



## Operational Guidance: Planning and Executing Prescribed Fires in Wild Sheep Habitat

Tactical steps required to plan, authorize, and evaluate a prescribed burn program aimed at enhancing wild sheep habitat - Alicia Woods, Ridgeline Wildlife Enhancement and University of Northern British Columbia, 2026 Thinhorn Summit IV.



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### Step 1: Establish Target Habitat Objectives

Define exactly what the prescribed fire needs to accomplish on the landscape before selecting a site.

- **Restore Historical Habitat:** Target areas where you need to clear out woody forest encroachment or remove specific vegetation communities.
- **Improve Existing Range:** Select locations where forcing a vegetation reset will refresh forage quality and thin out dense, sight-blocking shrub layers.
- **Create New Habitat:** Identify zones immediately adjacent to active sheep ranges that feature ideal terrain traits, such as steep escape terrain, but currently lack sufficient forage.

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### Step 2: Conduct Site Identification and Baseline Assessments

Identify and select candidate locations that ensure sheep safety and document pre-burn environmental conditions.

- **Analyze Local Terrain Features:** Verify the site satisfies core biological requirements, specifically direct proximity to steep escape terrain.
- **Perform Risk Screenings:** Eliminate candidate sites that introduce hazards, such as sections that pull sheep herds dangerously close to major highways.
- **Assess Non-Target Impact:** Review the current vegetation state to ensure the fire will not negatively impact other vulnerable wildlife species in the area.
- **Gather Baseline Data:** Deploy field cameras and vegetation quadrants to log pre-burn forage metrics, current sheep distribution, and general wildlife use.

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### Step 3: Navigate the Jurisdictional and Regulatory Approvals

Prescribed burning requires extensive multi-agency collaboration: begin this process early.

- **Engage Indigenous Communities:** Coordinate directly with local First Nations to incorporate traditional knowledge and align on land management goals.
- **Consult Government Biologists:** Partner with regional wildlife staff to validate the biological rationale and site selection.
- **Work with Fire Authorities:** Collaborate with the BC Wildfire Service (or local equivalent) to formalize operational fire boundaries.
- **Draft the Formal Burn Plan:** Build a comprehensive document that details fuels, site descriptions, smoke mitigation plans, values at risk, ignition/control protocols, and emergency resources.

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## Step 4: Execute Strategy and Monitor Effectiveness

Implement the burn under strict environmental prescriptions and conduct post-fire monitoring to track results.

- **Burn in Early Spring:** Conduct operations during the spring window to safely retain critical winter forage layers and protect underlying organic soils.
- **Measure Operational Success:** Document the immediate fire intensity across different slopes to verify if the target burn objectives were physically achieved.
- **Track Vegetation Recovery:** Re-enter the site at 2-month and 1-year intervals to verify an increase in forage quantity, diminished vertical brush structure, and improved nutritional value (such as spikes in crude protein or digestibility).
- **Monitor Wildlife Re-Entry:** Use remote trail cameras to document how quickly sheep populations transition into the newly burned treatment zones compared to unburned control zones.



Additional information can be shared upon request (i.e., project results, specific macro/micro mineral charts from the forage analysis or look at the population count increases in the Racing study area).

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