

Northeast Wyoming Habitat Improvement Partnership

HABITAT IMPROVEMENT SPECIFICATIONS AND STANDARDS

The following information was created by wildlife and forestry practitioners to successfully implement projects with the Northeast Wyoming Habitat Improvement Partnership. Landowner/land manager objectives will be considered in project designs, but must meet or exceed the overall benefits listed in the goals and objectives, as well as specifications and standards.

Location: Crook & Weston Counties, Wyoming

Treatment Types: Meadow Enhancement, Conifer Encroachment, Thinning

Goals & Objectives: The objective of this partnership is to mitigate mutual resource concerns across jurisdictional boundaries throughout northeastern Wyoming by creating more resilient and sustainable ecosystems. The goal is to improve mule deer and sage-grouse habitats by implementing non-commercial thinning to increase understory standing biomass. Thinning treatments benefit mule deer and sage-grouse habitats by providing structural diversity and by increasing the variety and biomass of forages. Projects will follow guidance provided by wildlife and forestry practitioners to ensure specifications and standards implemented are beneficial to wildlife habitat improvement.

Summary of Project: These landscape-scale projects will result in healthier ecological lands with more diverse species composition, increased structural and age diversity of plant communities, and improved riparian and wildlife habitats. Thinning noncommercial sized trees will increase the quantity and quality of forage and improve forest stands by balancing structural stage diversity; reducing meadow encroachment will diversify forbs and grasses; and removing juniper and pine from sagebrush-steppe habitats will decrease raptor perches and predator shelters.

Treatment Specifications:

Meadow enhancement projects will provide excellent foraging areas for ungulates and other species. These open areas should be at least 0.5 acres in size.

Open forest stands (less than 60 ft²/acre) should be created in more mesic locations to encourage understory growth of deciduous trees and shrubs. In locations where wildfire control is a concern, fire-resistant hardwoods will be encouraged to remain in open stands of pine (less than 60 ft²/acre) that foster understory growth.

Sagebrush grassland and riparian/mesic encroachment treatments should remove juniper and pine species if encroachment is negatively impacting desirable native species.

Stands or individual trees of a desirably unique nature or that exhibit old growth characteristics are strongly encouraged to remain.

Thinning projects should leave at least 1 or 2 large snags per acre, and most snags less than 6-inches diameter breast height (DBH) should be retained, as these provide foraging sites for cavity nesting birds. (DBH is diameter at breast height and is measured at 4.5 feet from the ground on the uphill side of the tree.) Avoid removing standing snags which provide habitat for cavity nesting birds and avoid removing trees that are used for turkey roosting.

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Leave Trees:

- When selecting “leave trees” or trees to keep, practitioners will be encouraged to choose straight stems, cone shaped crowns, single top (not forked), small diameter limbs, branches projecting horizontally from the stem, free of insect and disease problems, dominance in height growth relative to other trees in the stand, and free of damage.
- Leave trees should be spaced far enough apart that the branches of the trees do not touch the branches of the other leave trees. An average tree spacing of stems will vary due to size of trees and how much their crown spreads.
- Undamaged deciduous trees (e.g. aspen) are considered “leave” trees for the purpose of this project.
- Landowner objectives regarding “leave” trees will be considered in project design.

Trees to Remove:

- When choosing trees to remove, practitioners will be encouraged to select split or deformed tops; porcupine damage; insect damage; crooked trunks; height noticeably less than average for the stand.
- General rule: 2-inch DBH trees need a 10-foot by 10-foot average spacing, 5-inch diameter trees need an average spacing of 12-foot by 12-foot between the trunks, and 7- inch DBH trees need an average spacing of 15-foot by 15-foot between trees.
- Poor quality Ponderosa pine trees in the 1-inch to 9-inch DBH range should be removed. Poor quality trees in the 9-inch to 17-inch diameter range may be removed to improve spacing as long as there is not a 10-foot merchantable log in the tree.
- Rocky Mountain juniper or Eastern red cedar trees within 8-feet of Ponderosa pine leave trees should be removed to reduce competition and fire hazard.

Slash Treatment Specifications:

- Thinning slash shall be masticated (chipped/shredded) and spread, piled and burned, or lopped and scattered. Cut stumps should be not exceed more than a 6-inch height on the uphill side. Mastication slash shall not exceed an average depth of 3-inches. Slash piles shall not be located closer than 30-feet to leave trees, shall not be placed in waterways, and shall not block roads or trails. Burned piles should be spread, dragged or disked, and replanted with seed mixes designed to benefit wildlife by providing perennial food sources or cover (please contact your local Natural Resource District for recommendations). Leaving smaller slash piles (less than eight-foot diameter) of untreated slash in some areas can be beneficial for creating foraging locations along with hiding, denning and nesting cover for a variety mammals, reptiles, amphibians, and birds.
- Lop and scatter may be allowed on steep terrain or certain locations as deemed necessary by practitioners, but may be an increased fire hazard. Thinning slash that is lopped and scattered shall not exceed a height of more than 18- inches above the ground.
- Thinning trees after October 1st and before May 1st will minimize the spread of pine engraver beetle (*Ips pini*) from slash. Timeframes may be adjusted based on annual precipitation. Please contact your local state forester for additional information.
- Noxious weed control should occur where slash piles have been treated and where soils are disturbed by silvicultural activities.

Inspections, Operation and Maintenance:

Inspect the area periodically during and after treatment activities to ensure that objectives are achieved and resource damage is minimized (e.g., assessment of insects/disease, storm damage, etc.). The results of inspections shall determine the need for additional treatments. Projects will be inspected and approved by the CCNRD, WCNRD, Wyoming Game and Fish Department, Wyoming State Forestry Division, or Natural Resources Conservation Service staff.