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### Data Article

# Data and analyses of woody restoration planting survival and growth as a function of wild ungulate herbivory



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#### ABSTRACT

These data and analyses support the research article “Wild ungulate herbivory suppresses deciduous woody plant establishment following salmonid stream restoration” Averett et al. (2017) [1]. The data and analyses presented here include: (1) planting density, survival and growth (two years post restoration) of riparian plantings along an ~11 km stream reach in northeastern Oregon as a function of herbivory treatment (protected/not protected from wild ungulate herbivory), habitat type, and planting species; and (2) abundance and height distributions of naturally occurring deciduous woody species along the restored stream reach two years post restoration. Survival and growth analyses are provided as output from multiple logistic and mixed effect regression models respectively.

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## Specifications Table

Subject area	<i>Biology</i>
More specific subject area	<i>Riparian vegetation restoration and herbivory</i>
Type of data	<i>Figures and Tables</i>
How data was acquired	<i>Repeat vegetation sampling along permanent riparian transects.</i>
Data format	<i>Analyzed, Raw</i>
Experimental factors	<i>Woody species were planted along an 11-km stream reach. The plantings were exposed to two herbivory treatments (1) protected; and (2) unprotected from elk (<i>Cervus elaphus</i>) and mule deer (<i>Odocoileus hemionus</i>) herbivory. Planting occurred in wet and dry meadow habitats.</i>
Experimental features	<i>Planting growth and survival were measured at the end of two growing seasons. Planting densities were determined at the end of the first growing season, and naturally occurring deciduous woody species abundance and height was measured two years post-restoration.</i>
Data source location	<i>Data was collected at the Starkey Experimental Forest and Range of the USDA Forest Service in northeastern Oregon, USA. (45°12' N, 118° 3' W)</i>
Data accessibility	<i>The data are available with this article and within <a href="#">Supplementary files</a>.</i>

## Value of the data

- These data present survival and growth of woody riparian restoration plantings across two levels of wild ungulate herbivory and can be compared to other restoration planting studies.
- These data provide post-restoration abundance and heights of naturally occurring deciduous woody species that can be compared to riparian vegetation recovery in other studies.
- Future repeated measurements can be compared to this data to reveal long-term relationships between wild ungulate herbivory and woody riparian vegetation development.
- These data allow researchers to extend the analyses.

## 1. Data

The presented data was obtained by sampling riparian vegetation along 191 permanently located riparian transects, and by tracking the growth and survival of 1057 woody riparian restoration plantings exposed to two different herbivory treatments (protected/unprotected from wild ungulate herbivory) for two years following restoration, and include: (1) sampling densities of plantings by species along the restored reach ([Fig. 1](#)); (2) survival analyses using multiple logistic and mixed effects logistic regression ([Tables 1](#) and [2](#)); (3) growth analyses using mixed effects regression ([Tables 3](#) and [4](#)); (4) abundance (presence/absence) of naturally occurring deciduous woody species along the restored stream reach two years following restoration ([Fig. 2](#)); and (5) height distributions of naturally occurring deciduous woody species for highly and less preferred (by elk and deer) species as well as percentage of individuals within those two categories subjected to intensive browsing pressure ([Fig. 3](#)). Corresponding datasets are provided within a [Supplementary file](#) to this paper. Refer to [[1](#)] for detailed interpretation and discussion.

## 2. Experimental design, materials and methods

### 2.1. Design

A stream restoration project was implemented along ~11 km of Meadow Creek, a salmonid stream in northeastern Oregon, in 2012 and 2013. During spring of 2012 and 2013, more than 50,000

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