Point Weights

steppe

## # A tibble: 19 × 12  
## Plot.ID stratum.x id.x Panel.x Plot.…¹ psF.x strat…² id.y Panel.y Plot.…³  
## <chr> <chr> <chr> <chr> <chr> <fct> <chr> <chr> <chr> <chr>   
## 1 as-004 as 004 2021 sampled samp… as 004 2021 sampled  
## 2 as-008 as 008 oversamp… sampled samp… as 008 oversa… sampled  
## 3 as-012 as 012 oversamp… sampled samp… as 012 oversa… sampled  
## 4 gr-026 gr 026 oversamp… sampled samp… gr 026 oversa… sampled  
## 5 gr-027 gr 027 oversamp… sampled samp… gr 027 oversa… sampled  
## 6 gr-028 gr 028 oversamp… sampled samp… gr 028 oversa… sampled  
## 7 mc-056 mc 056 oversamp… sampled samp… mc 056 oversa… sampled  
## 8 mc-057 mc 057 oversamp… sampled samp… mc 057 oversa… sampled  
## 9 mms-083 mms 083 2020 sampled samp… mms 083 2020 sampled  
## 10 mms-084 mms 084 2020 sampled samp… mms 084 2020 sampled  
## 11 mms-096 mms 096 oversamp… sampled samp… mms 096 oversa… sampled  
## 12 mms-097 mms 097 oversamp… sampled samp… mms 097 oversa… sampled  
## 13 mms-098 mms 098 oversamp… sampled samp… mms 098 oversa… sampled  
## 14 ot-117 ot 117 oversamp… sampled samp… ot 117 oversa… sampled  
## 15 pj-158 pj 158 oversamp… sampled samp… pj 158 oversa… sampled  
## 16 pp-176 pp 176 oversamp… sampled samp… pp 176 oversa… sampled  
## 17 pp-177 pp 177 oversamp… sampled samp… pp 177 oversa… sampled  
## 18 sd-329 sd 329 2019 sampled samp… sd 329 2019 sampled  
## 19 ss-262 ss 262 2020 sampled samp… ss 262 2020 sampled  
## # … with 2 more variables: psF.y <fct>, grp\_n <int>, and abbreviated variable  
## # names ¹​Plot.Status.x, ²​stratum.y, ³​Plot.Status.y

## `summarise()` has grouped output by 'stratum'. You can override using the  
## `.groups` argument.

Design Weights

Under a Simple Random Sample, wherein each stratum would be un-weighted

\* Where + $ \_{i} $ is the inclusion probability of each individual, i.e. the probability of a site being selected + $ n $ sample size, e.g. the number of plots + $ N $ population size, e.g. the target is geographic size of the BLM field office

Under a weighted design, wherein each stratum has an associated weight e.g. based on it’s heterogeneity

\* Where + $ *{i} $ is the inclusion probability of each individual, i.e. the probability of a site being selected + $ W*{i} $ is the weight associated with each site

## Loading required package: survey

## Loading required package: grid

##   
## Attaching package: 'grid'

## The following object is masked from 'package:terra':  
##   
## depth

## Loading required package: Matrix

##   
## Attaching package: 'Matrix'

## The following objects are masked from 'package:tidyr':  
##   
## expand, pack, unpack

## Loading required package: survival

##   
## Attaching package: 'survey'

## The following object is masked from 'package:graphics':  
##   
## dotchart

## spsurvey version 5.0.0 introduced significant changes to the inputs and outputs of many functions. Please review the updated materials, vignettes, and documentation by visiting   
## https://cran.r-project.org/package=spsurvey

## Joining, by = "Stratum"  
## Adding missing grouping variables: `Stratum`  
## Joining, by = "Stratum"

The reporting units of Areas of Critical Environmental Concern (ACEC’s), and Wilderness Study Areas (WSA), have different management objectives relative to the remaining BLM administered surface area. These areas are intended to have ” … greater than 80 percent vegetation communities … “. These areas were not intensified units within the original sample design, rather we split them out here using the original point draw for the field office. Here we calculate the initial sample weights for them using the same approach as for the remainder of BLM land, i.e. the acreage of each stratum is weighed against a targeted proportion of sites in the region. As our sample design was initiated and completed during a period of drought (See…), we dismiss the possibilities of making temporal comparisons across the sample panels. Accordingly, we have strata within these management units which: do not have a point per year panel (i.e. cannot be sampled each year). Subsequently, we do not have the initial ability to infer across the entire acreage of each stratum within them.

## Warning: attribute variables are assumed to be spatially constant throughout all  
## geometries  
  
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## geometries

## Warning: [SpatVector from sf] not all geometries were transferred, use svc for a geometry collection

## Joining, by = "ID"

## Warning in rm(acecs, wsa, acec\_pts, wsa\_pts, raster\_cells, wsaSpat, wsAcec):  
## object 'acec\_pts' not found

## Warning in rm(acecs, wsa, acec\_pts, wsa\_pts, raster\_cells, wsaSpat, wsAcec):  
## object 'wsa\_pts' not found

## [1] "StratumName" "Stratum" "Total" "NotSampled" "Rejected"   
## [6] "Sampled" "DesiredSS" "PropArea" "PropTarget" "Acres"   
## [11] "ApproxStWgt"

## Warning: attribute variables are assumed to be spatially constant throughout all  
## geometries



