

Effects of prescribed burns on Stone's sheep health: research update

Muskwa-Kechika Advisory Board Meeting

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Prescribed burn research

- How do prescribed burns influence recruitment, physiology, and health in stone sheep and elk?
- Collaboration with Alicia Woods, Ridgeline Wildlife Enhancement, and Josh Hamilton, Wild Sheep Society of BC
- Examine effects of prescribed burns on sheep and elk health (stress and reproductive hormones in pellets and urine), diet (pellets), and recruitment
- 7 burn permits approved in 2022 for implementation over next 5 years



Three burns completed in May 2022



Prescribed fire in Stone's sheep habitat in the M-KMA, May, 2022. Photo by Alicia Woods.



Prescribed fire crew at Sikanni River Lodge.

Post-burn monitoring in July, 2022



Crew doing post-burn monitoring and pellet collections in July, 2022



Vegetation surveys 6 weeks post-burn. Photo by Alicia Woods.



Remote cameras to monitor wildlife activity

Pellet collection and recruitment surveys



Pellet sampling in early spring, summer, fall for diet & health studies



Recruitment surveys in spring to monitor population responses to fire

Prescribed burn plans for 2022-2023

- Fall camera checks and pellet collections (this week)
- Initial sample analysis (pellets, vegetation)
- Recruitment surveys in March 2023
- More burns planned for spring of 2023
- Graduate student to start in Sept, 2023
- Wildlife Sheep Society plans to submit more burn permits to burn an additional 500-1000 ha of sheep winter and lambing habitat over the coming 5 years

On-going and future research directions

- Continue building partnerships and collaborations
- On-going discussions with Rosalyn Notseta, HRFN, and consultants Lyle Mortenson and Catherine Piedt (Ecora) about research collaboration
- eDNA biodiversity monitoring project with Chu Cho Environmental and Tseh Keh Dene Nation
- Continue developing lab methods for wildlife monitoring
- Support wildlife health & climate monitoring

Endowment Fund

- Process for allocating monies for M-K-related wildlife research
 - William Chew, UNBC Treasury Services Manager, recommends an annual spending rate based on estimated market value of the endowment. Goal to maintain balance >\$1,000,000 + inflation
 - Heather submits a report to Dr. Kathy Lewis, VP Research with a summary of annual activities related to research in the M-KMA and upcoming projects, including a budget with past and upcoming research expenses
 - Once approved, funds are moved from the endowment fund into an operating fund to be used for the approved expenses

Endowment Fund

2021-2022 Fiscal Year

- Endowment fund market value on March 31, 2021: **\$1,205,025.95**
- Spending policy rate (3.5%) for 2021-2022: **\$40,121.32**
- Spent: **\$12,360** (\$4738 for research technician support, \$7622 for lab equipment and supplies for wildlife health research)
- Operating account balance as of March 31, 2022: **\$55,617**

Endowment Fund

2022-2023 Fiscal Year

- Endowment fund market value March 31, 2022: **\$1,284,230**
- Spending policy rate (3.5%) for 2022-2023 fiscal year: **\$42,197 (amount still in Endowment Fund)**
- Spent between April 1 and October 19, 2022: **\$12,831** (\$5287 for research technician support, \$7544 lab equipment and supplies for eDNA and wildlife health research)
- Operating account balance as of October 2022: **\$42,786**