

## Mule Deer Winter Habitat Management

# Westbank Community Forest



This booklet describes how Ntityix Resources LP manages for mule deer winter habitat in its forest operations on Westbank First Nation's community forest.

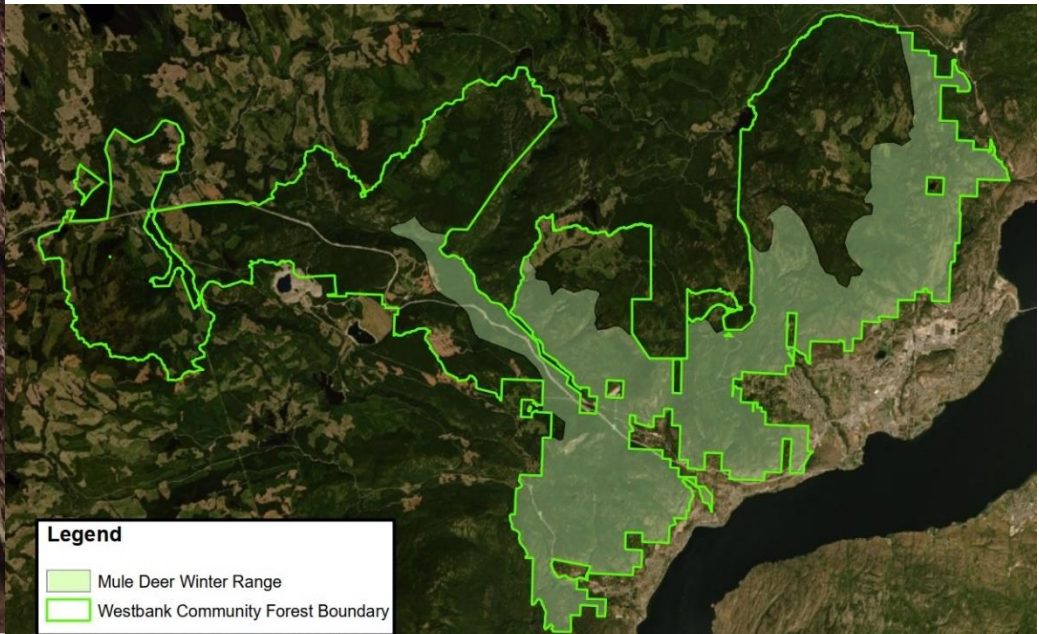
importance to Westbank First Nation community members and to all people that care about wildlife, the health of the land and our environment.

Almost half of the community forest's Okanagan Block is important deer winter habitat, where many mule deer, white-tailed deer and moose come from across the surrounding landscape to survive over winter.

As winter begins and snow depths increase, deer and moose must move from higher elevation summer range to lower elevation "winter range" where the snow depths are less.

Sā'a?cínm (deer) and pa?pa?lɛáca? (moose) are food and cultural resources of great

For deer and moose to survive the winter, their winter range must allow them to move freely to find adequate shelter and food, and to avoid predators and other disturbances.



### Legend

-  Mule Deer Winter Range
-  Westbank Community Forest Boundary



## IT'S ALL ABOUT ENERGY

Walking through deep snow is hard work!

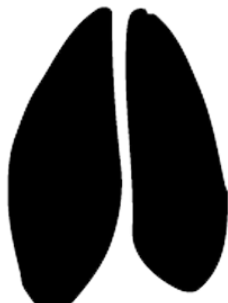
The deeper the snow the more energy it takes for deer to move to the places they need to be. The more energy a deer uses, the more food it needs to stay alert and to stay warm. Snow that is too deep, or too heavily crusted makes it easier for predators to hunt down and kill deer.

Older Douglas-fir stands with dense overlapping tops catch a lot of snow before it can reach the ground. Deer use these shallow snow areas to reduce the amount of energy they need to move between their food, shelter and hiding places. Deer that can easily move about in winter are more likely to survive.

No matter how shallow the snow all deer will lose weight in winter. If a deer loses too much weight too fast it may die. High quality food shrubs like willow, saskatoon and snowbrush next to well connected, low snow areas and good shelter habitat help deer to lose weight more slowly.

In winter, deer choose to be in areas that help them to save energy. Managing their winter range to provide connected areas of shallow snow close to well-distributed patches of high-quality food and dense hiding cover is good for deer.

As the snow gets deeper over winter, deer are forced to move into ever smaller areas, generally at lower elevation, onto steep, sunny south-facing slopes or into older tree cover. With each movement, the deer must still find enough food and shelter, and must still be able to avoid people and predators.

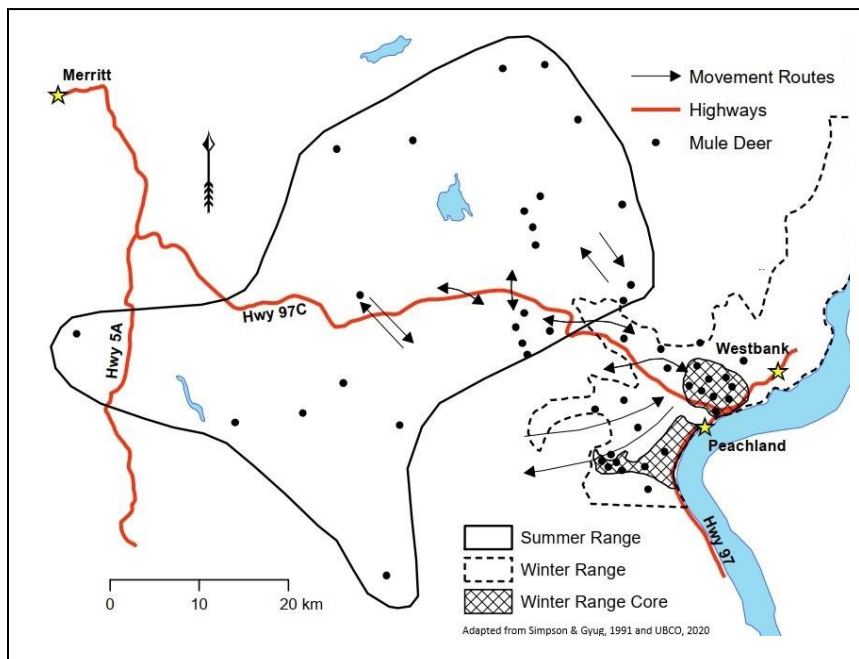


Mule deer track



A cutblock in mule deer winter range

Mule deer winter range in the Okanagan extends from an upper elevation defined mostly by snow depth and presence of Douglas-fir forest, to the valley bottoms and lakeshore. At the lowest elevations, most of the ponderosa pine forest and grasslands historically available to deer have been lost to human uses. Consequently, the fir forests in the Okanagan Block of WFN's community forest are now even more important to sustaining healthy and abundant numbers of deer and moose throughout the land.



Many mule deer that come to winter in the Okanagan Valley near Westbank spend their summers at higher elevations as far away as the Nicola Valley overlooking Merritt. What happens on mule deer winter range near Westbank affects the food supply of at least three First Nation communities—Westbank, Penticton and Upper Nicola.

## HOW DOES NTITYIX MANAGE FOR MULE DEER?

Ntityix recognizes that mule deer are important to the people, and that mule deer are less abundant now than in the past. To help increase and sustain mule deer, Ntityix manages deer habitat as part of its forestry plans; from the broad expanse of the landscape to the smallest cutblock.

### Across the landscape

WFN's community forest is large and the many values on the land are complex. For planning, Ntityix divided WFN's forest tenures into 12 "Planning Units". A plan for each Planning Unit will include information about that area important to WFN members, and will guide Ntityix's activities in the unit, including for mule deer and other wildlife.

To survive, mule deer need to be able to move between and within their summer, fall, winter and spring ranges. To manage for deer at a planning unit level, Ntityix will:

- Set aside about 1/3 of each planning unit for forest conservation,
- Protect wide, usable mule deer travel routes between and within planning units, and
- Manage the forest to provide shelter and high-quality food in places that deer can easily use.

### On the winter range

Good deer winter range contains the many habitats that allow deer to sustain energy in all winter conditions. Deer winter range in each planning unit is split into even smaller "planning cells". In each of the 65 winter

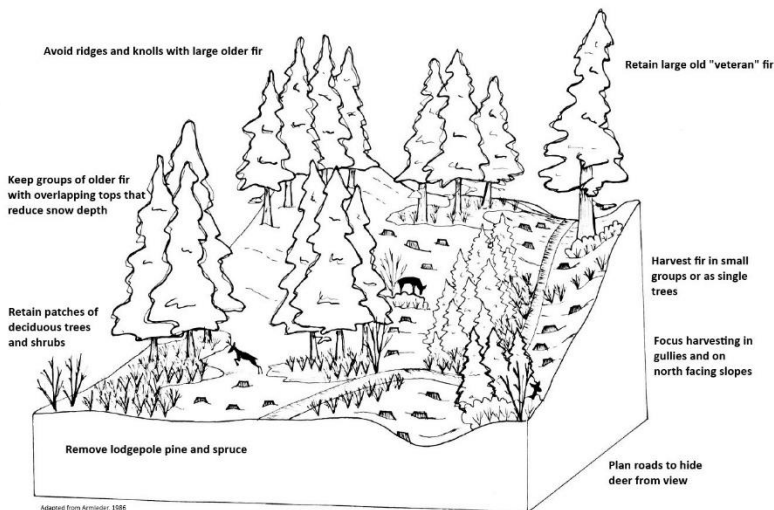
range planning cells on WFN's community forest, Ntityix manages for deer by:

- Managing the forest to provide deer with shelter and food in places with shallow enough snow that deer can move easily between the habitats they need.
- Mapping and protecting the required amount or more of the biggest and oldest Douglas-fir stands that create shallow snow areas.
- Keeping the size of harvested openings to about 3 hectares (7.5 acres) or less.
- Leaving 2/3 of each planning cell as forest more than 20 years old.

### At each cutblock in deer winter range

Ntityix will plan its cutblocks in deer winter range to provide local habitats that help deer to survive:

- Ridges and knolls with large older fir will be avoided or at most lightly harvested.
- Where they occur, harvesting will concentrate on tree species other than Douglas-fir.
- Harvesting will be focused on flats, north-facing slopes, and in gullies.
- Scattered clumps of older fir with overlapping tops will be kept at a deer's "bounding" distance apart.
- Most roads will be temporary and planned to hide deer from view.
- Deer food plants will be allowed to grow in harvested areas.



A typical cutblock in mule deer winter habitat

## LEGAL REQUIREMENTS

### Syilx Law & Responsibility

Syilx people have a sacred responsibility to care for *tmxʷulaxʷ* and *tmixʷ*. Wildlife species are relatives of the people and give of themselves to provide traditional foods, goods and cultural values; other wildlife are of spiritual significance, and some species are at-risk and in need of assistance. *Sł'aʔcínm* is such an important resource for Syilx people that they do not waste any portion of the animal. *Sł'aʔcínm* are hunted throughout the year but the optimal time is fall and winter. *Sł'aʔcínm* meat is a large part of Syilx diet. *Sł'aʔcínm* hide is used for making clothes, drums, rattles, blankets and shelter. Bones and feet are used to make tools and Syilx regalia. The brain is used in the process for turning the animal skin into leather.



### Provincial Law

The BC government's forestry law identifies parts of the Okanagan as mule deer winter range. This includes about half of WFN's community forest within its Okanagan Block. The BC law focuses on keeping a minimum amount of "snow interception cover" or "SIC" scattered across many small "planning cells" within the larger winter range. SIC are patches of large older Douglas-fir trees with overlapping tops that catch snow before it reaches the ground. Lower snow depth under these trees allows the deer to move about more easily. Twigs and lichens that fall from older Douglas-fir trees are also good winter food for deer.

BC's law requires forestry companies to retain a minimum area of SIC in each planning cell. For much of the mule deer winter range in WFN's community forest, the law describes SIC as Douglas-fir stands at least 175 years old where 36% or more of the tree-tops overlap.



## CHALLENGES IN MANAGING FOR MULE DEER

### Forest Health

Root rot, mistletoe and fir bark beetle are common in parts of WFN’s community forest. These reduce wood quality, may kill mature trees, and can increase fire risk. Activities aimed at improving forest health are not always consistent with best practices for managing mule deer habitat. By keeping the size of harvested openings to about 3 hectares (7.5 acres) or less, Ntityix intends to provide the best deer habitat possible while also aiming to somewhat improve forest health.

### Fire Risk

The communities of West Kelowna and Peachland are adjacent to WFN’s community forest. The risk of devastating fire in these communities can be high. Wildfire risk reduction is a high priority to Ntityix in its activities near developed areas. Forestry activities that reduce fire risk may harm low elevation mule deer winter habitat. Ntityix will seek to retain patches of good deer winter habitat when managing for fire risk.

### Snow Interception Targets

Over much of WFN’s community forest, provincial law defines snow interception cover as Douglas-fir stands at least 175 years old with a canopy cover greater than 36%. Douglas-fir stands in the community forest are rarely that old and the patchy nature of the stands makes their canopy cover highly variable. Ntityix will identify, map and protect the required amount or more of snow interception cover from the largest, oldest and most dense fir stands available in each planning cell.

### Recreation

The community forest is an important all-season recreational area. People disturb mule deer and frequent disturbance can prevent deer from using important habitats. Ntityix will strive to maintain and create great mule deer winter habitat through its forestry activities but frequent human use may reduce the habitat’s value to deer. Ntityix does not manage recreational activities but will manage its roads and trails on winter range to minimize human use and to protect quiet spaces for deer by providing visual screens.

Mule deer research by the Okanagan Nation Alliance, BC Wildlife Federation, the University of BC, provincial wildlife staff, volunteers and others is tackling one of BC’s most pressing needs in wildlife management: understanding and reversing the decline of mule deer in the southern interior, including on WFN’s community forest.

## SUSTAINING DEER FOR THE FUTURE

*Tmx<sup>w</sup>ulax<sup>w</sup>* is the foundation of Syilx life and culture. Sustainable use of land and resources honours our sacred responsibilities both to *tmix<sup>w</sup>* and to future generations of people.

Ntityix aims to manage WFN’s community forest in ways that sustain the land and resources, while helping to reduce some of the impacts of human land use and the uncertain effects of our changing climate.

A managed mix of open areas and older fir forest at low elevation in the community forest may help deer adapt to lost habitat and climate change by creating new spring ranges, close to forest stands that reduce snow depth.

In future, Ntityix may re-introduce fire into its forest activities to enhance food plants for deer and people. Ntityix is also considering how to restore wildlife movement corridors affected by roads and highways in the forest.

Syilx captikwł will sustain deer for the future.

*Sx’ ad cinn give of themselves for we Syilx to survive. Our enduring relationship is based on respect and reciprocity.*

- Chief Chris Derickson



USFWS  
Deer need quiet spaces and shallow snow to find food

*Our mission is to manage the forest tenures held by Westbank First Nation on the basis of sustainability and the interwoven values of the land while maximizing benefits to Westbank First Nation through revenue and community opportunities.*



Harvest. Growth. Protect.