



### BACKGROUND

Vanilla grass (Anthoxanthum nitens) is rare in California (CRPR 2B.3) but has a circumboreal range. Although this rhizomatous species is usually associated with meadow habitats, a two acre occurrence near Bunchgrass Valley on the Lassen National Forest occurred as scattered patches under dense, even-aged lodgepole pine forest.



Fig. 1 (above): In 2012, vanilla grass was most densely distributed under gaps in the lodgepole pine canopy

Historical imagery and coring of lodgepole pine trees suggested that this occurrence was once within meadow habitat (Fig. 2). Mechanical thinning to remove lodgepole pine occurred across half of the vanilla grass occurrence in Fall 2013.



Fig. 2 (above): Overlaying NAIP imagery from 2010 over aerial imagery from 1941 shows a contraction in open meadow habitat between 1941 and 2010.

# Rare vanilla grass expands following overstory removal Kirsten Bovee, USDA Forest Service, Lassen National Forest, 900 E. Highway 36, Chester, CA 96020



Decreases in canopy cover were significantly

## MANAGEMENT

# removal...



... however, lodgepole pine is returning to occupy plots and will continue to do so in the absence of disturbance. Future work is needed to investigate how to maintain open meadow conditions in this vanilla grass occurrence.



post-treatment (2018).

The Hat Creek Ranger District of the Lassen NF for project implementation; Tim Kellison, Allison Sanger, Krystal House and Taylor Figueroa for data collection assistance; Burney-Hat Creek Basins Collaborative Forest Landscape Restoration Project for project support.



Our results suggest that vanilla grass can tolerate mechanical disturbance and benefit from conifer

Fig. 6 (above): Vanilla grass occurrence one year post-treatment (2014).

Fig. 7 (above): Lodgepole pine saplings within vanilla grass occurrence five years

### THANKS TO