

11. A Significant Wallow

1) Definition

A **significant wallow** means a wallow that is:

- (i) used by Moose (*Alces americanus*), Bison (*Bos bison*), Elk (*Cervus elaphus*), Mountain Goat (*Oreamnos americanus*), or Grizzly Bear (*Ursus arctos*); and
- (ii) used at least annually by multiple individuals of one or more of the species in (i) as evidenced by well-established trails leading to the wallow, tracks in the wallow, lack of vegetation in the centre of the wallow, and/or vegetation disturbed by pawing, trampling, digging, or rolling.

A wallow is an existing depression or a shallow depression in the ground created and maintained by ungulates or Grizzly Bears through regular digging, trampling, or rolling (Figure 40).



Figure 40. Moose wallow in high-elevation fen. (Photo: Eliot Terry)

2) Importance of Wallows

Ungulates roll in wallows to cover themselves in mud or dust to provide relief from biting insects. In addition, wallowing may serve a social function during the breeding season where male ungulates (e.g., Moose and Elk) will urinate in the wallow and roll in it to attract females. Wallowing may also be important as a grooming behaviour associated with moulting, social behaviour for group cohesion, or simply play behaviour. Bears will also roll in wallows to help cool themselves in summer and as a method of marking their presence to other bears.

3) What to Look For

Wallows are typically shallow depressions in the soil that can either be wet or dry (Figure 41). They are generally situated in openings or clearings, usually adjacent to nearby security cover. Many wallows lack plants in their centres because the disturbed conditions from frequent wildlife use inhibits plant growth. The bare soils of wallows are usually covered in animal tracks that can indicate which wildlife species use the wallow. Well-used wildlife trails typically radiate out in multiple directions from the wallow.



Figure 41. Moose in wallow. (Photo: Lindsey Ballard)

Table 41 summarizes what to look for when identifying a significant wallow. Table 42 provides information to consider when conducting primary forest or range activities adjacent to a wallow.

Table 41. A significant wallow: what to look for.

Species	Description of a Significant Wallow
Ungulates and Grizzly Bears	<ul style="list-style-type: none">• Shallow, wet or mucky depressions, 2–3 m to many metres wide and typically less than 20 cm deep.• Disturbed vegetation (herbs and low shrubs) as a result of pawing, digging, or rolling, often in a non-forested area for ungulates (e.g., wet meadow); these sites may have a strong odour of urine, and may have tracks, shed hairs, or droppings nearby.
Grizzly Bears	<ul style="list-style-type: none">• Almost always found where seepage occurs or where the water table is close to the surface (e.g., near skunk cabbage seeps); others are found in muddy patches (Figure 42); typical locations are in, or beside, shrubby fringes of estuaries and wetlands, in open forests where an underground spring comes to the surface, or in small pockets of imperfect drainage.• Contain shed hairs and provide excellent conditions for tracks; the edges of wallows may be worn smooth from bears lying and rubbing against them; any tree branches, roots, and duff along the edges usually have an abundance of snagged hairs; fine bear hairs contrast with the coarse hair of ungulates.• Often found near mark trees; well-worn bear trails or mark trails may also lead to, or skirt around, the wallow.



Figure 42. Grizzly Bear in wallow. (Photo: Steve Stuller)

Table 42. Information to consider when conducting primary forest or range activities near a significant wallow.

Information to Consider
<ul style="list-style-type: none">• Avoid destruction of the wallow site.• Avoid road construction and human disturbances near known wallow areas during the autumn rut for ungulates (September–November) and hot summer months for Grizzly Bears (July–August).• Incorporate wallows into forested retention areas, such as a wildlife tree patch or riparian management area.• Maintain the integrity of trails between wallow sites and seasonal ranges.• Avoid locating new roads near known wallow sites and trails; if roads are required near wallows, implement measures to minimize disturbance to wallow access trails by restricting the number of road crossings and by maintaining connectivity to adjacent forest areas.• For existing roads near known wallows, minimize road use and disturbance (where possible) during critical use periods (September–November for ungulates).• Where roads can be deactivated, do so as soon as possible, and erect all-terrain vehicle barriers; reclaim roads with native vegetation.• Where harvesting activities occur near wallow sites, provide some visual screening (i.e. forested cover) around the lick; this will provide security and escape cover for animals using the lick.• Consult a qualified professional biologist to assess use and significance of the site for local ungulate and bear populations; some wallows may be assessed as “non-significant.”

4) Regional Information – Kootenay Boundary

In this section, we provide specific timing windows and guidance on disturbance buffers for the Kootenay Boundary Region. This information may vary from provincial guidance and may not be applicable outside of the Kootenay Boundary Region because of regional specificity.

Wallows are unique and are found across the landscape. They are generally associated with riparian receiving areas, springs, or other water sources. Although no identified biogeoclimatic associations are relevant for wallows, these features are often connected with localized moist soil regimes and site series. The species that use wallows are sensitive to disturbance. Table 43 provides suggested minimum buffer sizes. Additional protection or alternative measures may be needed, depending on the nature of the disturbance, existing landscape and cover, or other factors.

Wallows are most heavily used during the autumn ungulate breeding season. This creates a potential *sensitive period of September 1–November 1*. The length of this sensitive period will depend on geographic location and ungulate species. For *Grizzly Bears, the sensitive period is July 1–August 31*. No regional range maps exist for wallows.

Table 43. Guidance on disturbance buffers for significant wallows.

A Significant Wallow – Guidance on Buffers
<ul style="list-style-type: none">• Do not construct roads within 200 m of a significant wallow, unless no other practical option exists; maintain a visual screen between any roads (existing or built) and the wallow.¹• If no longer needed, reclaim any existing roads within 200 m of the wallow.• Maintain a minimum 100 m buffer of intact forest around significant wallows; this buffer should include at least two primary trails leading to the lick and connect adjacent forest to provide a windfirm travel corridor.• Avoid conducting field reconnaissance, layout, cruising, or tree planting within 100 m of a significant ungulate wallow from September 1 to November 1 (where possible). Leave the area if animals are observed approaching or at the site.• Avoid conducting field reconnaissance, layout, cruising, or tree planting within 100 m of a significant Grizzly Bear wallow from July 1 to August 31 (where possible). Leave the area if animals are observed approaching or at the site.

5) Additional Information

BC Timber Sales Cariboo–Chilcotin Field Guide to Wildlife Habitat Management:
<https://www.for.gov.bc.ca/ftp/tcc/external/!publish/ems2/SFM/TCC-Field-Guide.pdf>

Wildlife Habitat Features – Summary of Management Guidelines, Northern Interior Forest Region (Draft):
<https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/wildlife-wildlife-habitat/regional-wildlife/northeast-region/draftwhfnorthinteriorrevisejuly30.pdf>

¹ Modified from BCTS Cariboo-Chilcotin Field Guide to Wildlife Habitat Management 2009.