ADF&G Responses to Mat-Su Borough Fish & Wildlife Commission Questions

1. **What were the dates for the most recent moose census and/or survey?**
    - Game Management Unit 14A - 2023
    - Game Management Unit 14B - 2021
    - Game Management Unit 16A - 2023
    - Game Management Unit 16B - 2026
2. **What is the most recent data for moose populations?**
    - Game Management Unit 14A (2023) -
        - Population estimate: 6,657 (Population objective 6,000–6,500)
        - Bulls per 100 cows = 30
        - Calves per 100 cows = 28
    - Game Management Unit 14B (2021) -
        - Population estimate: 2,463 (Population objective 2,500–2,800)
        - Bulls per 100 cows = 22
        - Calves per 100 cows = 22
    - Game Management Unit 16A (2023) -
        - Population estimate: 3,589 (Population objective 3,500–4,000)
        - Bulls per 100 cows = 19
        - Calves per 100 cows =21
    - Game Management Unit 16B (2026) -
        - Population estimate: 6,413 (Population objective 6,500–7,500)
        - Bulls per 100 cows (from 2022 survey) = 24
        - Calves per 100 cows (from 2022 survey) = 10
3. **How do you best do these moose surveys in low snow years?**

    ADF&G does not survey when snow conditions are poor as it would likely result in a low estimate. Complete snow coverage of the ground is required for a survey.

ADF&G survey Game Management Units on a rotating basis as funding, pilots, observers, and weather are limiting factors to how often areas may be surveyed.

4. Nelchina caribou – status report on the herd, what are we seeing in habitat studies and what have we learned about ability for the herd to rebound based on experience with other herds.

- There is an hour-long Nelchina caribou herd update on our YouTube channel: https://www.youtube.com/watch?v=U-JdITyQepc

- No state hunt opportunity is offered for 2026/27 season; exploring limited, bull-only state opportunity for RY27.
- Spring 2025:
  - High overall parturition rates and 72% calf survival from birth through the end of September.
  - Spring of 2024 and 2025 combined: 94 neonates collared; 26 died (28%)
    - Of that 28% mortality:
      - 4% was starvation
      - 4% unknown predators
      - 8% wolverine
      - 19% wolves
      - 23% brown bears
      - 42% eagles.
- Summer 2025:
  - The minimum count of 13,937 caribou; expanded (Rivest) estimate is 14,472 (+/- 1,358)
  - Composition survey
    - 59 calves per 100 cows
    - 32 bulls per 100 cows
- October 2025:
  - Fall composition survey
    - 55 calves per 100 cows
    - 28 bulls per 100 cows
  - Fall estimate: minimum count: 13,397, expanded (Rivest) estimate: 13,911.
  - ADF&G deployed 15 VHF collars on female calves, plus there were still 45 neonate collars on air to track overwinter survival.
    - 2024 and 2025 had the heaviest calves since 2014 and largest growth metrics since 2015. These are good signs for recruitment potential and health measures compared to the past decade.
  - ADF&G captured 32 adult cows to begin a research project tracking body condition from fall to spring, as well as reproductive success.
- Winter 2025/26 (so far)
  - Adult and calf survival is promising so far.

- Roughly 2/3 of the herd wintered in 13A (Gunsight to the big bend of the Susitna River to Crosswind Lake).
- Roughly 1/3 of the herd wintered in Game Management Unit 11 (Slana to Copper Lake, around to the west and down to the Klawasi).

5. Same questions as #4, but for Dall sheep.

- A sheep update by Tom Lohuis and Brad Wendling during 2026 Region 2 BOG meeting is available online at: https://www.youtube.com/watch?v=lPbzw8lnmfQ (video time 5:50 – 7:53).
- Key take aways from the video
  - There is a decline in Dall sheep across North America not due to predation.
  - This decline is being documented by ADFG staff, Alaska National Park staff, and wildlife managers in Canada.
  - Documented declines in Alaska range from 40–70% from the last recorded peak of each mountain range.
  - The number of lambs counted during minimum counts is much lower from 2020–2024.
  - This coincides with rain on snow events during the winters of 2020–2021 where high snowfall was followed by heavy rainfall which quickly froze, excluding sheep from forage, causing a large die off.
  - Lambing was also poor in 2013–2014 in parts of the state.
  - Sheep hunters declined across Alaska from ~3000 in 2000 to ~1500 in 2024.
  - Sheep harvest also declined across Alaska from ~800 in 2000 to ~400 in 2024.

6. Introduction of new game biologist. Are there management things we could do better in the Mat-Su?

- The Mat-Su borough has authority over land and roads which both can be tailored to aid in wildlife management and conservation.
- Road crossings constructed with animal crossings such as for moose can reduce moose vehicle collisions and increase habitat connectivity. Under passes and over passes are both good options. Concentrating on areas where accidents most frequently occur may help more than random placement. ADFG has data to show these areas if the Borough is interested and has funding to undertake such projects.
- Road construction design and improvement can also help reduce moose vehicle collisions such as roads that are even with the surrounding land to

increase visibility of moose, decreased sinuosity, wide right-of-way that is regularly cleared of brush to allow motorists to spot moose more easily, and roadside lighting to increase the chances of motorists seeing moose at night.

- Habitat improvement such as prescribed burns, browse/vegetation crushing, or clearing mature forests to reset succession to an earlier stage provides new growth which can benefit grouse, moose, and several small and non-game species.

7. What are the most common concerns and questions about wildlife you hear from Mat-Su residents?

In my time here since January, most public inquiries were related to human-moose conflicts. Folks in the valley are very interested in moose management, population and trend information.

8. How soon after the implementation of Same-Day-Airborne (SDA) predator control does the Department expect to see measurable changes in moose calf recruitment or overall population growth in GMUs 13 and 16? What specific indicators or benchmarks will be used to evaluate success?

- ADF&G doesn't have a specific timeline that we can expect to see an increase in moose calf recruitment or the overall moose population. ADF&G implements changes knowing that we must monitor to see if there is any measurable effect on either metric. Examples across the state differ where intensive management was implemented and the prey species did not increase or did so slowly, or where following implementation of intensive management there was an increase in moose calf production and later the population. Habitat is key. If the habitat cannot support a larger moose or caribou population, no amount of predator control can change the population trajectory until the habitat recovers and is able to support such a change.

- When intensive management is considered, a feasibility assessment is created to determine whether Intensive management is appropriate to meet the needs of the people and animals of the area in question provided If IM activities are authored by BOG then an operational plan is developed define goal and objectives as well as the mechanism to achieve those aims as well as triggers to terminate or suspend the program. Both GMU 13 and 16 have these plans to benefit moose.

- For Game Management Unit 16 (from the operational plan):
    - The decision framework to evaluate, suspend, or terminate predation control will be based on achieving both predator and prey population and harvest objectives as follows:
        - When the mid-point of intensive management objectives for the moose population are reliably achieved;
        - When wolf population surveys or accumulated information from permittees indicate the need to avoid reducing

numbers below the midpoint of the intensive management objective of 35-55 wolves;

- When black bear population inventories or accumulated information from permitttees indicate the need to avoid reducing numbers below the management objective of 700 black bears;
- When brown bear population inventories or accumulated information form permittees indicate the need to avoid reducing numbers below the management objective of 375 brown bears;
- If after 3 years the harvest of predators is not sufficient to make progress towards the intensive management objectives for wolves, black bears, or brown bears; the program may be suspended for one or more of the predator species.

- Predation control activities will be suspended or modified:
  - When the moose population can be reasonably maintained at the midpoint of the IM population objectives, and moose harvest can be reasonably maintained within the IM moose harvest objectives;
  - IF after 3 years, there is no indication of any increase in the total number of moose in the assessment area;
  - When wolf reduction and population objectives have been met or after 3 years if progress towards that objective indicates that objectives cannot be achieved;
  - When bear reduction and population objectives have been met or after 3 years if progress towards that objective indicates that objectives cannot be achieved.
  - When declining trends in twinning rate or other index of nutritional status are observed and indicate objectives may be too high.

- For Game Management Unit 13 (form the operational plan):
  - Predation Control:
    - When the mid-point of intensive management objectives for the moose population are reliably achieved;
    - When wolf inventories or accumulated information form permittees indicate the need to avoid reducing wolf numbers below the management objective of 135 wolves;
    - If after 3 years the harvest of wolves is not sufficient to make progress towards the intensive management objectives for wolves;

- Predation control activities may be terminated:
  - If after 3 years, there is no detectable incres3e in the total number of moose in the control area;
  - If after 3 years, any measurable consistent with significant levels of nutritional stress in the moose population are identified;
  - When moose population and harvest objectives within the Unit 13 predation control area have been met.

9. Under what conditions would predator control efforts in GMUs 13 and 16 be expanded, modified, or reduced?

See answer to question 8 above.

10. If moose population levels or calf recruitment do not trend as desired under the current liberal general season regulations, does the Department anticipate considering the implementation of bear predator control in GMU 16?

- The Department has implemented predator control for both black and brown bears in the past and found that the methods allowed did not decrease either black or brown bear populations to the objective. The following are excerpts from the Game Management Unit 16 Intensive Management Operational Plan:
- In March 2007, the board reauthorized the predation control IM plan for a period of 5 years, from July 1, 2007 through June 30, 2012. Using the extended boundaries of Unit 16B and western Unit 16A, the Board added a black bear control program to the existing plan. Under black bear control the public could get a permit to take an unlimited number of black bears, cubs and sows with cubs, and allowed for the baiting of black bears in the fall (August 10–October 15). At this time, approximately 1,500 black bears were estimated in Unit 16B with an objective to reduce the population by 60%. This created a management objective of 600 black bears; however, more accurate population data became available later in 2007 and the population was refined to 3,200–3,800 black bears and 625–1,250 brown bears. An 80% reduction at the midpoint of the range at those population levels would result in 700 black bears remaining (removing 2,800) while a 60% reduction in brown bears would result in 375 remaining (removing 560).
- In March of 2009, the board added the snaring of black bears, made baiting and snaring available for the entire summer, allowed young hunters (10–15 years of age) to take bears under the adults permit, and allowed the use of helicopters to access black bear bait and foot-snaring camps. The board also updated the predator and prey population estimates as follows:
  - 2008 moose population estimate for mainland Unit 16B: 4,063–4,323 moose

- 2007 brown bear population estimate for mainland Unit 16B: 625–1 ,250 brown bears
- 2007 black bear estimate for mainland Unit 16B: 3,200–3,800 black bears

- In spring of 2010 the department conducted a calf mortality study in the southern portion of Unit 16B near the village of Tyonek. A total of 54 moose calves were collared within 48 hours of birth as identified by telemetry flights. Approximately 80% of the calves were killed within the first 6 months of life. Of those killed, 23 (54%) were taken by brown bears, 9 (21%) of the calves were taken by black bears, 6 (15%) of the calves were taken by an unknown predator, and 4 (10%) were capture related.

- In March 2011, the board reauthorized the IM plan for Unit 16B for a period of 6 years from July 1, 2011 to June 30, 2017, and added a brown bear control area to a portion of Unit 16B. Under this program permittees would be allowed to take brown bears over bait or with bucket snares in a 960 mi2 area between the MacArthur and Beluga Rivers termed the Brown Bear Control Area (BBCA) (Figure 2). The board also updated predator and prey numbers to reflect surveys conducted in 2010 and corrections to the bear survey conducted in 2007.

- Neither brown bear nor black bear numbers are expected to be reduced sufficiently to increase moose survival to attain IM objectives for moose abundance by using the methods and means employed to date. Concerted efforts from the public and organizations and liberalized methods and means resulted in substantial increases in take of bears initially, but effort and take have declined in recent years (Table 3 and 4). At no point have staff been able to detect measurable increases in moose calf survival attributable to the effort employed in this program. Table 7 and 8 (below) present the breakdown of bears harvested through the snaring component of the program. (Becker and Christ 2015).

11. How is increasing development pressure being incorporated into long-term wildlife population planning within the Matanuska-Susitna Borough? Are there mitigation strategies in place to address challenges that have occurred in other regions with growing human populations and industrial development?

- Development permitted through the state is handled on a case-by-case basis. When a project that requires a permit from the state arises, ADF&G is notified and asked to provide comments. Without a long-term list of anticipated projects, the department does not have a plan for long term development in the Borough.

- See answers to question 6 for recommendations on potential development improvements/considerations for the MSB.

12. Considering climate change, land development, and increased human use, what does the Department identify as the most significant

wildlife management challenge facing the Mat-Su Borough over the next 10 to 20 years?

- Increased human development and human use is closely coupled with increased human-wildlife conflict. As mentioned above, conflicts with moose via moose vehicle collisions and other conflicts would likely increase if the moose population is maintained within the current objective.

- Climate change is much more difficult to predict the direct influence on wildlife management over the next decade or two. Snow conditions are predicted to become more variable which may influence our ability to survey moose for example, but we can only guess as to what the actual effect will be.

13. Are there ways that the Matanuska Susitna Borough can assist the department, now or in the future, when thinking about sustainable wildlife populations and their supporting habitat?

As mentioned above in question 6, incorporating road building techniques that take into account wildlife movement are helpful. Also, habitat treatments to MSB land could improve wildlife habitat, in particular grouse and moose habitat.

14. Have there been any requests for information or requests for collaboration/consultation for any of the different development projects in the West Susitna Area? If so, what specific projects seem to be the main focus of the department regarding possible effects on wildlife and the habitat associated with the area?

ADF&G Habitat Section biologists responsible for reviewing projects that require permits or consultation from the state indicated they are awaiting communication from the entities responsible for developing the West Susitna Road access corridor. If you have questions that we cannot address at the upcoming meeting, they can be addressed to the commissioner at doug.vincent-lang@alaska.gov.