



# Conservation Options to Improve Moose Habitat

NRCS offers technical and financial assistance to help farmers, ranchers, forest managers, landowners, Tribes & other organizations improve moose habitat.

## USDA NATURAL RESOURCES CONSERVATION SERVICE

Are you interested in improving moose habitat on your property? The USDA Natural Resources Conservation Service (NRCS) may be able to help.

NRCS offers technical and financial assistance to farmers, ranchers, forest managers, landowners, Tribes and other entities to conserve natural resources on their land. Participation in our programs is entirely voluntary. We can help you install conservation practices that suit the unique needs of your property and help you achieve your management goals.

NRCS Conservation Planners can visit your property and evaluate current habitat quality as well as discuss your management objectives. Together, we can identify possible conservation practices to help improve moose habitat on your eligible agricultural or forest land.



**NRCS assists private landowners with conservation practices that improve and enhance food, cover, shelter and connectivity of habitats for moose.**



**ALASKA**  
Natural  
Resources  
Conservation  
Service

## Practice

## Description

## Benefits

### Early Successional Habitat Development



Using a variety of disturbance methods such as prescribed burning, light disking, mowing, prescribed grazing or willow tipping to manipulate vegetation to promote early successional plant growth to benefit desired wildlife.

- » Provides desirable habitat for species that require early successional habitat for all or part of their life cycle

### Upland Wildlife Habitat Management



Providing and managing upland habitats and connectivity within the landscape for wildlife. Can include planting new vegetation and manipulating vegetation.

- » Enables movement of animals
- » Provides shelter, cover or food for animals in proper amounts, locations and times to sustain wild animals that inhabit uplands during a portion of their life cycle

### Wildlife Habitat Planting



Establishing wildlife habitat by planting herbaceous vegetation or shrubs.

- » Improves degraded wildlife habitat
- » Establishes wildlife habitat that resembles the historic, desired and referenced native plant community

### Brush Management



Managing or removing woody plants including those that are invasive and noxious. Can include mechanical, chemical, burning or biological methods.

- » Create desired plant community
- » Restore or release desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality or enhance hydrology
- » Maintain, modify or enhance fish and wildlife habitat
- » Improve access to forage and forage quality/quantity for wildlife
- » Manage fuel loads to achieve desired conditions

## Success Story: Willow Tipping in Dillingham, Alaska

When the people in the village of Dillingham noticed a decline in the local moose population, specifically poor calf survival, they knew they should take action. As a subsistence village, they rely on moose and salmon for traditional food.

Choggiung Limited, the Village corporation of Dillingham, Alaska, contacted the Natural Resources Conservation Service. NRCS investigated sites within the village's traditional hunting areas, as identified by elders and tribal members, to determine the quality and quantity of moose habitat and develop alternatives for improvement. The sites revealed moose had browsed the willows so heavily the trees displayed a reverse hedge effect – in other words, the moose browsed the willows bare as far up as they could reach, eight to ten feet! In some cases, even the willow trunks were stripped of bark which occurs only when no other vegetation is available. Willow stands in this condition simply cannot sustain a stable moose population.

NRCS biologists, U.S. Fish and Wildlife Service biologists, and village residents scrutinized the correlation between moose population and

willow stand health, carefully considering forage availability and quality with seasonal use patterns. Late in winter, cows (female moose), are in critical stages of gestation. Also late in winter, nearly all the nutritious willow leaves and stems have been consumed.

A hypothesis formed: Cows carrying new calves were not finding nourishing food. Underfed calves and cows result in high mortality and the moose population suffered. It seemed obvious, then, the solution to improving and increasing forage quality and availability for all area moose was to make better and more willow browse available.

How do people improve hundreds of acres of willow in remote, roadless, wet, brushy tundra? In a world of immediate gratification, large gas powered equipment, and “get it done yesterday” attitudes, the Alaska answer may be difficult to accept: manual labor and perseverance. The improvement plan involved local people manually “tipping” tall willows over, forcing new growth (basal sprout) from partially severed trunks. The work had to be performed in midwinter with chainsaws, handsaws and brush whackers in areas with

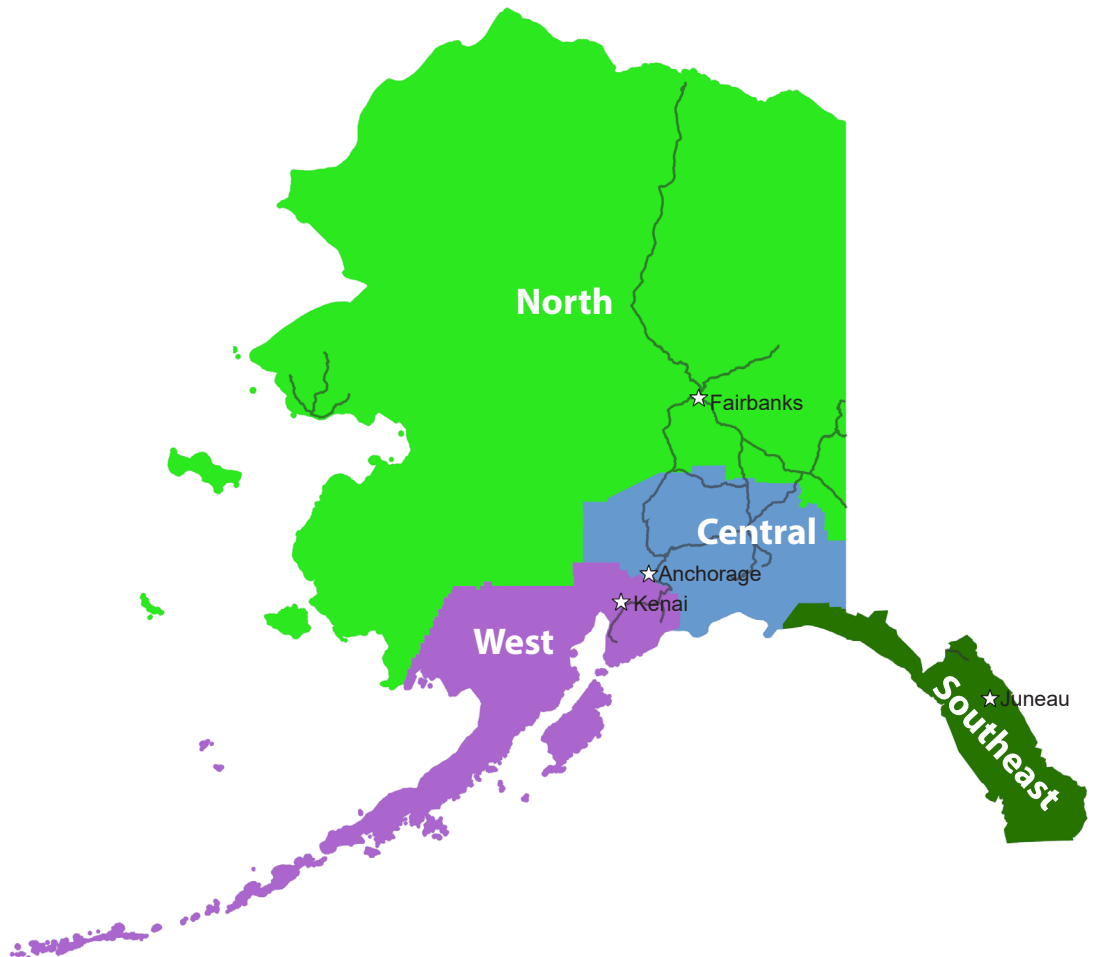
only snow machine access. The trick was to work on frozen ground, which is easier to traverse than boggy marshland. To keep the willows alive, first the trees must be completely dormant, then the willow trunks must not be entirely severed; instead, a viable amount of cambium (the soft woody layer just inside the bark) needed be left intact for optimum stem regrowth. The new stems provide nutritious browse necessary for healthy cow moose. Because of the regrowth, the food supply will last through the winter. The willows' regrowth is like a fully stocked pantry.

With a plan in place, the Village sought a work crew with the tools and winter gear to do the job. The regional village corporation forestry crew eagerly stepped up. This crew was normally without work or income during the winter, had the tools and skills, and understood harsh tundra outdoor winter work. Their efforts paid off. Just as the biologists and village residents hoped, the willows regrew bushy stems supplying a whole winter's worth of moose food.





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