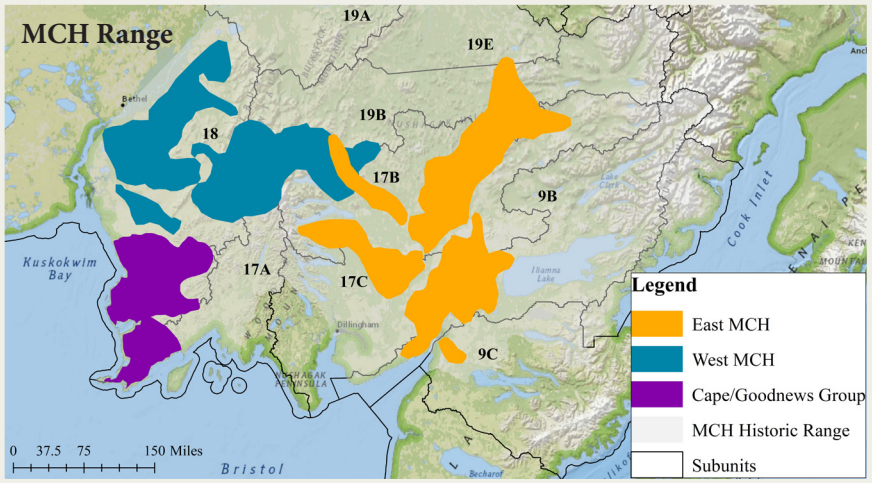
Mulchatna Caribou Herd News

The Mulchatna caribou herd (MCH), named for its traditional calving ground in the upper Mulchatna River region in Game Management Unit (Unit) 17B, is the largest caribou herd in southwest Alaska and was once one of the largest herds in the state. Throughout most of the year, Mulchatna caribou are spread out in several groups across portions of Units 9, 17, 18, and 19. The MCH is comprised of two main subgroups: the East-MCH and the West-MCH, and the smaller Cape/Goodnews subgroup. Alaska Department of Fish & Game (ADF&G) biologists are monitoring the population, composition, and recovery of the herd.

In this newsletter:



Population Survey

After ten years of below-objective population estimates, the 2025 survey showed continued growth.

Population surveys are important for herd management and ADF&G biologists have conducted annual population surveys since 2012. After calving between May and June, much of the herd comes together in large groups, called **aggregations**. When the herd forms aggregations, biologists can conduct aerial population surveys. These surveys are used to monitor **abundance** (number of caribou in the herd) over time.

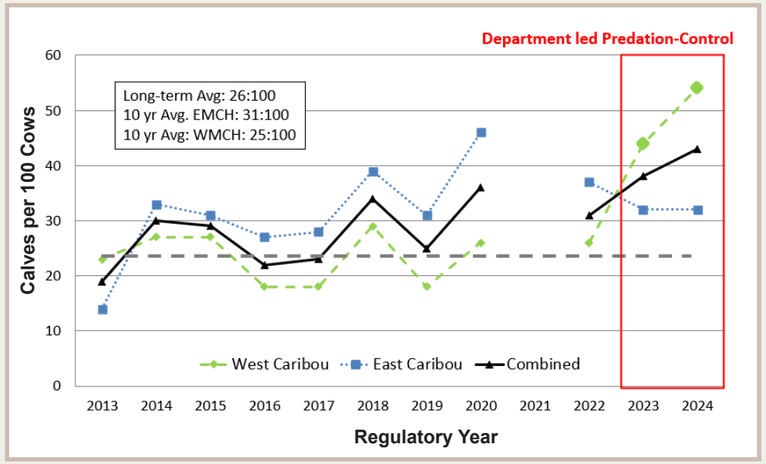
To conduct a population survey, biologists first locate aggregations by tracking radio and GPS-collared caribou. Then, large aggregations are photographed using handheld or aircraft-mounted cameras. The photographed caribou are added up to form the **minimum count** for the herd. Because this method misses some caribou that are not in the aggregations, a statistical analysis may be used to calculate a **population estimate** beyond the minimum count.

The 2025 MCH minimum count is 13,475 (6,902 East-MCH and 6,573 West-MCH), an increase of 8.7% over the 2024 minimum count. The herd aggregated enough to allow biologists to calculate a population estimate. The 2025 population estimate is 16,276 (8,684 East-MCH and 7,592 West-MCH), an increase of 15.7% over the 2024 estimate and a 30.1% increase since department-led intensive management efforts began in 2023.

Composition Survey

MCH calf composition ratio is steady in the East-MCH and increased in West-MCH.

In addition to monitoring herd abundance, MCH managers monitor **herd composition**. Herd composition is measured as a ratio of bulls-to-cows, and a ratio of calves-to-cows. The MCH composition objective as stated in the Intensive Management (IM) Plan is 35 bulls per 100 cows and 30 calves per 100 cows.



In October 2024, biologists conducted aerial composition surveys. Using radiocollar tracking to locate groups, biologists surveyed approximately 35% of the total herd. The 2024 MCH bull-to-cow composition was roughly equal in the east and west subgroups, and the overall bull-to-cow ratio was 26 bulls per 100 cows. The 2024 MCH calf-to-cow ratios differed significantly between the east and west subgroups. The East-MCH calf-to-cow ratio was 32 calves per 100 cows and the West-MCH calf-to-cow ratio was 54 calves per 100 cows. The improved calf-to-cow ratio in the West-MCH is the highest recorded since 1999, and suggests a positive response to the 2023 and 2024 predator control program targeting bears and wolves on the West-MCH calving grounds. The combined 2024 MCH calf-to-cow ratio was 43 calves per 100 cows, surpassing the intensive management objective by 13%.

Research Brief

ADF&G biologists are researching why the herd is experiencing a slow recovery following a substantial population decline. Current research is assessing how nutrition affects reproduction, calf recruitment, and survival of adult cows. Biologists continue to monitor diseases in the herd and study impacts of predation on calf survival.

Habitat & nutrition studies

MCH habitat and nutrition research suggests habitat quality is not limiting reproduction.

The high abundance of caribou in the 1990s likely decreased range quality and available nutrition, triggering the initial decline of the herd. To understand the quality of the range and nutrition available to the herd currently, biologists are assessing body condition of Mulchatna caribou. Biologists are particularly interested in the body condition of breeding-age cows because an increase in reproduction and especially **recruitment** (calf survival to greater than one year) is necessary for the herd to grow.

ADF&G biologist John Crouse uses an ultrasound machine to measure body fat in a sedated MCH cow.

Body condition, an estimate of total body fat (%) and total body protein (kg), is assessed using ultrasound measurements and a body condition score calculation to determine body fat and protein stores. Body fat and protein stores are an integrated measure of the animal's nutritional requirements and nutrient intake. In this way, body condition can indicate whether the range is providing adequate nutrition for survival, growth, fattening, and reproduction.

Pregnant and lactating cows have elevated nutritional requirements because they require more energy and protein to grow calves and produce milk. Research of the MCH since 2023 has revealed that although lactating cows are in moderate to poor body condition in autumn, their body condition improves overwinter. Research has also shown that nutrition is adequate to support high rates of pregnancy (94% and 96% in 2024 and 2025 respectively) and high rates of adult female survival. These preliminary results suggest that nutrition is not having population-level effects despite constraining fat gain during summer. Biologists will continue this nutrition study through 2026.

Understanding brucellosis

Despite evidence of past and current brucellosis infections, data does not show impact on MCH reproduction at this time.

Brucella suis biovar 4 is a bacteria that can cause the disease **brucellosis** in caribou. Brucellosis has been detected in the MCH since at least 2015. Brucellosis can reduce pregnancy rates, live births, and calf survival. Impacts from brucellosis are typically observed in first-time mothers and when the infection is first introduced to a herd. Most recent data show high rates of pregnancy in the MCH. Data also show high rates of calf survival among calves born to mothers with antibodies to *Brucella* from an earlier infection. These data indicate that brucellosis is not having a significant impact on reproduction in the herd at this time.

Mulchatna caribou herd calf.

Monitoring predation impacts

Evidence suggests predation of calves is the primary limiter of the herd's recovery.

Bears and wolves have been identified as significant calf predators. When predation on calves is high, fewer calves survive to breeding age. This can limit the ability of the herd to grow. Research presented to the Board of Game in January 2022 indicated that between 2011 and 2021 various predators, including wolves and mainly brown bears, were responsible for nearly 90% of newborn calf deaths during the first two weeks of life.

Calf survival is an important metric for monitoring recovery of the herd and the effectiveness of the **Intensive Management (IM) Plan** and predator control program (more information about the IM plan on page 4). Composition surveys are conducted in the fall, which also allows biologists to estimate calf survival to approximately five months of age. Ongoing calf monitoring in 2024 showed that where predation control occurred on the West-MCH calving grounds, calf survival increased. During two years of predation control, calf survival to five months was the highest recorded during fall composition surveys since 1999.

To learn more about Mulchatna caribou herd history and research, Visit **adfg.alaska.gov** and search "caribou resources."

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Intensive Management Plan

Intensive management is Alaska law that may be implemented when specific populations cannot be maintained by standard management practices alone.

The MCH reached approximately 190,000 animals at its peak in 1997 and provided as many as 4,770 caribou per year for the subsistence needs of more than 48 local communities. In the late 1990s and early 2000s, the herd began to decline. By 2019, the population declined by 94% to about 13,000 animals, well below the population objective of 30,000 to 80,000 caribou. The 2024 population estimate was 14,846 caribou. The MCH has been closed to all hunting since 2021.

In response to herd decline, in 2011 the Board of Game (board) designated the MCH Predation Management Area (MCHPMA) and directed ADF&G to implement an Intensive Management (IM) Plan. In 2022, the board approved and directed ADF&G to implement a revised Intensive Management Plan to increase the abundance of the MCH. In July 2025, the board voted to amend the Mulchatna caribou herd intensive management plan to allow the department to lethally remove black and brown bears (in addition to wolves) in a specific area of the herd's range.

To learn more about the MCH IM Plan go to: **adfg.alaska.gov** and search "intensive management."

The Alaska Department of Fish and Game mourns the passing of Dillingham-based Area Wildlife Biologist John Landsiedel. John's work with the Mulchatna caribou herd earned a Division of Wildlife Conservation Director's Award in 2024.

His dedication to Alaska's wildlife leaves a lasting legacy. We are grateful for his service.

Contact a wildlife biologist near you:

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Bethel ADF&G: (907) 543-2433
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