Metadata for file `spring_height_data_2003_2019.csv`

Description of column headings for for data on spring heights in experimental and observational plots. Experimental layout and procedures for data collection in experimental plots were described in Bilyeu, D. M., D. J. Cooper, and N. T. Hobbs. 2008. Water tables constrain height recovery of willow on Yellowstone's northern range. Ecological Applications 18:80-92. Sampling design and procedures for data collection for observational plots are described in Marshall, K. N., D. J. Cooper, and N. T. Hobbs. 2014. Interactions among herbivory, climate, topography and plant age shape riparian willow dynamics in northern Yellowstone National Park, USA. Journal of Ecology 102:667-677.

Column name	Description
willid_full	Identification code for an individual plant. Components are site-treatment-plant number. For example eb1-cc-614 is plant number 614 in the control plot of site eb1. Treatment codes are given below. Site codes and their spatial coordinates are given in the document "Site Locations.pdf".
year	The year that the measurement was taken.
treat	Code for treatment: cc = experimental unfenced, undammed; cx = experimental undammed, fenced; dc = experimental dammed, unfenced; dx = experimental dammed, fenced; obs = observational
site_id	Identification code for site (without treatment code)
exp	Indicator variable for membership in experiment = 1 if a experimental plot and 0 otherwise.
willid	Plant number
species_id	Identification code for species: geyer = *Salix geyeriana;* beb = *Salix bebbiana*; pseudo = *Salix pseudomonticola*; planifolia = *Salix planifolia;* boothi = *Salix boothii*
fence	Indicator variable for fence = 1 if a fenced plot and 0 otherwise.
dam	Indicator variable for dam = 1 if a dammed plot and 0 otherwise.
browse	Indicator variable for browsed = 1 if unfenced or observational plot, 0 otherwise.
n.plants	Number of plants in the plot
n.years	Number of years the plant was observed
min.year	First year that plant was marked and measured
max.year	Last year that plant was measured
site_full	Identification code for site including site abbreviation and treatment code. Treatment codes are given the treat row above. Site codes and their spatial coordinates are given in the document "Site Locations.pdf".
spring_height	Height of tallest stem on plant in cm
overwinter _loss	Change in height of plant between fall of year t and spring of year $t+1$.
height_increment	Change in height during growing season, i.e., between spring of year t and fall of year t