2018 Hebgen Lake Ranger District Edwards Peninsula Hardwood Restoration Project Report

Submitted to NorthWestern Energy Wildlife TAC

November 21, 2018

Prepared by:

Randy Scarlett
West Zone Wildlife Biologist
Hebgen Lake Ranger District
US Forest Service

Background

Overall, aspen is a relatively rare element on the Custer Gallatin National Forest (CGNF) compared to other vegetation communities. Aspen stands are considered one of the most biologically diverse ecosystems in the Intermountain West, second only to riparian areas, and are, thus, disproportionately important to many species of wildlife. They provide forage, cover, shade, and nesting habitat for birds, small mammals, big game, and forest carnivores. Conserving aspen benefits not only many plants and vertebrates, but also ecologically significant invertebrates, such as native bees. Cottonwood stands are exceedingly rare on the Hebgen Lake Ranger District as well; similar to aspen stands, they provide important cover, foraging, and nesting habitat for a number of species.

Aspen is a fast-growing, early seral, disturbance-dependent species that can be out-competed over time by slower-growing conifer species in the absence of disturbance. Cottonwood can also be outcompeted by conifer species. Reduction of conifer competition by hand or mechanical equipment is often used to sustain the presence of aspen, and to a lesser extent cottonwood, on the landscape and increase the health and vigor of hardwood stands. Aspen and cottonwood stands in the vicinity of Edwards Peninsula are being shaded out and outcompeted by lodgepole pine that has encroached onto the Peninsula since at least the 1959 earthquake.

The Northwestern Energy *Updated Five Year (2018 thru 2022) Madison and Missouri River Wildlife and Terrestrial Habitat Plan per Project 2188 License Articles 411, 418, 421, 423, and 424* states under Article 423 that the licensee will develop a vegetation and wildlife monitoring and enhancement plan that includes specific goals, objectives, and standards to enhance native plants and wildlife populations on the lands and waters associated with the project. This project would result in enhancement of native aspen and cottonwood stands that are being encroached upon by conifer species in an area directly adjacent to the main stem Madison River (Hebgen Lake).

Objective

To reduce conifer encroachment and improve the health and vigor of aspen and cottonwood stands on approximately 10 acres in the vicinity of Edwards Peninsula.

Methods

The Forest Service would use the seasonal fire crew based out of West Yellowstone to complete all proposed aspen restoration work. The fire crew would fell competing conifers (up to 14” dbh) from aspen and cottonwood stands using chainsaws. Conifers would be felled within approximately 40 feet of healthy aspen regeneration. Where existing aspen and cottonwood regeneration has been browsed by wildlife, conifers would be felled in such a way as to provide physical protection to sprouts. Depending

on the fuel loading following felling, slash may be left where felled, lopped and scattered, or piled by hand. If piled, slash would be allowed to cure and would be burned one to two seasons following felling. Felled conifers may also be "jackpot burned" where there are dense accumulations of fuel and where burning would benefit aspen by stimulating suckering. Competing conifers >14 inches dbh would be girdled to create standing dead wood habitat for wildlife.

Results

This field season, approximately 9 acres of conifer felling occurred within and adjacent to existing aspen clones and cottonwood stands on Edwards Peninsula. This work was accomplished using the seasonal fire crew in West Yellowstone as well as personnel assigned to the Bacon Rind Fire in August and September. Where possible, conifers were felled in such a manner as to provide physical protection to aspen and cottonwood regeneration. All felled conifers were dropped and left; no lopping and scattering or piling of felled material occurred. Felled material may be lopped and scattered, piled, and/or burned at a later date to try to stimulate suckering of aspen. Approximately 1-1.5 acres of conifer felling along the southwest shore of the Peninsula will be implemented in the spring/early summer 2019. This work will be accomplished using FS fuels dollars.

Funding

Funding for this project in 2018 was as follows:

Category	Description	TAC	FS	Total
Direct Labor	FS Bio/Silv		$4,000	$4,000
	FS Fire Crews	$5,000	$10,000	$15,000
Direct Overhead	2%	$100		$100
Travel and Living	FS vehicle	$0	$500	$500
Materials	Saw parts, fuel, mosquito head nets, bug spray, etc.	$0	$1,000	$1,000
Other Direct Expenses	None	$0	$0	$0
Total		**$5,100**	**$15,500**	**$20,600**

Future Activities

The remaining 1-1.5 acres of treatment along the southwest shoreline of the Peninsula would be completed next spring/early summer. The fire crew will also be doing some lopping and scattering or piling of felled material in some areas. Monitoring of the response to conifer felling will occur starting next year. Additional density transects would be placed in the work

area should jackpot burning of felled material occur in the 1 to 2 years following conifer felling to gauge aspen response to burning.

Pre-Treatment Aspen Photos

Post Treatment Aspen Photos