

# deschutes NATIONAL FOREST

**What is winter range?** Winter range is habitat deer and elk migrate to in order to find more favorable living conditions during the winter. Winter range is found predominantly in lower elevations of central Oregon and is extremely important to mule deer survival. Winter ranges usually have minimal amounts of snow cover and provide vegetation for forage, hiding cover, and protection from the weather. In Oregon, mule deer migrate, often long distances, to lower elevations to escape or minimize exposure to snow cover.



Photo by Andrew Tasler

## **Why is this habitat important?**

Nutritional intake is a critical component of deer biology. Deer must obtain sufficient energy, protein, and nutrients from the plants they eat to maintain body condition and successfully reproduce. Nutrition influences overall body condition, reproductive success, and survival. During the summer, deer accumulate and store body fat under their skin and around internal organs. This serves both as insulation and as energy reserves for the rigors of winter. Fat reserves can be upwards of 30 percent of total body mass. The natural winter diet

(i.e. bitterbrush, sagebrush) is lower in nutrients and less digestible than the summer diet, requiring more energy to digest and resulting in fewer calories. Stored fat is burned during winter to partially compensate for the lack of nutrients in the winter diet. Deer normally lose weight during the winter. Deer go into the winter with a full tank of gas (fat reserves) not knowing how long the winter will be or what issues they will need to deal with.

Severe winters are a major factor influencing population dynamics. Severe winters can tax a deer's ability to obtain necessary forage while draining fat reserves. This can result in reduced reproductive success and increased mortality. In addition, human-related disturbance can stress animals and cause them to expend unnecessary energy which may increase winter mortality.



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**How do people fit into this?** Disturbance and harassment comes in many forms and can be caused intentionally or unintentionally by human activities or development. Irrespective of the cause, disturbance usually results in mule deer avoiding areas where the disturbance occurs and forcing them into smaller or more marginal areas with poorer habitat. This may occur on rare occasions or countless times per day depending on the level of use and frequency of disturbance. Concentrating deer in smaller areas has been shown to result in increased disease transmission, increased susceptibility to predation, and/or over-use of forage plants.

Development can have direct impacts to mule deer habitat. Buildings, roads, fences, trails, and supporting infrastructures (i.e. parking lots, trailheads, etc.) fragments mule deer habitat and disrupts travel corridors. Compounding the loss of habitat is the associated increase in disturbance and harassment. Encroaching development into winter range results in humans being present during this critical time. Trail use in central Oregon has grown exponentially over the past few years and now includes yearlong use as opposed to just seasonal use due to lower snow levels. Increased energy expenditures to avoid people and using more marginal habitats can affect deer body condition, survival, and ultimately population growth. As human populations continue to grow and expand and the ability to access more lands increases, disturbance in mule deer habitats increases.

**Why Do Deer Freeze or Flee?** Deer recognize threats and how they perceive a threat will determine the response. If they perceive the threat as passing by, they may just freeze. A motorized vehicle or a bike moving along a road or trail may cause the animal to freeze. If the intruder stops, the deer may flee. However, if a deer observes the same activity from a different angle, they may perceive it as a threat and run away. In any human/deer interaction, deer expend energy. Expending energy or stopping feeding activities to avoid humans causes deer to use energy reserves that might be needed to get them through the harshness of winter. Studies have found that ATVs and mountain bikes illicit a stronger flight response than hiking or horseback riding.

**What Can You Do?** Animals respond better to disturbances that are predictable, so please respect winter closures on trails and roads. Tell your friends and family of the need to reduce impacts to deer on winter range.

Deer can flourish if we all respect the closures!



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