washington to provide better scientific information on population size and status.

In comparison, the status of cougar populations in northeastern and central Washington are assessed using cougar demographic data from living cougar populations, as well as the parameters from harvest data. The department invests most of our monitoring efforts on adult female cougar survival (because of its importance to population growth) and population size. Ancillary data on litter size, cub survival, and adult

Table 1. Cougar population objectives for each cougar management unit in Washington, 2008.

CMU	Geographic Area	Population Objective
1	Coastal	Maintain a stable cougar population
2	Puget Sound	Manage cougar population at a level that increases public safety and protection of property
3	North Cascades	Maintain a stable cougar population
4	South Cascades	Maintain a stable cougar population
5	East Cascades North	Maintain a stable cougar population at 2007 level
6	East Cascades South	Maintain a stable cougar population
7	Northeastern	Maintain a stable cougar population at 2007 level
8	Blue Mountains	Maintain a stable cougar population
9	Columbia Basin	Unsustainable; not considered suitable cougar habitat

\* Implement cougar population reductions over a 3-year period and monitor annually.

male survival are collected on an opportunistic basis. Washington State University also has provided valuable data on population growth rates from cougar research projects in northeastern and central Washington. These data suggest that cougar populations in northeastern Washington have declined whereas populations in central Washington appear to be stable. The decline in northeastern Washington has largely been due to hunter harvest (following population objectives in the 2003 Game Management Plan).

**Hunting seasons and harvest trends**

Since the mid-1980s, the most significant change to cougar seasons has been the passage of three legislative bills. During the November 1996 general election, Washington voters passed Initiative 655 (I-655) that banned the use of hounds for hunting cougar and bobcat, and the use of bait and hounds for hunting black bear. In an effort to mitigate the anticipated decrease in cougar harvest (i.e., post I-655), permit-only seasons were replaced with general seasons, cougar seasons were lengthened from approximately 6 weeks to 7 and one-half months, and bag limit was increased from 1 to 2 cougar/year. Legislation was also passed that provided the authority to the Fish and Wildlife Commission to establish reduced costs for cougar and black bear transport tags, which they did from \$24 to \$5 in 1996 (cougar tags can also be purchased as part of a big game package). The outcome of these strategies was the number of hunters purchasing a cougar tag in Washington increased from 1,000 to ~59,000. As a result, annual cougar harvest during post I-655 years increased slightly; however, the composition of the harvest has changed dramatically (Table 2). The majority of cougar harvested pre-I 655 was done so with the aid of dogs, thus mostly males and older animals were taken. From 1996 to 2000, the majority of

cougars were harvested either as opportunistic encounters by deer/elk and cougar hunters, or by using tracking and calling techniques. These harvest methods are not as selective as using dogs. Therefore, hunters harvested more females and younger cougars (Martorello and Beausoleil 2003).

During the 2000 legislative session, the Legislature and Governor passed Engrossed Substitute Senate Bill 5001, which allowed the use of dogs to hunt cougar, but only to address a demonstrated public safety threat and only in portions of GMUs. Following the bill, the Fish and Wildlife Commission adopted what’s called public safety cougar removals. By Commission rule, permits to use dogs to hunt cougar are allocated to GMUs with 11 or more confirmed human-cougar incidents (including sightings), of which at least 4 must be threats to public safety or pets/livestock. Kills levels associated with public safety cougar removal permits have ranged from 64 cougar in 2001 to 4 cougar in 2005.

During the 2004 legislative session, the Legislature and Governor passed Substitute Senate Bill 6118, creating a pilot cougar hound-hunting program. Under the program, Commission rule establishes seasons to allow licensed hunters to hunt cougar with the aid of dogs, but only for three years and only in Chelan, Okanogan, Ferry, Stevens, and Pend O’reille counties. Under this legislation, the Fish and Wildlife Commission established four hunt zones across the five county area, each with a total kill quota and a female subquota; the kill season remains open for a zone until either the total kill quota or female subquota is reached, at which point the season becomes a pursuit-only season (unlawful to kill cougar).

During the 2008 legislative session, the Legislature and Governor passed ESHB 2438, which extended the pilot

Table 2. Cougar harvest statistics by CMU, WDFW.

CMU	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	18	34	15	24	14	18	26	7	18	17
2	10	17	8	2	13	11	11	12	12	11
3	19	11	15	3	4	3	7	9	7	6
4	15	20	12	19	28	25	23	11	16	12
5	42	64	42	46	52	45	42	64	49	21
6	14	16	14	20	13	10	13	14	21	16
7	111	115	90	86	65	75	54	65	41	41
8	18	19	13	18	14	11	14	9	14	7
9	5	4	1	4	5	4	10	10	10	11
	252	300	210	222	208	202	200	201	188	142

cougar hunt 3 additional years. The bill also provided a mechanism for other counties to request inclusion into the pilot program. In 2008, only Klickitat County opted into the pilot hound hunt program.

Also in 2008 and the Department adopted the 2009-2015 Game Management Plan, which includes cougar as a species chapter. The cougar plan identifies the female harvest guidelines to achieve the population objective in each CMU (Table 3).

### Human conflict

The trend in confirmed human safety incidents, and pet and livestock depredations has decreased since the recorded high of 936 in 2000 and is now at the lowest documented level (Figure 2). However, the levels of interactions continue to be problematic in some areas (Table 4). It's important to point out that the management actions the Department takes to manage human-cougar conflict don't necessarily equate to the observed trends in confirmed interactions. Several factors likely impact the rate of human-cougar interactions, such as changing public attitudes,

significant media events, cougar population size, etc.

### Management conclusions

Washington has experienced wide fluctuations in cougar harvest methods, cougar population size, and even cougar management objectives. With such a dynamic management arena, the importance of scientific data for guiding management decisions cannot be overstated. There continues to be a critical need for better information of cougar behaviors related to human-cougar interactions, impacts of population manipulations to conflict levels, and predator-prey interactions.

### Literature cited

- Martorello, D. A., and R. A. Beausoleil. 2003. Characteristics of cougar harvest with and without the use of dogs. Pages 129-135 in S.A. Becker, D.D. Bjornlie, F.G. Lindzey, and D.S. Moody, eds. Proceedings of the Seventh Mountain Lion Workshop. Lander, Wyoming, USA

Table 3. Cougar harvest statistics, 2009, WDFW.

CMU	General Season			Special Permit Hunts			Depredation/Kill Permit			Other		
	M	F	Unk	M	F	Unk	M	F	Unk	M	F	Unk
1	3	10	0	0	0	0	3	1	0	0	0	0
2	4	5	0	0	0	0	0	1	0	1	0	0
3	5	1	0	0	0	0	0	0	0	0	0	0
4	7	3	1	0	0	0	0	0	0	0	1	0
5	1	6	0	6	5	0	2	1	0	0	0	0
6	5	6	0	4	0	0	0	1	0	0	0	0
7	6	11	0	10	7	0	1	2	0	1	3	0
8	2	2	1	2	0	0	0	0	0	0	0	0
9	5	5	0	0	0	0	0	0	0	0	1	0
Total	38	49	2	22	12	0	6	6	0	2	5	0

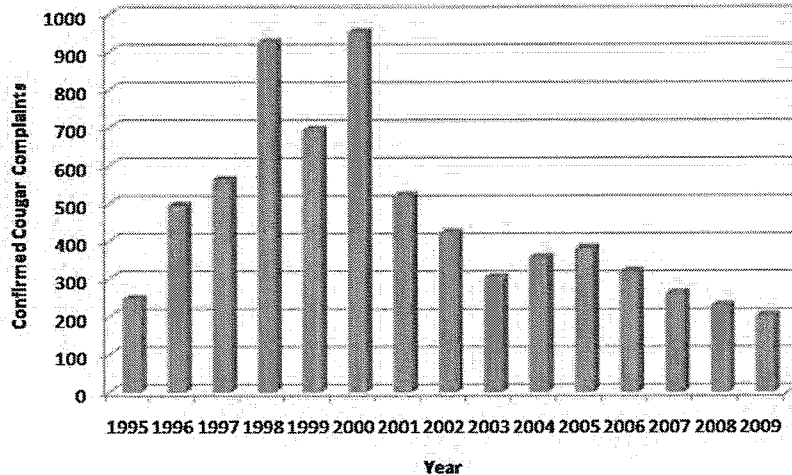


Figure 2. Number of confirmed human-cougar complaints, 1995-2009, WDFW.

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County	2003	2004	2005	2006	2007	2008	2009
Adams	0	0	0	0	0	1	0
Asotin	0	0	2	4	0	0	0
Benton	0	0	3	0	0	0	0
Chelan	8	11	7	9	13	5	8
Clallam	9	23	19	9	7	6	5
Clark	5	10	25	18	21	12	5
Columbia	1	2	2	2	0	8	3
Cowlitz	2	3	10	7	3	3	4
Douglas	3	6	6	5	2	2	1
Ferry	23	21	23	3	6	13	3
Franklin	0	0	2	0	0	1	0
Garfield	0	0	7	5	0	0	1
Grant	0	0	4	6	2	5	7
Grays	0	13	7	9	3	9	3
Jefferson	8	9	1	1	2	13	24
King	29	37	31	23	25	6	9
Kitsap	7	11	7	1	2	5	3
Kittitas	4	2	6	5	2	1	11
Klickitat	8	6	20	19	38	18	6
Lewis	5	12	9	20	5	9	9
Lincoln	4	6	7	7	1	2	6
Mason	0	1	1	1	4	7	6
Okanogan	92	50	64	46	19	15	21
Pacific	0	2	1	1	1	1	1
Pend Oreille	2	4	0	6	7	10	3
Pierce	39	27	13	13	25	12	4
Skagit	16	11	18	16	10	9	6
Skamania	0	7	2	1	4	3	2
Snohomish	9	26	17	9	8	5	6
Spokane	29	28	24	29	10	14	15
Stevens	20	34	20	25	20	17	24
Thurston	5	2	2	0	3	6	4
Wahkiakum	3	1	1	1	0	1	0
Walla Walla	3	0	6	10	9	5	0
Whatcom	10	16	26	6	3	13	1
Whitman	3	2	1	2	1	0	0
Yakima	3	0	6	3	6	2	2
Unknown cty	0	3	0	0	1	3	0
<b>TOTAL</b>	<b>350</b>	<b>386</b>	<b>400</b>	<b>322</b>	<b>263</b>	<b>242</b>	<b>203</b>