

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 about half of the State (Fig. 1). There is no reliable estimate of statewide cougar abundance. However, cougar population size has been estimated in three project areas in eastern Washington; extrapolation from those projects corresponds to roughly about 1,800 to 2,100 animals (excluding yearlings and kittens) statewide.

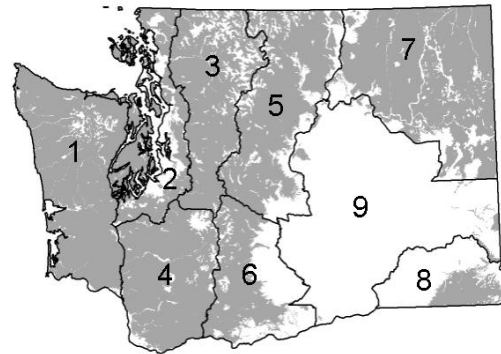


Figure 1. Distribution of cougars (gray) and cougar management units in Washington.

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; see 2009 Game Management Plan), while minimizing the number of negative human-cougar interactions. The methods for assessing cougar populations are improving in Washington, largely due to better scientific data becoming available. The status of cougar populations in Washington are assessed using cougar demographic data from living cougar populations in five study sites. The department invests most of its 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 male survival are collected on an opportunistic basis. Washington State University and University of Washington also have provided valuable data on population growth rates from cougar research projects in Washington. These data suggest that cougar populations appear to be stable throughout most of Washington.

Hunting seasons and harvest trends

With the completion of several cougar research projects and the findings from those studies, the Department conducted a comprehensive assessment of cougar hunting season structure in 2011 with research partners from University of Washington and Washington State University. Following a science review the proposed re-vamped cougar season framework was circulated with the public for input through the Fish and Wildlife Commission process and Game Management Advisory Council. The scientific rationale and new cougar season framework was also recently published (Beausoleil et al. 2013).

Table 1. Cougar population objectives for each cougar management unit in Washington, 2009.

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

Under the new framework, the Department manages for stable cougar populations in all areas of the state (except the Columbia Basin and Puget Sound areas where the habitat is not suitable for cougar; Game Management Plan 2008). To achieve that objective, the Department divided the state into 49 cougar population management units (PMUs) and applied a 12-16% harvest guideline to each PMU based on the estimated population within each PMU (excluding kittens; not applied to Columbia Basin and Puget Sound PMUs).

During the 2014-2015 cougar seasons, the Department implemented two any weapon general seasons: an early season from September 1 to December 31, 2014 followed by a late season from January 1 to March 31, 2015. Each PMU has a harvest guideline that corresponds to a 12-16% harvest rate of the estimated population within each PMU. Only general season harvested cougar counted toward the harvest guideline. If a PMU harvest guideline was reached during the late season, the Director (under existing Director Authority) considered closing the season. During the late season cougar hunters could hunt in any PMU until the harvest guideline was reached and the Director closed the seasons or March 31, whichever occurred first.

Based on the summation of the harvest guidelines for all 49 PMUs, the total allowable statewide cougar harvest was 205-277. The total statewide cougar harvest was 158 in 2014 (Table 2).

Human conflict

The general 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. It is important to point out that the management actions the Department takes to manage human-cougar conflict do not 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 and structure, 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.

Literature Cited

Beausoleil, R. A., G. M. Foehler, B. T. Maletzke, B N. Kertson, and R. B. Weilgus. 2013. Research to regulation: cougar social behavior as a guide for management. *Wildlife Society Bulletin* 37(3): 680-688.

Table 2. Cougar harvest guidelines and total harvest by hunt area, 2012-2013, 2013-2014, and 2014-2015 seasons.

Hunt Area	2012-2013 Season			2013-2014 Season		2014-2015 Season		3-year Mean Harvest
	Harvest Guideline	Harvest Mortality	Hunt area closed during late season?	Harvest Mortality	Hunt area closed during late season?	Harvest Mortality	Hunt area closed during late season?	
GMU 101	7-9	1	No	5	No	8	Yes	5
GMU 105	2	2	Yes	2	Yes	4	Yes	3
GMUs 108, 111	5-6	6	Yes	6	Yes	7	Yes	6
GMU 113	4-6	3	No	5	Yes	6	Yes	5
GMU 117	6-8	9	Yes	12	Yes	12	Yes	11
GMU 121	5-6	7	Yes	5	Yes	7	Yes	6
GMUs 124, 127, 130	7-9	8	Yes	5	Yes	8	No	7
GMUs 133, 136, 139, 142, 248, 254, 260, 262, 266, 269, 272, 278, 284, 290, 330, 334, 371, 372, 373, 379, 381	None	11	No	13	No	10	No	11
GMUs 145, 166, 175, 178	3-4	7	Yes	6	Yes	7	Yes	7
GMUs 149, 154, 157, 162, 163	4-6	10	Yes	10	Yes	3	No	8
GMUs 169, 172, 181, 186	3-4	4	Yes	4	Yes	1	No	3
GMU 203	4-6	0	No	0	No	0	No	0
GMU 204	6-8	4	No	5	No	1	No	3
GMUs 209, 215	4-5	4	Yes	2	No	3	No	3
GMUs 218, 231	4-6	2	No	3	No	2	No	2
GMU 224	2-3	1	No	2	Yes	1	No	1
GMUs 233, 239	3-4	2	No	0	No	1	No	1
GMUs 242, 243	4-6	4	Yes	4	Yes	3	No	4
GMUs 244, 246, 247	5-6	3	No	3	No	1	No	2
GMUs 245, 250	5-6	2	No	0	No	4	No	2
GMUs 249, 251	5-6	6	Yes	6	Yes	3	No	5
GMUs 328, 329, 335	6-8	10	Yes	9	Yes	7	No	9
GMUs 336, 340, 342, 346	5-7	8	Yes	5	Yes	6	No	6
GMUs 352, 356, 360, 364, 368	5-7	6	Yes	5	Yes	6	No	6
GMUs 382, 388	3-4	4	Yes	10	Yes	1	No	5
GMU 407	None	2	No	1	No	2	No	2
GMUs 418, 426, 437	11-15	1	No	2	No	0	No	1
GMUs 448, 450	9-13	0	No	0	No	0	No	0
GMU 454	None	0	No	2	No	3	No	2
GMU 460	5-7	2	No	1	No	0	No	1
GMUs 466, 485, 490	2-3	0	No	2	Yes	0	No	1
GMUs 501, 504, 506, 530	7-10	1	No	1	No	1	No	1
GMUs 503, 505, 520, 550	6-8	0	No	2	No	7	No	3
GMUs 510, 513	3-4	0	No	1	No	2	No	1
GMU 516	3-5	1	No	3	Yes	3	No	2
GMUs 522, 524, 554, 556	3-4	1	No	0	No	0	No	0
GMU 560	5-6	1	No	4	No	1	No	2
GMUs 564, 568	3-4	2	No	4	Yes	0	No	2
GMU 572	3-4	1	No	2	No	1	No	1
GMU 574, 578	3-5	3	Yes	5	Yes	4	No	4
GMUs 601, 602, 603, 612	5-7	1	No	3	No	1	No	2
GMUs 607, 615	4-5	0	No	1	No	0	No	0
GMUs 618, 636, 638	4-5	2	No	4	Yes	4	No	3
GMUs 621, 624, 627, 633	None	2	No	5	No	1	No	3
GMUs 642, 648, 651	6-8	10	Yes	6	Yes	6	No	7
GMUs 652, 666	None	2	No	1	No	1	No	1
GMUs 653, 654	4-6	1	No	1	No	1	No	1
GMUs 658, 660, 663, 672, 673, 681, 684, 699	9-12	1	No	1	No	1	No	1
GMU 667	3-4	1	No	3	Yes	7	Yes	4
Total		159		182		158		166

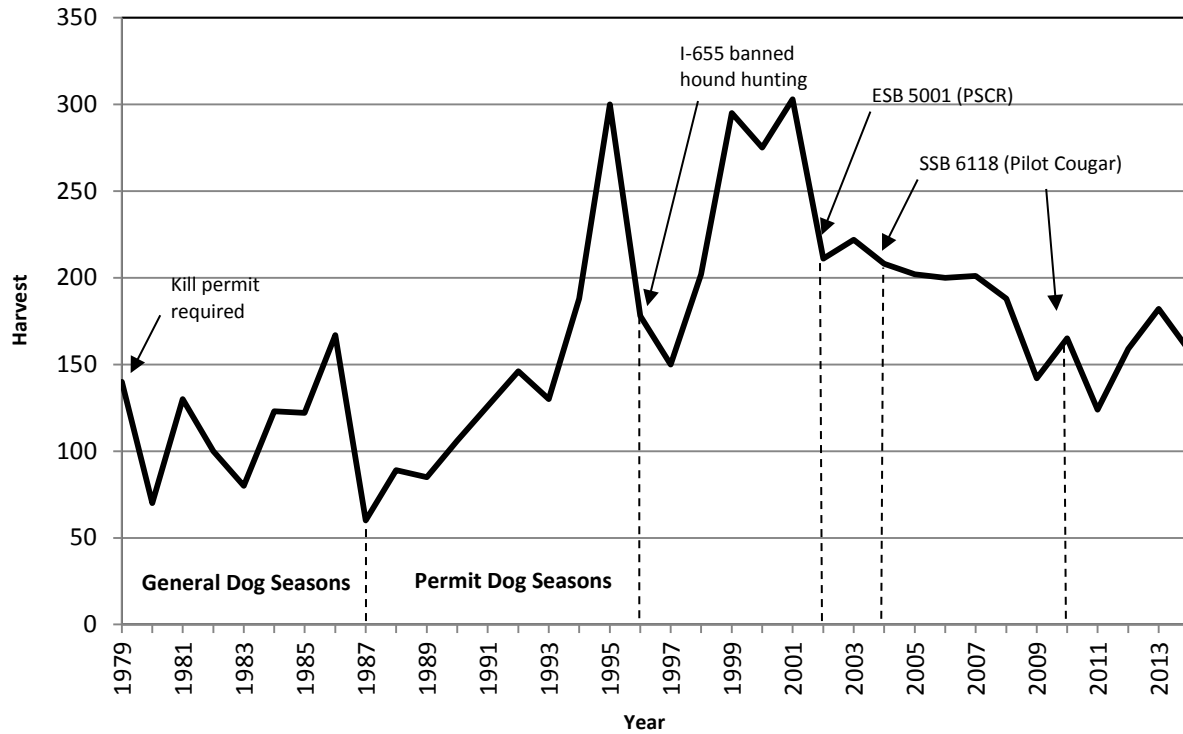


Figure 2. Trend in cougar harvest and hunting season structure, 1979-2014.

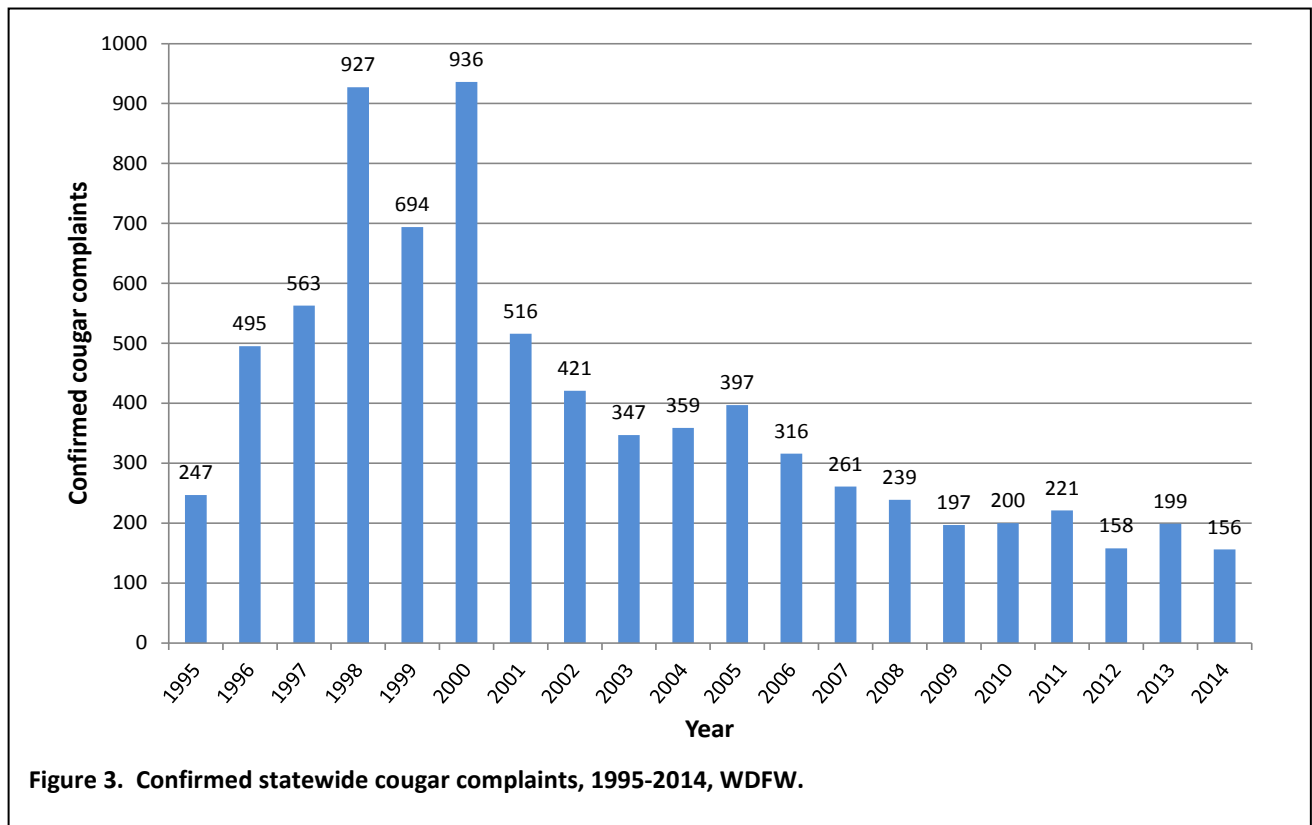


Figure 3. Confirmed statewide cougar complaints, 1995-2014, WDFW.