LCI\_Areas\_HighRskPopulation\_LifeExp

AAABatt

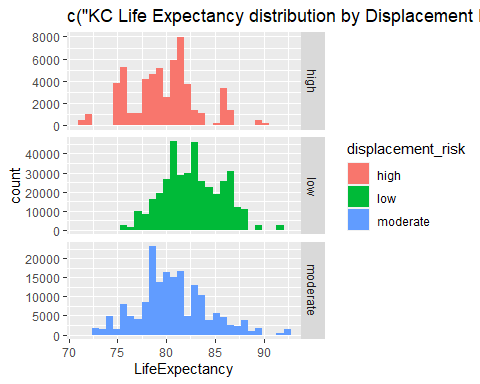
2023-04-25

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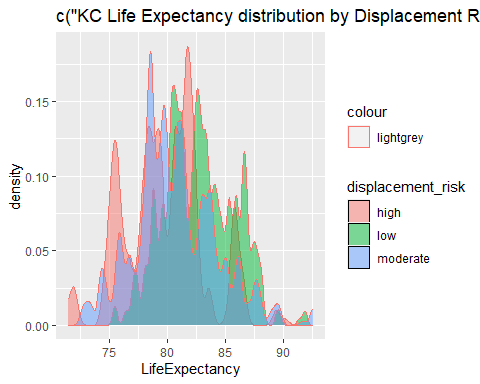
#TEST\_1  
 #Life Expectancy and Median Income Distributions  
 #by Displacement Risk Group  
 #KC,WA 2023  
#  
###https://gis-kingcounty.opendata.arcgis.com/maps/lci-opportunity-area-metrics-lci-opportunity-metrics-area  
###  
library(tidyverse)

## ── Attaching core tidyverse packages ──────────────────────── tidyverse 2.0.0 ──  
## ✔ dplyr 1.1.2 ✔ readr 2.1.4  
## ✔ forcats 1.0.0 ✔ stringr 1.5.0  
## ✔ ggplot2 3.4.2 ✔ tibble 3.2.1  
## ✔ lubridate 1.9.2 ✔ tidyr 1.3.0  
## ✔ purrr 1.0.1   
## ── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
## ✖ dplyr::filter() masks stats::filter()  
## ✖ dplyr::lag() masks stats::lag()  
## ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors

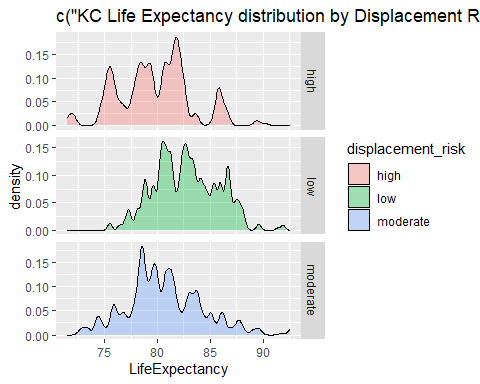
df1<-c(0)  
df1<-array(1L:628174L,dim = c(628174L,14L))  
df1[,]<-c(NA)  
df1<-read.csv(file=c("LCI\_KC\_04\_2023.csv"),header=T)  
dff<-read.csv(file=c("LCI\_KC\_04\_2023.csv"),header=T)  
df<-select(df1,c(OBJECTID,ZIP5,  
 median\_income,  
 KCA\_ACRES,GEO\_ID\_GRP,GEO\_ID\_TRT, Shape\_Area,  
 limitedEng\_pct,  
 disabled\_pct,disabled\_uninsured\_pct,foodstamp\_pct,LifeExpectancy ,life\_exp\_pctle,  
 displacement\_risk))  
rm(df1)  
  
df$OBJECTID<-as.factor(df$OBJECTID)  
df$ZIP5<-as.factor(df$ZIP5)  
df$GEO\_ID\_GRP<-as.factor(df$GEO\_ID\_GRP)  
df$GEO\_ID\_TRT<-as.factor(df$GEO\_ID\_TRT)  
df$displacement\_risk<-as.factor(df$displacement\_risk)  
  
  
  
  
HighDisplcRsk<-filter(df,  
 displacement\_risk==c("high"))  
  
AbovMuLifeExp<-filter(df,  
 LifeExpectancy>76)  
  
BelowMuLifeExp<-filter(df,  
 LifeExpectancy<76)  
  
  
  
  
# Histogram of Life Expectancy by Displacement Group KC  
hstoplt<-df %>% na.omit() %>% ggplot(aes(x = LifeExpectancy,  
 fill=displacement\_risk,  
 title=c("KC Life Expectancy distribution by Displacement Risk"))) + # remember aes()  
 geom\_histogram(bins = 30,show.legend = T)+  
 facet\_grid(displacement\_risk~.,scales="free")  
print(hstoplt)



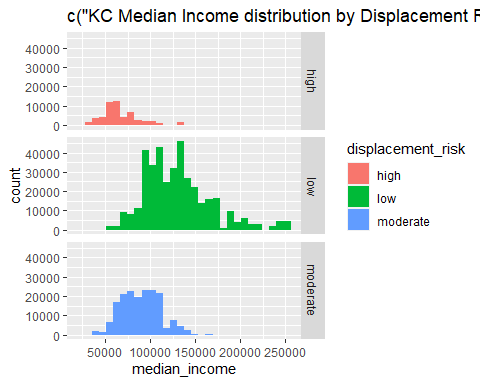
#  
#  
#  
#  
#Density plots for Life Expectancy distribution by Displacement Group KC  
dnstyplt<-df %>% na.omit() %>% ggplot(aes(x = LifeExpectancy,  
 colour="lightgrey",fill=displacement\_risk,  
 title=c("KC Life Expectancy distribution by Displacement Risk"))) + # remember aes()  
 geom\_density(alpha=0.5)  
print(dnstyplt)



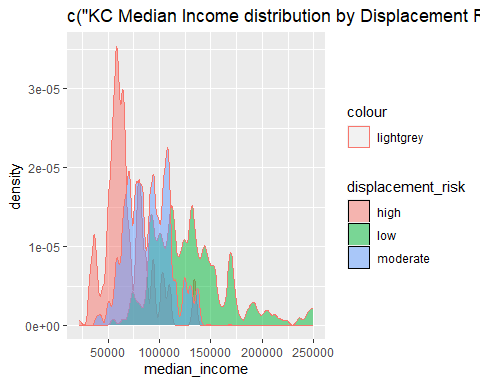
#  
dnstyplt1<-df %>% na.omit() %>% ggplot(aes(x = LifeExpectancy,  
 fill=displacement\_risk,  
 title=c("KC Life Expectancy distribution by Displacement Risk"))) + # remember aes()  
 geom\_density(alpha=0.35)+  
 facet\_grid(displacement\_risk~.,scales="free")  
print(dnstyplt1)



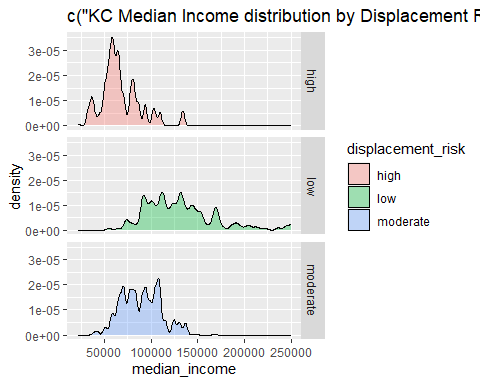
#Median Income by Displacement Risk group  
hstopltM<-df %>% na.omit() %>% ggplot(aes(x = median\_income,  
 fill=displacement\_risk,  
 title=c("KC Median Income distribution by Displacement Risk"))) + # remember aes()  
 geom\_histogram(bins = 30,show.legend = T)+  
 facet\_grid(displacement\_risk~.)  
print(hstopltM)



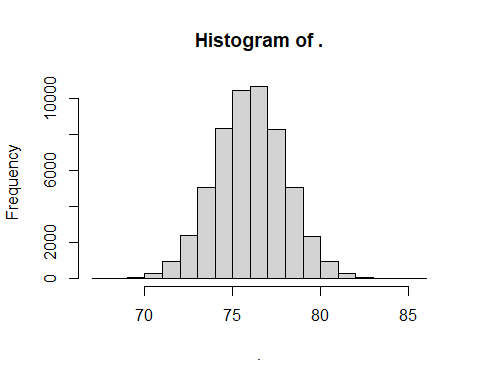
#  
#  
#  
#  
#Density plots  
dnstypltM<-df %>% na.omit() %>% ggplot(aes(x = median\_income,  
 colour="lightgrey",fill=displacement\_risk,  
 title=c("KC Median Income distribution by Displacement Risk"))) + # remember aes()  
 geom\_density(alpha=0.5)  
print(dnstypltM)



#  
dnstypltM1<-df %>% na.omit() %>% ggplot(aes(x = median\_income,  
 fill=displacement\_risk,  
 title=c("KC Median Income distribution by Displacement Risk"))) + # remember aes()  
 geom\_density(alpha=0.35)+  
 facet\_grid(displacement\_risk~.,)  
print(dnstypltM1)



#randomized normal distribution model of life expectancy(mu=76,sd=2) of size n=size of high displacement risk sample   
rnorm(55157,76,sd=2) %>% hist()



##Student's T-test for testing difference of means between sample and population  
#assumes normal distribution, independence, and as an, a prioi, declares the alpha (significance level) for cut off of p values  
#necessary for rejection ,or failure to reject the null hypothesis (H0) given particular xyz...  
#i.e. 1. nml dist, 2. ind sample / rep sample of population 3. sample variance and size 4. Confounding factors. 5. Design Flaws  
t.test(df$LifeExpectancy,mu = c(76), conf.level = 0.95)

##   
## One Sample t-test  
##   
## data: df$LifeExpectancy  
## t = 1377.1, df = 625123, p-value < 2.2e-16  
## alternative hypothesis: true mean is not equal to 76  
## 95 percent confidence interval:  
## 81.87874 81.89550  
## sample estimates:  
## mean of x   
## 81.88712

# High Displacement Risk  
#highdispl  
#1 KCA Acres  
HighDisplcRsk %>% arrange(desc(c(KCA\_ACRES))) %>% glimpse() %>% head(30) %>% print()

## Rows: 56,065  
## Columns: 14  
## $ OBJECTID <fct> 499862, 579030, 579027, 628154, 500502, 432694,…  
## $ ZIP5 <fct> 98105, 98057, 98057, 98030, 98108, 98001, 98047…  
## $ median\_income <int> NA, 44940, 44940, 67045, 59529, 57731, 57731, 5…  
## $ KCA\_ACRES <dbl> 478.20650, 153.27596, 152.45014, 150.20000, 131…  
## $ GEO\_ID\_GRP <fct> 530330053032, 530330253024, 530330253023, 53033…  
## $ GEO\_ID\_TRT <fct> 53033005303, 53033025302, 53033025302, 53033029…  
## $ Shape\_Area <dbl> 20830769, 6676690, 6640787, 6445248, 5462652, 5…  
## $ limitedEng\_pct <dbl> 0.00000000, 0.07196970, 0.07196970, 0.13694853,…  
## $ disabled\_pct <dbl> 0.03655728, 0.24722629, 0.24722629, 0.17361111,…  
## $ disabled\_uninsured\_pct <dbl> 0.00143926, 0.01528156, 0.01528156, 0.00000000,…  
## $ foodstamp\_pct <dbl> 0.00000000, 0.12954545, 0.12954545, 0.11213235,…  
## $ LifeExpectancy <dbl> NA, 81.1, 81.1, 80.6, 85.8, 71.5, 71.5, 71.5, 7…  
## $ life\_exp\_pctle <dbl> NA, 0.43478261, 0.43478261, 0.37084399, 0.83887…  
## $ displacement\_risk <fct> high, high, high, high, high, high, high, high,…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 499862 98105 NA 478.20650 530330053032 53033005303 20830769  
## 2 579030 98057 44940 153.27596 530330253024 53033025302 6676690  
## 3 579027 98057 44940 152.45014 530330253023 53033025302 6640787  
## 4 628154 98030 67045 150.20000 530330297022 53033029702 6445248  
## 5 500502 98108 59529 131.10000 530330100011 53033010001 5462652  
## 6 432694 98001 57731 127.85865 530330308011 53033030801 5685237  
## 7 421867 98047 57731 102.28526 530330308011 53033030801 4590024  
## 8 432674 98001 57731 90.41506 530330308011 53033030801 3911696  
## 9 628148 98002 32283 86.86001 530330305011 53033030501 3895667  
## 10 591291 98133 70268 77.68999 530330203012 53033020301 3169142  
## 11 431474 98057 64691 72.34056 530330262001 53033026200 3176831  
## 12 361077 98030 67045 67.25048 530330297021 53033029702 2929365  
## 13 567958 98003 51442 63.62022 530330300061 53033030006 2771385  
## 14 627505 98032 67045 62.93999 530330297022 53033029702 2736277  
## 15 627764 98168 64691 60.62000 530330262001 53033026200 2630658  
## 16 550560 98032 35819 60.40000 530330292061 53033029206 2627468  
## 17 368383 98030 67045 59.11001 530330297022 53033029702 2561977  
## 18 374138 98002 67045 59.10000 530330297022 53033029702 2555645  
## 19 627360 98032 35819 58.76035 530330292061 53033029206 2561167  
## 20 390383 98158 65179 56.31171 530330284024 53033028402 2452938  
## 21 550577 98032 35819 54.23999 530330292061 53033029206 2361404  
## 22 432677 98001 57731 52.51001 530330308011 53033030801 2287343  
## 23 438576 98188 64691 51.45999 530330262001 53033026200 2227187  
## 24 500422 98108 59529 51.20999 530330100012 53033010001 1463877  
## 25 421861 98001 57731 49.37000 530330308011 53033030801 2152394  
## 26 420969 98057 64691 48.21097 530330262001 53033026200 2100070  
## 27 332874 98188 50222 45.32176 530330284031 53033028403 1973806  
## 28 431468 98057 64691 45.15592 530330262001 53033026200 1970077  
## 29 500359 98144 59529 44.77000 530330100012 53033010001 1964684  
## 30 184732 98032 35819 43.51150 530330292061 53033029206 1893014  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.00000000 0.03655728 0.00143926 0.00000000  
## 2 0.07196970 0.24722629 0.01528156 0.12954545  
## 3 0.07196970 0.24722629 0.01528156 0.12954545  
## 4 0.13694853 0.17361111 0.00000000 0.11213235  
## 5 0.17354877 0.09953811 0.00000000 0.10353082  
## 6 0.14935065 0.11894673 0.00771792 0.08395176  
## 7 0.14935065 0.11894673 0.00771792 0.08395176  
## 8 0.14935065 0.11894673 0.00771792 0.08395176  
## 9 0.05457746 0.26726163 0.00000000 0.19454225  
## 10 0.10607029 0.17269964 0.00911854 0.09840256  
## 11 0.04321486 0.06825233 0.00206825 0.08319871  
## 12 0.13694853 0.17361111 0.00000000 0.11213235  
## 13 0.15756036 0.15887635 0.02624914 0.18614994  
## 14 0.13694853 0.17361111 0.00000000 0.11213235  
## 15 0.04321486 0.06825233 0.00206825 0.08319871  
## 16 0.13662791 0.19528762 0.03481214 0.18120155  
## 17 0.13694853 0.17361111 0.00000000 0.11213235  
## 18 0.13694853 0.17361111 0.00000000 0.11213235  
## 19 0.13662791 0.19528762 0.03481214 0.18120155  
## 20 0.24435524 0.08800438 0.00000000 0.04415454  
## 21 0.13662791 0.19528762 0.03481214 0.18120155  
## 22 0.14935065 0.11894673 0.00771792 0.08395176  
## 23 0.04321486 0.06825233 0.00206825 0.08319871  
## 24 0.17354877 0.09953811 0.00000000 0.10353082  
## 25 0.14935065 0.11894673 0.00771792 0.08395176  
## 26 0.04321486 0.06825233 0.00206825 0.08319871  
## 27 0.13310434 0.17305678 0.00293317 0.04036067  
## 28 0.04321486 0.06825233 0.00206825 0.08319871  
## 29 0.17354877 0.09953811 0.00000000 0.10353082  
## 30 0.13662791 0.19528762 0.03481214 0.18120155  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 NA NA high  
## 2 81.1 0.43478261 high  
## 3 81.1 0.43478261 high  
## 4 80.6 0.37084399 high  
## 5 85.8 0.83887468 high  
## 6 71.5 0.00000000 high  
## 7 71.5 0.00000000 high  
## 8 71.5 0.00000000 high  
## 9 72.0 0.00255754 high  
## 10 79.7 0.28900256 high  
## 11 80.7 0.38363171 high  
## 12 80.6 0.37084399 high  
## 13 74.7 0.02046036 high  
## 14 80.6 0.37084399 high  
## 15 80.7 0.38363171 high  
## 16 75.7 0.05115090 high  
## 17 80.6 0.37084399 high  
## 18 80.6 0.37084399 high  
## 19 75.7 0.05115090 high  
## 20 78.7 0.19181586 high  
## 21 75.7 0.05115090 high  
## 22 71.5 0.00000000 high  
## 23 80.7 0.38363171 high  
## 24 85.8 0.83887468 high  
## 25 71.5 0.00000000 high  
## 26 80.7 0.38363171 high  
## 27 79.4 0.25063939 high  
## 28 80.7 0.38363171 high  
## 29 85.8 0.83887468 high  
## 30 75.7 0.05115090 high

HighDisplcRsk %>% arrange(desc(c(KCA\_ACRES))) %>% glimpse() %>% tail(30) %>% print()

## Rows: 56,065  
## Columns: 14  
## $ OBJECTID <fct> 499862, 579030, 579027, 628154, 500502, 432694,…  
## $ ZIP5 <fct> 98105, 98057, 98057, 98030, 98108, 98001, 98047…  
## $ median\_income <int> NA, 44940, 44940, 67045, 59529, 57731, 57731, 5…  
## $ KCA\_ACRES <dbl> 478.20650, 153.27596, 152.45014, 150.20000, 131…  
## $ GEO\_ID\_GRP <fct> 530330053032, 530330253024, 530330253023, 53033…  
## $ GEO\_ID\_TRT <fct> 53033005303, 53033025302, 53033025302, 53033029…  
## $ Shape\_Area <dbl> 20830769, 6676690, 6640787, 6445248, 5462652, 5…  
## $ limitedEng\_pct <dbl> 0.00000000, 0.07196970, 0.07196970, 0.13694853,…  
## $ disabled\_pct <dbl> 0.03655728, 0.24722629, 0.24722629, 0.17361111,…  
## $ disabled\_uninsured\_pct <dbl> 0.00143926, 0.01528156, 0.01528156, 0.00000000,…  
## $ foodstamp\_pct <dbl> 0.00000000, 0.12954545, 0.12954545, 0.11213235,…  
## $ LifeExpectancy <dbl> NA, 81.1, 81.1, 80.6, 85.8, 71.5, 71.5, 71.5, 7…  
## $ life\_exp\_pctle <dbl> NA, 0.43478261, 0.43478261, 0.37084399, 0.83887…  
## $ displacement\_risk <fct> high, high, high, high, high, high, high, high,…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 56036 593868 98030 57271 NA 530330295051 53033029505  
## 56037 593869 98030 57271 NA 530330295051 53033029505  
## 56038 599178 98188 62683 NA 530330288021 53033028802  
## 56039 604614 98188 62683 NA 530330288021 53033028802  
## 56040 605494 98030 67045 NA 530330297021 53033029702  
## 56041 607227 98133 81331 NA 530330207001 53033020700  
## 56042 607228 98133 81331 NA 530330207001 53033020700  
## 56043 607229 98133 81331 NA 530330207001 53033020700  
## 56044 608011 98030 58545 NA 530330297013 53033029701  
## 56045 608036 98030 58545 NA 530330297013 53033029701  
## 56046 610803 98188 62683 NA 530330288022 53033028802  
## 56047 611234 98188 62683 NA 530330288021 53033028802  
## 56048 612747 98188 64691 NA 530330262001 53033026200  
## 56049 612948 98118 50490 NA 530330118022 53033011802  
## 56050 614438 98146 85278 NA 530330266002 53033026600  
## 56051 615484 98032 67045 NA 530330297022 53033029702  
## 56052 615515 98030 52809 NA 530330295061 53033029506  
## 56053 616969 98133 33089 NA 530330004042 53033000404  
## 56054 616970 98133 37432 NA 530330004032 53033000403  
## 56055 618351 98133 81331 NA 530330207003 53033020700  
## 56056 619309 98106 85278 NA 530330266002 53033026600  
## 56057 619310 98146 85278 NA 530330266002 53033026600  
## 56058 619311 98146 85278 NA 530330266002 53033026600  
## 56059 619312 98146 85278 NA 530330266002 53033026600  
## 56060 620281 98001 32283 NA 530330305011 53033030501  
## 56061 625249 98168 54957 NA 530330282001 53033028200  
## 56062 626231 98108 54412 NA 530330112001 53033011200  
## 56063 627364 98188 64691 NA 530330262001 53033026200  
## 56064 627494 98032 67045 NA 530330297022 53033029702  
## 56065 627717 98168 64691 NA 530330262002 53033026200  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 56036 2022.6640 0.08279338 0.05701640 0.00468628  
## 56037 1963.6388 0.08279338 0.05701640 0.00468628  
## 56038 341332.2328 0.18581803 0.08258258 0.00327600  
## 56039 3635167.2029 0.18581803 0.08258258 0.00327600  
## 56040 1150.9098 0.13694853 0.17361111 0.00000000  
## 56041 410.3701 0.11749516 0.17472393 0.00000000  
## 56042 533.5040 0.11749516 0.17472393 0.00000000  
## 56043 3026.7740 0.11749516 0.17472393 0.00000000  
## 56044 289.9891 0.08010753 0.12743823 0.00000000  
## 56045 105.5164 0.08010753 0.12743823 0.00000000  
## 56046 6790.2790 0.18581803 0.08258258 0.00327600  
## 56047 3328.8470 0.18581803 0.08258258 0.00327600  
## 56048 28334.9249 0.04321486 0.06825233 0.00206825  
## 56049 987719.4167 0.09010417 0.12662942 0.01096627  
## 56050 1599.9421 0.04017857 0.05743243 0.00591216  
## 56051 23560.0717 0.13694853 0.17361111 0.00000000  
## 56052 3370.2329 0.22505938 0.10890878 0.00000000  
## 56053 12831.5616 0.10431504 0.25862530 0.01631452  
## 56054 134246.9779 0.06171429 0.20120664 0.00000000  
## 56055 5125.2358 0.11749516 0.17472393 0.00000000  
## 56056 10221.4854 0.04017857 0.05743243 0.00591216  
## 56057 4344.8977 0.04017857 0.05743243 0.00591216  
## 56058 3325.7913 0.04017857 0.05743243 0.00591216  
## 56059 2737.0094 0.04017857 0.05743243 0.00591216  
## 56060 60495.9897 0.05457746 0.26726163 0.00000000  
## 56061 8184.3255 0.11501272 0.08765690 0.00690377  
## 56062 2545.2903 0.19220430 0.12853678 0.00000000  
## 56063 5070.0980 0.04321486 0.06825233 0.00206825  
## 56064 19899.2306 0.13694853 0.17361111 0.00000000  
## 56065 4975.2724 0.04321486 0.06825233 0.00206825  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 56036 0.01223902 78.1 0.13554987 high  
## 56037 0.01223902 78.1 0.13554987 high  
## 56038 0.03203759 77.6 0.11253197 high  
## 56039 0.03203759 77.6 0.11253197 high  
## 56040 0.11213235 80.6 0.37084399 high  
## 56041 0.10071014 78.5 0.16624041 high  
## 56042 0.10071014 78.5 0.16624041 high  
## 56043 0.10071014 78.5 0.16624041 high  
## 56044 0.05967742 80.6 0.37084399 high  
## 56045 0.05967742 80.6 0.37084399 high  
## 56046 0.03203759 77.6 0.11253197 high  
## 56047 0.03203759 77.6 0.11253197 high  
## 56048 0.08319871 80.7 0.38363171 high  
## 56049 0.13437500 81.8 0.51406650 high  
## 56050 0.03236607 79.4 0.25063939 high  
## 56051 0.11213235 80.6 0.37084399 high  
## 56052 0.09976247 78.1 0.13554987 high  
## 56053 0.12484290 80.3 0.33759591 high  
## 56054 0.14857143 80.3 0.33759591 high  
## 56055 0.10071014 78.5 0.16624041 high  
## 56056 0.03236607 79.4 0.25063939 high  
## 56057 0.03236607 79.4 0.25063939 high  
## 56058 0.03236607 79.4 0.25063939 high  
## 56059 0.03236607 79.4 0.25063939 high  
## 56060 0.19454225 72.0 0.00255754 high  
## 56061 0.06717557 79.0 0.21994885 high  
## 56062 0.08467742 76.0 0.07161125 high  
## 56063 0.08319871 80.7 0.38363171 high  
## 56064 0.11213235 80.6 0.37084399 high  
## 56065 0.08319871 80.7 0.38363171 high

#2 Life Exp  
HighDisplcRsk %>% arrange(desc(c(LifeExpectancy))) %>% glimpse() %>% head(30) %>% print()

## Rows: 56,065  
## Columns: 14  
## $ OBJECTID <fct> 3038, 3258, 3259, 3260, 3261, 3262, 3263, 3264,…  
## $ ZIP5 <fct> 98144, 98104, 98104, 98104, 98104, 98104, 98104…  
## $ median\_income <int> 33346, 33346, 33346, 33346, 33346, 33346, 33346…  
## $ KCA\_ACRES <dbl> 0.33057851, 0.25266299, 0.19054178, 0.18032598,…  
## $ GEO\_ID\_GRP <fct> 530330091001, 530330091001, 530330091001, 53033…  
## $ GEO\_ID\_TRT <fct> 53033009100, 53033009100, 53033009100, 53033009…  
## $ Shape\_Area <dbl> 14312.007, 10935.859, 8314.272, 7873.338, 7885.…  
## $ limitedEng\_pct <dbl> 0.3958219, 0.3958219, 0.3958219, 0.3958219, 0.3…  
## $ disabled\_pct <dbl> 0.3214286, 0.3214286, 0.3214286, 0.3214286, 0.3…  
## $ disabled\_uninsured\_pct <dbl> 0.01046176, 0.01046176, 0.01046176, 0.01046176,…  
## $ foodstamp\_pct <dbl> 0.2561847, 0.2561847, 0.2561847, 0.2561847, 0.2…  
## $ LifeExpectancy <dbl> 90.2, 90.2, 90.2, 90.2, 90.2, 90.2, 90.2, 90.2,…  
## $ life\_exp\_pctle <dbl> 0.9897698, 0.9897698, 0.9897698, 0.9897698, 0.9…  
## $ displacement\_risk <fct> high, high, high, high, high, high, high, high,…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 3038 98144 33346 0.33057851 530330091001 53033009100 14312.007  
## 2 3258 98104 33346 0.25266299 530330091001 53033009100 10935.859  
## 3 3259 98104 33346 0.19054178 530330091001 53033009100 8314.272  
## 4 3260 98104 33346 0.18032598 530330091001 53033009100 7873.338  
## 5 3261 98104 33346 0.18037190 530330091001 53033009100 7885.005  
## 6 3262 98104 33346 0.18039485 530330091001 53033009100 7896.433  
## 7 3263 98104 33346 0.28737373 530330091001 53033009100 15845.505  
## 8 3264 98104 33346 0.25224977 530330091001 53033009100 10992.088  
## 9 3265 98104 33346 0.19008264 530330091001 53033009100 8280.814  
## 10 3266 98104 33346 0.19008264 530330091001 53033009100 8281.251  
## 11 3267 98104 33346 0.19855371 530330091001 53033009100 8657.445  
## 12 3268 98104 33346 0.13583562 530330091001 53033009100 5923.313  
## 13 3269 98104 33346 0.11627640 530330091001 53033009100 5132.671  
## 14 3270 98104 33346 0.39974747 530330091001 53033009100 17841.307  
## 15 3271 98104 33346 0.45681818 530330091001 53033009100 19903.139  
## 16 3272 98104 33346 0.40227272 530330091001 53033009100 17527.511  
## 17 3273 98104 33346 0.13096877 530330091001 53033009100 5710.879  
## 18 3274 98104 33346 0.16666666 530330091001 53033009100 7261.950  
## 19 3275 98104 33346 0.16666666 530330091001 53033009100 7262.224  
## 20 3276 98104 33346 0.22123507 530330091001 53033009100 9640.585  
## 21 3277 98104 33346 0.51790633 530330091001 53033009100 22608.572  
## 22 3278 98104 33346 0.17998163 530330091001 53033009100 7833.589  
## 23 3279 98104 33346 0.15833333 530330091001 53033009100 6913.284  
## 24 3280 98104 33346 0.06707988 530330091001 53033009100 2972.702  
## 25 3281 98104 33346 0.86168503 530330091001 53033009100 37687.775  
## 26 3282 98122 33346 0.19931129 530330091001 53033009100 8688.977  
## 27 3283 98104 33346 0.38643250 530330091001 53033009100 16845.751  
## 28 3284 98104 33346 0.88248393 530330091001 53033009100 38458.903  
## 29 3285 98144 33346 1.09768135 530330091001 53033009100 47848.344  
## 30 3286 98104 33346 0.27428833 530330091001 53033009100 11961.426  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.3958219 0.3214286 0.01046176 0.2561847  
## 2 0.3958219 0.3214286 0.01046176 0.2561847  
## 3 0.3958219 0.3214286 0.01046176 0.2561847  
## 4 0.3958219 0.3214286 0.01046176 0.2561847  
## 5 0.3958219 0.3214286 0.01046176 0.2561847  
## 6 0.3958219 0.3214286 0.01046176 0.2561847  
## 7 0.3958219 0.3214286 0.01046176 0.2561847  
## 8 0.3958219 0.3214286 0.01046176 0.2561847  
## 9 0.3958219 0.3214286 0.01046176 0.2561847  
## 10 0.3958219 0.3214286 0.01046176 0.2561847  
## 11 0.3958219 0.3214286 0.01046176 0.2561847  
## 12 0.3958219 0.3214286 0.01046176 0.2561847  
## 13 0.3958219 0.3214286 0.01046176 0.2561847  
## 14 0.3958219 0.3214286 0.01046176 0.2561847  
## 15 0.3958219 0.3214286 0.01046176 0.2561847  
## 16 0.3958219 0.3214286 0.01046176 0.2561847  
## 17 0.3958219 0.3214286 0.01046176 0.2561847  
## 18 0.3958219 0.3214286 0.01046176 0.2561847  
## 19 0.3958219 0.3214286 0.01046176 0.2561847  
## 20 0.3958219 0.3214286 0.01046176 0.2561847  
## 21 0.3958219 0.3214286 0.01046176 0.2561847  
## 22 0.3958219 0.3214286 0.01046176 0.2561847  
## 23 0.3958219 0.3214286 0.01046176 0.2561847  
## 24 0.3958219 0.3214286 0.01046176 0.2561847  
## 25 0.3958219 0.3214286 0.01046176 0.2561847  
## 26 0.3958219 0.3214286 0.01046176 0.2561847  
## 27 0.3958219 0.3214286 0.01046176 0.2561847  
## 28 0.3958219 0.3214286 0.01046176 0.2561847  
## 29 0.3958219 0.3214286 0.01046176 0.2561847  
## 30 0.3958219 0.3214286 0.01046176 0.2561847  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 90.2 0.9897698 high  
## 2 90.2 0.9897698 high  
## 3 90.2 0.9897698 high  
## 4 90.2 0.9897698 high  
## 5 90.2 0.9897698 high  
## 6 90.2 0.9897698 high  
## 7 90.2 0.9897698 high  
## 8 90.2 0.9897698 high  
## 9 90.2 0.9897698 high  
## 10 90.2 0.9897698 high  
## 11 90.2 0.9897698 high  
## 12 90.2 0.9897698 high  
## 13 90.2 0.9897698 high  
## 14 90.2 0.9897698 high  
## 15 90.2 0.9897698 high  
## 16 90.2 0.9897698 high  
## 17 90.2 0.9897698 high  
## 18 90.2 0.9897698 high  
## 19 90.2 0.9897698 high  
## 20 90.2 0.9897698 high  
## 21 90.2 0.9897698 high  
## 22 90.2 0.9897698 high  
## 23 90.2 0.9897698 high  
## 24 90.2 0.9897698 high  
## 25 90.2 0.9897698 high  
## 26 90.2 0.9897698 high  
## 27 90.2 0.9897698 high  
## 28 90.2 0.9897698 high  
## 29 90.2 0.9897698 high  
## 30 90.2 0.9897698 high

HighDisplcRsk %>% arrange(desc(c(LifeExpectancy))) %>% glimpse() %>% tail(30) %>% print()

## Rows: 56,065  
## Columns: 14  
## $ OBJECTID <fct> 3038, 3258, 3259, 3260, 3261, 3262, 3263, 3264,…  
## $ ZIP5 <fct> 98144, 98104, 98104, 98104, 98104, 98104, 98104…  
## $ median\_income <int> 33346, 33346, 33346, 33346, 33346, 33346, 33346…  
## $ KCA\_ACRES <dbl> 0.33057851, 0.25266299, 0.19054178, 0.18032598,…  
## $ GEO\_ID\_GRP <fct> 530330091001, 530330091001, 530330091001, 53033…  
## $ GEO\_ID\_TRT <fct> 53033009100, 53033009100, 53033009100, 53033009…  
## $ Shape\_Area <dbl> 14312.007, 10935.859, 8314.272, 7873.338, 7885.…  
## $ limitedEng\_pct <dbl> 0.3958219, 0.3958219, 0.3958219, 0.3958219, 0.3…  
## $ disabled\_pct <dbl> 0.3214286, 0.3214286, 0.3214286, 0.3214286, 0.3…  
## $ disabled\_uninsured\_pct <dbl> 0.01046176, 0.01046176, 0.01046176, 0.01046176,…  
## $ foodstamp\_pct <dbl> 0.2561847, 0.2561847, 0.2561847, 0.2561847, 0.2…  
## $ LifeExpectancy <dbl> 90.2, 90.2, 90.2, 90.2, 90.2, 90.2, 90.2, 90.2,…  
## $ life\_exp\_pctle <dbl> 0.9897698, 0.9897698, 0.9897698, 0.9897698, 0.9…  
## $ displacement\_risk <fct> high, high, high, high, high, high, high, high,…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 56036 626878 98122 62810 0.13636363 530330086002 53033008600  
## 56037 626901 98122 62810 0.03000459 530330086002 53033008600  
## 56038 626903 98122 62810 0.02190082 530330086002 53033008600  
## 56039 626904 98122 62810 0.02926997 530330086002 53033008600  
## 56040 626905 98122 62810 0.02380624 530330086002 53033008600  
## 56041 626906 98122 62810 0.02323232 530330086002 53033008600  
## 56042 626907 98122 62810 0.02139577 530330086002 53033008600  
## 56043 626908 98122 62810 0.03181818 530330086002 53033008600  
## 56044 626909 98122 62810 0.02396694 530330086002 53033008600  
## 56045 626911 98122 62810 0.02635445 530330086002 53033008600  
## 56046 626916 98122 62810 0.09699265 530330086002 53033008600  
## 56047 626917 98122 62810 0.23415977 530330086002 53033008600  
## 56048 626918 98122 62810 0.21595500 530330086002 53033008600  
## 56049 626919 98122 62810 0.01896235 530330086002 53033008600  
## 56050 626920 98122 62810 0.01857208 530330086002 53033008600  
## 56051 626921 98122 62810 0.02252066 530330086002 53033008600  
## 56052 626922 98122 62810 0.13223140 530330086002 53033008600  
## 56053 626923 98122 62810 0.03057851 530330086002 53033008600  
## 56054 626924 98122 62810 0.38569788 530330086002 53033008600  
## 56055 626925 98122 62810 0.11019283 530330086002 53033008600  
## 56056 626930 98122 62810 0.02346189 530330086002 53033008600  
## 56057 626931 98122 62810 0.01487603 530330086002 53033008600  
## 56058 626934 98122 62810 0.01487603 530330086002 53033008600  
## 56059 627835 98122 62810 0.09412304 530330086003 53033008600  
## 56060 627836 98122 62810 0.06150137 530330086003 53033008600  
## 56061 627837 98122 62810 0.08815426 530330086003 53033008600  
## 56062 627838 98122 62810 0.09088613 530330086003 53033008600  
## 56063 627839 98122 62810 0.07545913 530330086003 53033008600  
## 56064 627840 98122 62810 0.40224977 530330086003 53033008600  
## 56065 627842 98122 62810 0.46246556 530330086003 53033008600  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 56036 6008.5157 0.07132867 0.05747126 0.00362976  
## 56037 1285.5375 0.07132867 0.05747126 0.00362976  
## 56038 958.1235 0.07132867 0.05747126 0.00362976  
## 56039 1255.2989 0.07132867 0.05747126 0.00362976  
## 56040 1020.2577 0.07132867 0.05747126 0.00362976  
## 56041 1027.2766 0.07132867 0.05747126 0.00362976  
## 56042 937.7729 0.07132867 0.05747126 0.00362976  
## 56043 1369.0567 0.07132867 0.05747126 0.00362976  
## 56044 1051.5506 0.07132867 0.05747126 0.00362976  
## 56045 1140.3157 0.07132867 0.05747126 0.00362976  
## 56046 4222.5507 0.07132867 0.05747126 0.00362976  
## 56047 10739.0008 0.07132867 0.05747126 0.00362976  
## 56048 9406.5628 0.07132867 0.05747126 0.00362976  
## 56049 812.7068 0.07132867 0.05747126 0.00362976  
## 56050 815.0146 0.07132867 0.05747126 0.00362976  
## 56051 998.4970 0.07132867 0.05747126 0.00362976  
## 56052 5472.4352 0.07132867 0.05747126 0.00362976  
## 56053 1338.8847 0.07132867 0.05747126 0.00362976  
## 56054 16351.6225 0.07132867 0.05747126 0.00362976  
## 56055 5109.0107 0.07132867 0.05747126 0.00362976  
## 56056 1031.5472 0.07132867 0.05747126 0.00362976  
## 56057 652.4708 0.07132867 0.05747126 0.00362976  
## 56058 652.2524 0.07132867 0.05747126 0.00362976  
## 56059 4096.9165 0.07132867 0.05747126 0.00362976  
## 56060 2679.0491 0.07132867 0.05747126 0.00362976  
## 56061 3881.1778 0.07132867 0.05747126 0.00362976  
## 56062 3974.1238 0.07132867 0.05747126 0.00362976  
## 56063 3309.3432 0.07132867 0.05747126 0.00362976  
## 56064 17116.3669 0.07132867 0.05747126 0.00362976  
## 56065 20597.3625 0.07132867 0.05747126 0.00362976  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 56036 0.03531469 NA NA high  
## 56037 0.03531469 NA NA high  
## 56038 0.03531469 NA NA high  
## 56039 0.03531469 NA NA high  
## 56040 0.03531469 NA NA high  
## 56041 0.03531469 NA NA high  
## 56042 0.03531469 NA NA high  
## 56043 0.03531469 NA NA high  
## 56044 0.03531469 NA NA high  
## 56045 0.03531469 NA NA high  
## 56046 0.03531469 NA NA high  
## 56047 0.03531469 NA NA high  
## 56048 0.03531469 NA NA high  
## 56049 0.03531469 NA NA high  
## 56050 0.03531469 NA NA high  
## 56051 0.03531469 NA NA high  
## 56052 0.03531469 NA NA high  
## 56053 0.03531469 NA NA high  
## 56054 0.03531469 NA NA high  
## 56055 0.03531469 NA NA high  
## 56056 0.03531469 NA NA high  
## 56057 0.03531469 NA NA high  
## 56058 0.03531469 NA NA high  
## 56059 0.03531469 NA NA high  
## 56060 0.03531469 NA NA high  
## 56061 0.03531469 NA NA high  
## 56062 0.03531469 NA NA high  
## 56063 0.03531469 NA NA high  
## 56064 0.03531469 NA NA high  
## 56065 0.03531469 NA NA high

#3 Median income  
HighDisplcRsk %>% arrange(desc(c(median\_income))) %>% glimpse() %>% head(30) %>% print()

## Rows: 56,065  
## Columns: 14  
## $ OBJECTID <fct> 479378, 592939, 729, 730, 731, 733, 734, 735, 7…  
## $ ZIP5 <fct> 98092, 98002, 98144, 98144, 98144, 98144, 98144…  
## $ median\_income <int> 135845, 135845, 134063, 134063, 134063, 134063,…  
## $ KCA\_ACRES <dbl> 1.10000000, 0.36999540, 0.80775941, 0.82614784,…  
## $ GEO\_ID\_GRP <fct> 530330296021, 530330296021, 530330101023, 53033…  
## $ GEO\_ID\_TRT <fct> 53033029602, 53033029602, 53033010102, 53033010…  
## $ Shape\_Area <dbl> 47649.171, 32058.865, 34473.912, 35326.795, 352…  
## $ limitedEng\_pct <dbl> 0.04720195, 0.04720195, 0.01816052, 0.01816052,…  
## $ disabled\_pct <dbl> 0.03586271, 0.03586271, 0.11851315, 0.11851315,…  
## $ disabled\_uninsured\_pct <dbl> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,…  
## $ foodstamp\_pct <dbl> 0.01265207, 0.01265207, 0.04276508, 0.04276508,…  
## $ LifeExpectancy <dbl> 80.6, 80.6, 79.2, 79.2, 79.2, 79.2, 79.2, 79.2,…  
## $ life\_exp\_pctle <dbl> 0.3708440, 0.3708440, 0.2378517, 0.2378517, 0.2…  
## $ displacement\_risk <fct> high, high, high, high, high, high, high, high,…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 479378 98092 135845 1.10000000 530330296021 53033029602 47649.171  
## 2 592939 98002 135845 0.36999540 530330296021 53033029602 32058.865  
## 3 729 98144 134063 0.80775941 530330101023 53033010102 34473.912  
## 4 730 98144 134063 0.82614784 530330101023 53033010102 35326.795  
## 5 731 98144 134063 0.81308539 530330101023 53033010102 35274.645  
## 6 733 98144 134063 0.08978420 530330101023 53033010102 4013.586  
## 7 734 98144 134063 0.09001377 530330101023 53033010102 3877.058  
## 8 735 98144 134063 0.12079889 530330101023 53033010102 5170.607  
## 9 736 98144 134063 0.11292470 530330101023 53033010102 4853.900  
## 10 737 98144 134063 0.12924701 530330101023 53033010102 5491.483  
## 11 738 98144 134063 0.14187327 530330101023 53033010102 6128.983  
## 12 767 98118 134063 0.09366391 530330101022 53033010102 4072.593  
## 13 768 98118 134063 0.09366391 530330101022 53033010102 4073.481  
## 14 769 98118 134063 0.09366391 530330101022 53033010102 4074.321  
## 15 770 98118 134063 0.09366391 530330101022 53033010102 4075.078  
## 16 771 98118 134063 0.09366391 530330101022 53033010102 4075.985  
## 17 772 98118 134063 0.11707988 530330101022 53033010102 5086.115  
## 18 773 98118 134063 0.14049586 530330101022 53033010102 6109.979  
## 19 774 98118 134063 0.11707988 530330101022 53033010102 5116.072  
## 20 775 98118 134063 0.09366391 530330101022 53033010102 4080.159  
## 21 776 98118 134063 0.09366391 530330101022 53033010102 4080.961  
## 22 777 98118 134063 0.14049586 530330101022 53033010102 6101.241  
## 23 778 98118 134063 0.14049586 530330101022 53033010102 6146.590  
## 24 779 98118 134063 0.11942148 530330101022 53033010102 5262.720  
## 25 780 98118 134063 0.12130394 530330101022 53033010102 5270.282  
## 26 781 98118 134063 0.09366391 530330101022 53033010102 4082.865  
## 27 782 98118 134063 0.09366391 530330101022 53033010102 4082.053  
## 28 783 98118 134063 0.09366391 530330101022 53033010102 4081.099  
## 29 784 98118 134063 0.09366391 530330101022 53033010102 4080.358  
## 30 785 98118 134063 0.09366391 530330101022 53033010102 4079.581  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.04720195 0.03586271 0 0.01265207  
## 2 0.04720195 0.03586271 0 0.01265207  
## 3 0.01816052 0.11851315 0 0.04276508  
## 4 0.01816052 0.11851315 0 0.04276508  
## 5 0.01816052 0.11851315 0 0.04276508  
## 6 0.01816052 0.11851315 0 0.04276508  
## 7 0.01816052 0.11851315 0 0.04276508  
## 8 0.01816052 0.11851315 0 0.04276508  
## 9 0.01816052 0.11851315 0 0.04276508  
## 10 0.01816052 0.11851315 0 0.04276508  
## 11 0.01816052 0.11851315 0 0.04276508  
## 12 0.01816052 0.11851315 0 0.04276508  
## 13 0.01816052 0.11851315 0 0.04276508  
## 14 0.01816052 0.11851315 0 0.04276508  
## 15 0.01816052 0.11851315 0 0.04276508  
## 16 0.01816052 0.11851315 0 0.04276508  
## 17 0.01816052 0.11851315 0 0.04276508  
## 18 0.01816052 0.11851315 0 0.04276508  
## 19 0.01816052 0.11851315 0 0.04276508  
## 20 0.01816052 0.11851315 0 0.04276508  
## 21 0.01816052 0.11851315 0 0.04276508  
## 22 0.01816052 0.11851315 0 0.04276508  
## 23 0.01816052 0.11851315 0 0.04276508  
## 24 0.01816052 0.11851315 0 0.04276508  
## 25 0.01816052 0.11851315 0 0.04276508  
## 26 0.01816052 0.11851315 0 0.04276508  
## 27 0.01816052 0.11851315 0 0.04276508  
## 28 0.01816052 0.11851315 0 0.04276508  
## 29 0.01816052 0.11851315 0 0.04276508  
## 30 0.01816052 0.11851315 0 0.04276508  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 80.6 0.3708440 high  
## 2 80.6 0.3708440 high  
## 3 79.2 0.2378517 high  
## 4 79.2 0.2378517 high  
## 5 79.2 0.2378517 high  
## 6 79.2 0.2378517 high  
## 7 79.2 0.2378517 high  
## 8 79.2 0.2378517 high  
## 9 79.2 0.2378517 high  
## 10 79.2 0.2378517 high  
## 11 79.2 0.2378517 high  
## 12 79.2 0.2378517 high  
## 13 79.2 0.2378517 high  
## 14 79.2 0.2378517 high  
## 15 79.2 0.2378517 high  
## 16 79.2 0.2378517 high  
## 17 79.2 0.2378517 high  
## 18 79.2 0.2378517 high  
## 19 79.2 0.2378517 high  
## 20 79.2 0.2378517 high  
## 21 79.2 0.2378517 high  
## 22 79.2 0.2378517 high  
## 23 79.2 0.2378517 high  
## 24 79.2 0.2378517 high  
## 25 79.2 0.2378517 high  
## 26 79.2 0.2378517 high  
## 27 79.2 0.2378517 high  
## 28 79.2 0.2378517 high  
## 29 79.2 0.2378517 high  
## 30 79.2 0.2378517 high

HighDisplcRsk %>% arrange(desc(c(median\_income))) %>% glimpse() %>% tail(30) %>% print()

## Rows: 56,065  
## Columns: 14  
## $ OBJECTID <fct> 479378, 592939, 729, 730, 731, 733, 734, 735, 7…  
## $ ZIP5 <fct> 98092, 98002, 98144, 98144, 98144, 98144, 98144…  
## $ median\_income <int> 135845, 135845, 134063, 134063, 134063, 134063,…  
## $ KCA\_ACRES <dbl> 1.10000000, 0.36999540, 0.80775941, 0.82614784,…  
## $ GEO\_ID\_GRP <fct> 530330296021, 530330296021, 530330101023, 53033…  
## $ GEO\_ID\_TRT <fct> 53033029602, 53033029602, 53033010102, 53033010…  
## $ Shape\_Area <dbl> 47649.171, 32058.865, 34473.912, 35326.795, 352…  
## $ limitedEng\_pct <dbl> 0.04720195, 0.04720195, 0.01816052, 0.01816052,…  
## $ disabled\_pct <dbl> 0.03586271, 0.03586271, 0.11851315, 0.11851315,…  
## $ disabled\_uninsured\_pct <dbl> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,…  
## $ foodstamp\_pct <dbl> 0.01265207, 0.01265207, 0.04276508, 0.04276508,…  
## $ LifeExpectancy <dbl> 80.6, 80.6, 79.2, 79.2, 79.2, 79.2, 79.2, 79.2,…  
## $ life\_exp\_pctle <dbl> 0.3708440, 0.3708440, 0.2378517, 0.2378517, 0.2…  
## $ displacement\_risk <fct> high, high, high, high, high, high, high, high,…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 56036 547303 98105 21781 0.09458218 530330053051 53033005305  
## 56037 547304 98105 21781 0.56749311 530330053051 53033005305  
## 56038 547305 98105 21781 0.09458218 530330053051 53033005305  
## 56039 547306 98105 21781 0.09458218 530330053051 53033005305  
## 56040 547307 98105 21781 0.66207529 530330053051 53033005305  
## 56041 547308 98105 21781 0.28374655 530330053051 53033005305  
## 56042 547309 98105 21781 0.17649219 530330053051 53033005305  
## 56043 272995 98105 NA 0.29990817 530330053031 53033005303  
## 56044 272996 98105 NA 0.50757575 530330053031 53033005303  
## 56045 272997 98105 NA 1.57679063 530330053031 53033005303  
## 56046 499861 98195 NA NA 530330053032 53033005303  
## 56047 499862 98105 NA 478.20649678 530330053032 53033005303  
## 56048 509226 98105 NA 2.78064738 530330053032 53033005303  
## 56049 547134 98105 NA 1.24885215 530330053031 53033005303  
## 56050 547135 98105 NA 2.25463728 530330053031 53033005303  
## 56051 547136 98105 NA 1.05511937 530330053031 53033005303  
## 56052 547137 98105 NA 3.13021120 530330053031 53033005303  
## 56053 547138 98105 NA 0.18640955 530330053031 53033005303  
## 56054 547139 98105 NA 3.58907254 530330053031 53033005303  
## 56055 547140 98105 NA 0.32483930 530330053031 53033005303  
## 56056 547141 98105 NA 0.42472451 530330053031 53033005303  
## 56057 547142 98105 NA 3.26067493 530330053031 53033005303  
## 56058 547143 98105 NA 4.01370523 530330053031 53033005303  
## 56059 547144 98105 NA 5.73645546 530330053031 53033005303  
## 56060 547145 98105 NA 6.86848025 530330053031 53033005303  
## 56061 547146 98105 NA 1.29476584 530330053031 53033005303  
## 56062 547147 98105 NA 1.01062901 530330053031 53033005303  
## 56063 547148 98105 NA 0.37832874 530330053031 53033005303  
## 56064 547149 98105 NA 2.78969237 530330053031 53033005303  
## 56065 579642 98105 NA 0.23177226 530330053032 53033005303  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 56036 4120.230 0.1560178 0.06793961 0.00000000  
## 56037 24720.594 0.1560178 0.06793961 0.00000000  
## 56038 4119.979 0.1560178 0.06793961 0.00000000  
## 56039 4120.702 0.1560178 0.06793961 0.00000000  
## 56040 28840.841 0.1560178 0.06793961 0.00000000  
## 56041 12360.807 0.1560178 0.06793961 0.00000000  
## 56042 7670.759 0.1560178 0.06793961 0.00000000  
## 56043 13064.427 0.0000000 0.03655728 0.00143926  
## 56044 22110.310 0.0000000 0.03655728 0.00143926  
## 56045 68685.927 0.0000000 0.03655728 0.00143926  
## 56046 6998227.286 0.0000000 0.03655728 0.00143926  
## 56047 20830769.463 0.0000000 0.03655728 0.00143926  
## 56048 51218.747 0.0000000 0.03655728 0.00143926  
## 56049 54400.290 0.0000000 0.03655728 0.00143926  
## 56050 98212.405 0.0000000 0.03655728 0.00143926  
## 56051 45961.222 0.0000000 0.03655728 0.00143926  
## 56052 136351.973 0.0000000 0.03655728 0.00143926  
## 56053 8158.324 0.0000000 0.03655728 0.00143926  
## 56054 156852.708 0.0000000 0.03655728 0.00143926  
## 56055 14328.325 0.0000000 0.03655728 0.00143926  
## 56056 16466.486 0.0000000 0.03655728 0.00143926  
## 56057 148552.624 0.0000000 0.03655728 0.00143926  
## 56058 174998.408 0.0000000 0.03655728 0.00143926  
## 56059 249740.575 0.0000000 0.03655728 0.00143926  
## 56060 307677.375 0.0000000 0.03655728 0.00143926  
## 56061 56400.952 0.0000000 0.03655728 0.00143926  
## 56062 44023.749 0.0000000 0.03655728 0.00143926  
## 56063 16274.895 0.0000000 0.03655728 0.00143926  
## 56064 121520.612 0.0000000 0.03655728 0.00143926  
## 56065 9879.074 0.0000000 0.03655728 0.00143926  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 56036 0.0230312 89.4 0.9769821 high  
## 56037 0.0230312 89.4 0.9769821 high  
## 56038 0.0230312 89.4 0.9769821 high  
## 56039 0.0230312 89.4 0.9769821 high  
## 56040 0.0230312 89.4 0.9769821 high  
## 56041 0.0230312 89.4 0.9769821 high  
## 56042 0.0230312 89.4 0.9769821 high  
## 56043 0.0000000 NA NA high  
## 56044 0.0000000 NA NA high  
## 56045 0.0000000 NA NA high  
## 56046 0.0000000 NA NA high  
## 56047 0.0000000 NA NA high  
## 56048 0.0000000 NA NA high  
## 56049 0.0000000 NA NA high  
## 56050 0.0000000 NA NA high  
## 56051 0.0000000 NA NA high  
## 56052 0.0000000 NA NA high  
## 56053 0.0000000 NA NA high  
## 56054 0.0000000 NA NA high  
## 56055 0.0000000 NA NA high  
## 56056 0.0000000 NA NA high  
## 56057 0.0000000 NA NA high  
## 56058 0.0000000 NA NA high  
## 56059 0.0000000 NA NA high  
## 56060 0.0000000 NA NA high  
## 56061 0.0000000 NA NA high  
## 56062 0.0000000 NA NA high  
## 56063 0.0000000 NA NA high  
## 56064 0.0000000 NA NA high  
## 56065 0.0000000 NA NA high

#summary of highdisplcrsk  
summary(HighDisplcRsk) %>% as.array()%>%View()  
summary(HighDisplcRsk) %>% as.array() %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES   
## 64 : 1 98118 : 8592 Min. : 21781 Min. : 0.0000   
## 65 : 1 98144 : 5151 1st Qu.: 54646 1st Qu.: 0.1111   
## 66 : 1 98108 : 5082 Median : 62810 Median : 0.1653   
## 67 : 1 98188 : 4071 Mean : 66964 Mean : 0.5172   
## 68 : 1 98133 : 3592 3rd Qu.: 78929 3rd Qu.: 0.2389   
## 69 : 1 98168 : 3109 Max. :135845 Max. :478.2065   
## (Other):56059 (Other):26468 NA's :23 NA's :307   
## GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area limitedEng\_pct   
## 530330292061: 845 53033009400: 2011 Min. : 2 Min. :0.00000   
## 530330262001: 821 53033026200: 1702 1st Qu.: 4845 1st Qu.:0.07133   
## 530330305011: 794 53033010401: 1691 Median : 7226 Median :0.11750   
## 530330297021: 685 53033011200: 1561 Mean : 23870 Mean :0.12244   
## 530330104012: 627 53033010102: 1492 3rd Qu.: 10458 3rd Qu.:0.17355   
## 530330101021: 617 53033026500: 1433 Max. :24697563 Max. :0.39582   
## (Other) :51676 (Other) :46175   
## disabled\_pct disabled\_uninsured\_pct foodstamp\_pct LifeExpectancy   
## Min. :0.03586 Min. :0.000000 Min. :0.00000 Min. :71.50   
## 1st Qu.:0.09701 1st Qu.:0.000000 1st Qu.:0.04820 1st Qu.:77.60   
## Median :0.12430 Median :0.004147 Median :0.08468 Median :79.70   
## Mean :0.13067 Mean :0.006840 Mean :0.08884 Mean :79.78   
## 3rd Qu.:0.15970 3rd Qu.:0.010966 3rd Qu.:0.11518 3rd Qu.:81.80   
## Max. :0.32143 Max. :0.040931 Max. :0.25618 Max. :90.20   
## NA's :907   
## life\_exp\_pctle displacement\_risk  
## Min. :0.0000 : 0   
## 1st Qu.:0.1125 high :56065   
## Median :0.2890 low : 0   
## Mean :0.3389 moderate: 0   
## 3rd Qu.:0.5141   
## Max. :0.9898   
## NA's :907

# Above Mu(mu=76) Life Expectancy  
#abovMuLifeExp  
#1 KCA Acres  
AbovMuLifeExp%>% arrange(desc(c(KCA\_ACRES))) %>% head(30) %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 390387 98188 80254 1753.326 530330273003 53033027300 76565294  
## 2 531768 98022 92717 1061.000 530330315021 53033031502 46716370  
## 3 455955 98038 122644 920.000 530330319041 53033031904 40077498  
## 4 367355 98288 73750 870.800 530330328003 53033032800 38560840  
## 5 372368 98288 73750 870.600 530330328003 53033032800 37940448  
## 6 472147 98288 73750 870.280 530330328003 53033032800 37771325  
## 7 480775 98288 73750 869.600 530330328003 53033032800 37807319  
## 8 578476 98288 73750 868.920 530330328003 53033032800 37718219  
## 9 591298 98224 73750 868.000 530330328003 53033032800 37171801  
## 10 597442 98224 73750 867.000 530330328003 53033032800 37580627  
## 11 618794 98224 73750 867.000 530330328003 53033032800 37983492  
## 12 611933 98224 73750 866.160 530330328003 53033032800 38060799  
## 13 602792 98224 73750 865.900 530330328003 53033032800 37595381  
## 14 617827 98019 73750 829.520 530330328003 53033032800 36133505  
## 15 585918 98288 73750 822.050 530330328003 53033032800 35891208  
## 16 367443 98045 73750 802.640 530330328003 53033032800 34719732  
## 17 372709 98288 73750 802.200 530330328003 53033032800 35127770  
## 18 472574 98288 73750 801.800 530330328003 53033032800 34985962  
## 19 481077 98288 73750 801.200 530330328003 53033032800 34883448  
## 20 578562 98288 73750 800.500 530330328003 53033032800 34998231  
## 21 585481 98019 73750 795.170 530330328003 53033032800 33433976  
## 22 530229 98045 99194 777.600 530330327063 53033032706 33701653  
## 23 591031 98019 131154 776.080 530330325001 53033032500 35070484  
## 24 473781 98022 94688 759.720 530330315011 53033031501 33264001  
## 25 482605 98038 119618 747.320 530330320034 53033032003 32595844  
## 26 366721 98019 73750 740.660 530330328003 53033032800 32241995  
## 27 579750 98038 119618 740.030 530330320034 53033032003 31246476  
## 28 585034 98019 131154 739.410 530330325001 53033032500 34141892  
## 29 371849 98019 73750 729.640 530330328003 53033032800 32725481  
## 30 471525 98019 73750 728.410 530330328003 53033032800 32311267  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.19644903 0.09447289 0.00194243 0.08934708  
## 2 0.01348651 0.11561181 0.00421941 0.02797203  
## 3 0.00000000 0.07954866 0.00000000 0.00636436  
## 4 0.00000000 0.17966472 0.00036443 0.01813685  
## 5 0.00000000 0.17966472 0.00036443 0.01813685  
## 6 0.00000000 0.17966472 0.00036443 0.01813685  
## 7 0.00000000 0.17966472 0.00036443 0.01813685  
## 8 0.00000000 0.17966472 0.00036443 0.01813685  
## 9 0.00000000 0.17966472 0.00036443 0.01813685  
## 10 0.00000000 0.17966472 0.00036443 0.01813685  
## 11 0.00000000 0.17966472 0.00036443 0.01813685  
## 12 0.00000000 0.17966472 0.00036443 0.01813685  
## 13 0.00000000 0.17966472 0.00036443 0.01813685  
## 14 0.00000000 0.17966472 0.00036443 0.01813685  
## 15 0.00000000 0.17966472 0.00036443 0.01813685  
## 16 0.00000000 0.17966472 0.00036443 0.01813685  
## 17 0.00000000 0.17966472 0.00036443 0.01813685  
## 18 0.00000000 0.17966472 0.00036443 0.01813685  
## 19 0.00000000 0.17966472 0.00036443 0.01813685  
## 20 0.00000000 0.17966472 0.00036443 0.01813685  
## 21 0.00000000 0.17966472 0.00036443 0.01813685  
## 22 0.00000000 0.13778076 0.00100570 0.03166227  
## 23 0.00674374 0.09070175 0.00578947 0.03179191  
## 24 0.00968188 0.12150239 0.00831863 0.01244813  
## 25 0.02857143 0.08194645 0.00000000 0.00394089  
## 26 0.00000000 0.17966472 0.00036443 0.01813685  
## 27 0.02857143 0.08194645 0.00000000 0.00394089  
## 28 0.00674374 0.09070175 0.00578947 0.03179191  
## 29 0.00000000 0.17966472 0.00036443 0.01813685  
## 30 0.00000000 0.17966472 0.00036443 0.01813685  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 78.4 0.1560102 moderate  
## 2 77.4 0.1099744 low  
## 3 79.7 0.2890026 low  
## 4 82.8 0.6086957 low  
## 5 82.8 0.6086957 low  
## 6 82.8 0.6086957 low  
## 7 82.8 0.6086957 low  
## 8 82.8 0.6086957 low  
## 9 82.8 0.6086957 low  
## 10 82.8 0.6086957 low  
## 11 82.8 0.6086957 low  
## 12 82.8 0.6086957 low  
## 13 82.8 0.6086957 low  
## 14 82.8 0.6086957 low  
## 15 82.8 0.6086957 low  
## 16 82.8 0.6086957 low  
## 17 82.8 0.6086957 low  
## 18 82.8 0.6086957 low  
## 19 82.8 0.6086957 low  
## 20 82.8 0.6086957 low  
## 21 82.8 0.6086957 low  
## 22 80.6 0.3708440 low  
## 23 81.4 0.4757033 low  
## 24 79.0 0.2199489 low  
## 25 80.5 0.3631714 low  
## 26 82.8 0.6086957 low  
## 27 80.5 0.3631714 low  
## 28 81.4 0.4757033 low  
## 29 82.8 0.6086957 low  
## 30 82.8 0.6086957 low

AbovMuLifeExp %>% arrange(desc(c(KCA\_ACRES))) %>% tail(30) %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 594366 626399 98052 169420 NA 530330323232 53033032323  
## 594367 626469 98052 169420 NA 530330323234 53033032323  
## 594368 626470 98052 169420 NA 530330323234 53033032323  
## 594369 626471 98052 169420 NA 530330323234 53033032323  
## 594370 626472 98052 169420 NA 530330323234 53033032323  
## 594371 626473 98052 169420 NA 530330323234 53033032323  
## 594372 626474 98052 169420 NA 530330323234 53033032323  
## 594373 626545 98052 169420 NA 530330323234 53033032323  
## 594374 626546 98052 169420 NA 530330323232 53033032323  
## 594375 626547 98052 169420 NA 530330323232 53033032323  
## 594376 626548 98052 169420 NA 530330323232 53033032323  
## 594377 626549 98052 169420 NA 530330323234 53033032323  
## 594378 626550 98052 169420 NA 530330323234 53033032323  
## 594379 626687 98034 114912 NA 530330220034 53033022003  
## 594380 626688 98034 114912 NA 530330220034 53033022003  
## 594381 626712 98007 97775 NA 530330232012 53033023201  
## 594382 626713 98007 97775 NA 530330232012 53033023201  
## 594383 626714 98007 97775 NA 530330232012 53033023201  
## 594384 626715 98007 97775 NA 530330232012 53033023201  
## 594385 626716 98007 97775 NA 530330232012 53033023201  
## 594386 626717 98007 97775 NA 530330232012 53033023201  
## 594387 626718 98007 97775 NA 530330232012 53033023201  
## 594388 627364 98188 64691 NA 530330262001 53033026200  
## 594389 627494 98032 67045 NA 530330297022 53033029702  
## 594390 627631 98144 128996 NA 530330095004 53033009500  
## 594391 627717 98168 64691 NA 530330262002 53033026200  
## 594392 627848 98032 74875 NA 530330291021 53033029102  
## 594393 627898 98108 94125 NA 530330104022 53033010402  
## 594394 627899 98108 94125 NA 530330104022 53033010402  
## 594395 628032 98002 58783 NA 530330305031 53033030503  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 594366 3287.2147 0.01510297 0.06266276 0.00455729  
## 594367 20491.8710 0.01510297 0.06266276 0.00455729  
## 594368 6753.7495 0.01510297 0.06266276 0.00455729  
## 594369 11125.1008 0.01510297 0.06266276 0.00455729  
## 594370 4373.1240 0.01510297 0.06266276 0.00455729  
## 594371 8328.6289 0.01510297 0.06266276 0.00455729  
## 594372 132097.8328 0.01510297 0.06266276 0.00455729  
## 594373 8557.7590 0.01510297 0.06266276 0.00455729  
## 594374 12315.0500 0.01510297 0.06266276 0.00455729  
## 594375 2336.4728 0.01510297 0.06266276 0.00455729  
## 594376 30599.3426 0.01510297 0.06266276 0.00455729  
## 594377 12688.0682 0.01510297 0.06266276 0.00455729  
## 594378 254726.9380 0.01510297 0.06266276 0.00455729  
## 594379 19560.5505 0.03984451 0.11078717 0.01621720  
## 594380 1257.0730 0.03984451 0.11078717 0.01621720  
## 594381 588.7915 0.19260463 0.08614838 0.00307096  
## 594382 4183.1251 0.19260463 0.08614838 0.00307096  
## 594383 17767.6955 0.19260463 0.08614838 0.00307096  
## 594384 1813.7593 0.19260463 0.08614838 0.00307096  
## 594385 89426.8600 0.19260463 0.08614838 0.00307096  
## 594386 13257.1507 0.19260463 0.08614838 0.00307096  
## 594387 1645.3987 0.19260463 0.08614838 0.00307096  
## 594388 5070.0980 0.04321486 0.06825233 0.00206825  
## 594389 19899.2306 0.13694853 0.17361111 0.00000000  
## 594390 26548.0084 0.03291052 0.07391365 0.00000000  
## 594391 4975.2724 0.04321486 0.06825233 0.00206825  
## 594392 5835.2553 0.11318242 0.13135853 0.00694586  
## 594393 7757.9828 0.15703518 0.10012386 0.00000000  
## 594394 7392.2968 0.15703518 0.10012386 0.00000000  
## 594395 14887.0379 0.07636187 0.18823529 0.00219342  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 594366 0.00000000 84.7 0.77493606 low  
## 594367 0.00000000 84.7 0.77493606 low  
## 594368 0.00000000 84.7 0.77493606 low  
## 594369 0.00000000 84.7 0.77493606 low  
## 594370 0.00000000 84.7 0.77493606 low  
## 594371 0.00000000 84.7 0.77493606 low  
## 594372 0.00000000 84.7 0.77493606 low  
## 594373 0.00000000 84.7 0.77493606 low  
## 594374 0.00000000 84.7 0.77493606 low  
## 594375 0.00000000 84.7 0.77493606 low  
## 594376 0.00000000 84.7 0.77493606 low  
## 594377 0.00000000 84.7 0.77493606 low  
## 594378 0.00000000 84.7 0.77493606 low  
## 594379 0.01749271 79.8 0.30434783 low  
## 594380 0.01749271 79.8 0.30434783 low  
## 594381 0.02966274 85.5 0.82352941 moderate  
## 594382 0.02966274 85.5 0.82352941 moderate  
## 594383 0.02966274 85.5 0.82352941 moderate  
## 594384 0.02966274 85.5 0.82352941 moderate  
## 594385 0.02966274 85.5 0.82352941 moderate  
## 594386 0.02966274 85.5 0.82352941 moderate  
## 594387 0.02966274 85.5 0.82352941 moderate  
## 594388 0.08319871 80.7 0.38363171 high  
## 594389 0.11213235 80.6 0.37084399 high  
## 594390 0.03770998 83.7 0.70332481 moderate  
## 594391 0.08319871 80.7 0.38363171 high  
## 594392 0.03395473 78.6 0.17902813 low  
## 594393 0.03391960 82.9 0.61892583 moderate  
## 594394 0.03391960 82.9 0.61892583 moderate  
## 594395 0.14105058 77.0 0.09974425 moderate

#2 Life Exp  
AbovMuLifeExp %>% arrange(desc(c(LifeExpectancy))) %>% head(30) %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 25762 98105 51213 0.08539944 530330044022 53033004402 3719.017  
## 2 53192 98115 135329 0.08264462 530330044012 53033004401 3616.104  
## 3 53193 98115 135329 0.10192837 530330044012 53033004401 4503.865  
## 4 53194 98115 135329 0.10674931 530330044012 53033004401 4653.506  
## 5 53195 98115 135329 0.12304866 530330044012 53033004401 5388.049  
## 6 53196 98115 135329 0.14325068 530330044012 53033004401 6268.205  
## 7 53197 98115 135329 0.08264462 530330044012 53033004401 3599.271  
## 8 53198 98115 135329 0.08080808 530330044012 53033004401 3549.716  
## 9 53199 98115 135329 0.06198347 530330044012 53033004401 2705.874  
## 10 53200 98115 135329 0.08595041 530330044012 53033004401 3752.799  
## 11 53201 98115 135329 0.09366391 530330044012 53033004401 4080.161  
## 12 53202 98115 135329 0.09366391 530330044012 53033004401 4079.990  
## 13 53203 98115 135329 0.09366391 530330044012 53033004401 4080.210  
## 14 53204 98115 135329 0.09366391 530330044012 53033004401 4079.919  
## 15 53205 98115 135329 0.09733700 530330044012 53033004401 4203.015  
## 16 53206 98115 135329 0.09733700 530330044012 53033004401 4200.089  
## 17 53207 98115 135329 0.09733700 530330044012 53033004401 4196.387  
## 18 53208 98115 135329 0.09733700 530330044012 53033004401 4193.086  
## 19 53209 98115 135329 0.09733700 530330044012 53033004401 4189.947  
## 20 53210 98115 135329 0.09733700 530330044012 53033004401 4186.464  
## 21 53211 98115 135329 0.07699724 530330044012 53033004401 3352.704  
## 22 53212 98115 135329 0.08767217 530330044012 53033004401 3742.879  
## 23 53213 98115 135329 0.07162534 530330044012 53033004401 3116.560  
## 24 53214 98115 135329 0.08207070 530330044012 53033004401 3599.033  
## 25 53215 98115 135329 0.06795224 530330044012 53033004401 2987.892  
## 26 53216 98115 135329 0.09641873 530330044012 53033004401 4240.188  
## 27 53217 98115 135329 0.09641873 530330044012 53033004401 4240.141  
## 28 53218 98115 135329 0.09641873 530330044012 53033004401 4240.334  
## 29 53219 98115 135329 0.09641873 530330044012 53033004401 4240.108  
## 30 53220 98115 135329 0.09641873 530330044012 53033004401 4240.264  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.01175779 0.07088459 0.00380785 0.00823045  
## 2 0.00000000 0.07339662 0.00347303 0.00000000  
## 3 0.00000000 0.07339662 0.00347303 0.00000000  
## 4 0.00000000 0.07339662 0.00347303 0.00000000  
## 5 0.00000000 0.07339662 0.00347303 0.00000000  
## 6 0.00000000 0.07339662 0.00347303 0.00000000  
## 7 0.00000000 0.07339662 0.00347303 0.00000000  
## 8 0.00000000 0.07339662 0.00347303 0.00000000  
## 9 0.00000000 0.07339662 0.00347303 0.00000000  
## 10 0.00000000 0.07339662 0.00347303 0.00000000  
## 11 0.00000000 0.07339662 0.00347303 0.00000000  
## 12 0.00000000 0.07339662 0.00347303 0.00000000  
## 13 0.00000000 0.07339662 0.00347303 0.00000000  
## 14 0.00000000 0.07339662 0.00347303 0.00000000  
## 15 0.00000000 0.07339662 0.00347303 0.00000000  
## 16 0.00000000 0.07339662 0.00347303 0.00000000  
## 17 0.00000000 0.07339662 0.00347303 0.00000000  
## 18 0.00000000 0.07339662 0.00347303 0.00000000  
## 19 0.00000000 0.07339662 0.00347303 0.00000000  
## 20 0.00000000 0.07339662 0.00347303 0.00000000  
## 21 0.00000000 0.07339662 0.00347303 0.00000000  
## 22 0.00000000 0.07339662 0.00347303 0.00000000  
## 23 0.00000000 0.07339662 0.00347303 0.00000000  
## 24 0.00000000 0.07339662 0.00347303 0.00000000  
## 25 0.00000000 0.07339662 0.00347303 0.00000000  
## 26 0.00000000 0.07339662 0.00347303 0.00000000  
## 27 0.00000000 0.07339662 0.00347303 0.00000000  
## 28 0.00000000 0.07339662 0.00347303 0.00000000  
## 29 0.00000000 0.07339662 0.00347303 0.00000000  
## 30 0.00000000 0.07339662 0.00347303 0.00000000  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 92.6 1 moderate  
## 2 92.6 1 moderate  
## 3 92.6 1 moderate  
## 4 92.6 1 moderate  
## 5 92.6 1 moderate  
## 6 92.6 1 moderate  
## 7 92.6 1 moderate  
## 8 92.6 1 moderate  
## 9 92.6 1 moderate  
## 10 92.6 1 moderate  
## 11 92.6 1 moderate  
## 12 92.6 1 moderate  
## 13 92.6 1 moderate  
## 14 92.6 1 moderate  
## 15 92.6 1 moderate  
## 16 92.6 1 moderate  
## 17 92.6 1 moderate  
## 18 92.6 1 moderate  
## 19 92.6 1 moderate  
## 20 92.6 1 moderate  
## 21 92.6 1 moderate  
## 22 92.6 1 moderate  
## 23 92.6 1 moderate  
## 24 92.6 1 moderate  
## 25 92.6 1 moderate  
## 26 92.6 1 moderate  
## 27 92.6 1 moderate  
## 28 92.6 1 moderate  
## 29 92.6 1 moderate  
## 30 92.6 1 moderate

AbovMuLifeExp %>% arrange(desc(c(LifeExpectancy))) %>% tail(30) %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 594366 623946 98146 63979 0.3579890 530330275002 53033027500  
## 594367 623947 98146 63979 0.1962580 530330275002 53033027500  
## 594368 623948 98146 63979 0.1510790 530330275002 53033027500  
## 594369 623949 98146 63979 0.4267677 530330275002 53033027500  
## 594370 623950 98146 63979 0.1721763 530330275002 53033027500  
## 594371 623951 98146 63979 0.1981634 530330275002 53033027500  
## 594372 623952 98146 63979 0.1836547 530330275002 53033027500  
## 594373 623953 98146 63979 0.2754821 530330275002 53033027500  
## 594374 623954 98146 63979 0.1530073 530330275002 53033027500  
## 594375 623955 98146 63979 0.2544766 530330275002 53033027500  
## 594376 623956 98146 63979 0.1778926 530330275002 53033027500  
## 594377 623957 98146 63979 0.2181129 530330275002 53033027500  
## 594378 623958 98146 63979 0.2272727 530330275002 53033027500  
## 594379 623959 98146 63979 0.2995868 530330275002 53033027500  
## 594380 623960 98146 63979 0.2623967 530330275002 53033027500  
## 594381 623961 98146 63979 0.2681359 530330275002 53033027500  
## 594382 623962 98146 63979 0.2895776 530330275002 53033027500  
## 594383 623963 98146 63979 0.2869605 530330275002 53033027500  
## 594384 623964 98168 63979 0.2869605 530330275002 53033027500  
## 594385 623965 98168 63979 0.3794995 530330275002 53033027500  
## 594386 623966 98168 63979 0.1157025 530330275002 53033027500  
## 594387 623967 98146 63979 0.1581497 530330275002 53033027500  
## 594388 623968 98168 63979 0.2405418 530330275002 53033027500  
## 594389 623969 98168 63979 0.3873967 530330275002 53033027500  
## 594390 623970 98168 63979 0.3873967 530330275002 53033027500  
## 594391 623971 98146 63979 0.5157943 530330275002 53033027500  
## 594392 623972 98146 63979 0.3226584 530330275002 53033027500  
## 594393 623973 98146 63979 0.3099173 530330275002 53033027500  
## 594394 623974 98146 63979 0.3099173 530330275002 53033027500  
## 594395 623975 98146 63979 0.3099173 530330275002 53033027500  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 594366 15878.803 0.06789788 0.1266681 0.01684533  
## 594367 8435.694 0.06789788 0.1266681 0.01684533  
## 594368 6353.132 0.06789788 0.1266681 0.01684533  
## 594369 19008.632 0.06789788 0.1266681 0.01684533  
## 594370 7926.965 0.06789788 0.1266681 0.01684533  
## 594371 8434.623 0.06789788 0.1266681 0.01684533  
## 594372 8136.260 0.06789788 0.1266681 0.01684533  
## 594373 11928.497 0.06789788 0.1266681 0.01684533  
## 594374 6418.185 0.06789788 0.1266681 0.01684533  
## 594375 11533.583 0.06789788 0.1266681 0.01684533  
## 594376 7820.743 0.06789788 0.1266681 0.01684533  
## 594377 9442.629 0.06789788 0.1266681 0.01684533  
## 594378 9475.685 0.06789788 0.1266681 0.01684533  
## 594379 12698.316 0.06789788 0.1266681 0.01684533  
## 594380 11244.206 0.06789788 0.1266681 0.01684533  
## 594381 11473.549 0.06789788 0.1266681 0.01684533  
## 594382 11698.826 0.06789788 0.1266681 0.01684533  
## 594383 12683.845 0.06789788 0.1266681 0.01684533  
## 594384 12906.443 0.06789788 0.1266681 0.01684533  
## 594385 16962.024 0.06789788 0.1266681 0.01684533  
## 594386 4965.332 0.06789788 0.1266681 0.01684533  
## 594387 6864.617 0.06789788 0.1266681 0.01684533  
## 594388 10407.175 0.06789788 0.1266681 0.01684533  
## 594389 14527.728 0.06789788 0.1266681 0.01684533  
## 594390 16769.643 0.06789788 0.1266681 0.01684533  
## 594391 22497.021 0.06789788 0.1266681 0.01684533  
## 594392 14296.844 0.06789788 0.1266681 0.01684533  
## 594393 13560.389 0.06789788 0.1266681 0.01684533  
## 594394 13987.555 0.06789788 0.1266681 0.01684533  
## 594395 13660.162 0.06789788 0.1266681 0.01684533  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 594366 0.08256382 76.2 0.07672634 moderate  
## 594367 0.08256382 76.2 0.07672634 moderate  
## 594368 0.08256382 76.2 0.07672634 moderate  
## 594369 0.08256382 76.2 0.07672634 moderate  
## 594370 0.08256382 76.2 0.07672634 moderate  
## 594371 0.08256382 76.2 0.07672634 moderate  
## 594372 0.08256382 76.2 0.07672634 moderate  
## 594373 0.08256382 76.2 0.07672634 moderate  
## 594374 0.08256382 76.2 0.07672634 moderate  
## 594375 0.08256382 76.2 0.07672634 moderate  
## 594376 0.08256382 76.2 0.07672634 moderate  
## 594377 0.08256382 76.2 0.07672634 moderate  
## 594378 0.08256382 76.2 0.07672634 moderate  
## 594379 0.08256382 76.2 0.07672634 moderate  
## 594380 0.08256382 76.2 0.07672634 moderate  
## 594381 0.08256382 76.2 0.07672634 moderate  
## 594382 0.08256382 76.2 0.07672634 moderate  
## 594383 0.08256382 76.2 0.07672634 moderate  
## 594384 0.08256382 76.2 0.07672634 moderate  
## 594385 0.08256382 76.2 0.07672634 moderate  
## 594386 0.08256382 76.2 0.07672634 moderate  
## 594387 0.08256382 76.2 0.07672634 moderate  
## 594388 0.08256382 76.2 0.07672634 moderate  
## 594389 0.08256382 76.2 0.07672634 moderate  
## 594390 0.08256382 76.2 0.07672634 moderate  
## 594391 0.08256382 76.2 0.07672634 moderate  
## 594392 0.08256382 76.2 0.07672634 moderate  
## 594393 0.08256382 76.2 0.07672634 moderate  
## 594394 0.08256382 76.2 0.07672634 moderate  
## 594395 0.08256382 76.2 0.07672634 moderate

#3 median income  
AbovMuLifeExp %>% arrange(desc(c(median\_income))) %>% head(30) %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 3173 98105 250001 0.16069788 530330041013 53033004101 6920.349  
## 2 3174 98105 250001 0.29843893 530330041013 53033004101 13064.349  
## 3 3175 98105 250001 0.11478420 530330041013 53033004101 5037.022  
## 4 3176 98105 250001 0.11478420 530330041013 53033004101 4959.952  
## 5 3177 98105 250001 0.22956841 530330041013 53033004101 9981.422  
## 6 3178 98105 250001 0.11478420 530330041013 53033004101 4998.034  
## 7 3179 98105 250001 0.11478420 530330041013 53033004101 4998.182  
## 8 3180 98105 250001 0.11478420 530330041013 53033004101 4998.169  
## 9 3181 98105 250001 0.11478420 530330041013 53033004101 4998.226  
## 10 3182 98105 250001 0.11478420 530330041013 53033004101 4998.803  
## 11 3183 98105 250001 0.11478420 530330041013 53033004101 4998.765  
## 12 3184 98105 250001 0.11478420 530330041013 53033004101 4998.809  
## 13 3185 98105 250001 0.11478420 530330041013 53033004101 4998.645  
## 14 3186 98105 250001 0.12167125 530330041013 53033004101 5519.689  
## 15 3187 98105 250001 0.11478420 530330041013 53033004101 5004.761  
## 16 3188 98105 250001 0.10330578 530330041013 53033004101 4490.617  
## 17 3189 98105 250001 0.11478420 530330041013 53033004101 5004.513  
## 18 3190 98105 250001 0.11478420 530330041013 53033004101 5004.393  
## 19 3191 98105 250001 0.11478420 530330041013 53033004101 5004.657  
## 20 3192 98105 250001 0.11019283 530330041013 53033004101 4828.588  
## 21 3193 98105 250001 0.11707988 530330041013 53033004101 5181.492  
## 22 3194 98105 250001 0.13774104 530330041013 53033004101 6069.583  
## 23 3195 98105 250001 0.09182736 530330041013 53033004101 3940.026  
## 24 3196 98105 250001 0.11478420 530330041013 53033004101 5004.289  
## 25 3197 98105 250001 0.11478420 530330041013 53033004101 5003.955  
## 26 3198 98105 250001 0.11478420 530330041013 53033004101 5003.881  
## 27 3199 98105 250001 0.11478420 530330041013 53033004101 5004.186  
## 28 3200 98105 250001 0.11478420 530330041013 53033004101 5004.394  
## 29 3201 98105 250001 0.11478420 530330041013 53033004101 5004.882  
## 30 3202 98105 250001 0.11478420 530330041013 53033004101 5000.294  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.02274294 0.05187386 0 0  
## 2 0.02274294 0.05187386 0 0  
## 3 0.02274294 0.05187386 0 0  
## 4 0.02274294 0.05187386 0 0  
## 5 0.02274294 0.05187386 0 0  
## 6 0.02274294 0.05187386 0 0  
## 7 0.02274294 0.05187386 0 0  
## 8 0.02274294 0.05187386 0 0  
## 9 0.02274294 0.05187386 0 0  
## 10 0.02274294 0.05187386 0 0  
## 11 0.02274294 0.05187386 0 0  
## 12 0.02274294 0.05187386 0 0  
## 13 0.02274294 0.05187386 0 0  
## 14 0.02274294 0.05187386 0 0  
## 15 0.02274294 0.05187386 0 0  
## 16 0.02274294 0.05187386 0 0  
## 17 0.02274294 0.05187386 0 0  
## 18 0.02274294 0.05187386 0 0  
## 19 0.02274294 0.05187386 0 0  
## 20 0.02274294 0.05187386 0 0  
## 21 0.02274294 0.05187386 0 0  
## 22 0.02274294 0.05187386 0 0  
## 23 0.02274294 0.05187386 0 0  
## 24 0.02274294 0.05187386 0 0  
## 25 0.02274294 0.05187386 0 0  
## 26 0.02274294 0.05187386 0 0  
## 27 0.02274294 0.05187386 0 0  
## 28 0.02274294 0.05187386 0 0  
## 29 0.02274294 0.05187386 0 0  
## 30 0.02274294 0.05187386 0 0  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 87.3 0.9283887 low  
## 2 87.3 0.9283887 low  
## 3 87.3 0.9283887 low  
## 4 87.3 0.9283887 low  
## 5 87.3 0.9283887 low  
## 6 87.3 0.9283887 low  
## 7 87.3 0.9283887 low  
## 8 87.3 0.9283887 low  
## 9 87.3 0.9283887 low  
## 10 87.3 0.9283887 low  
## 11 87.3 0.9283887 low  
## 12 87.3 0.9283887 low  
## 13 87.3 0.9283887 low  
## 14 87.3 0.9283887 low  
## 15 87.3 0.9283887 low  
## 16 87.3 0.9283887 low  
## 17 87.3 0.9283887 low  
## 18 87.3 0.9283887 low  
## 19 87.3 0.9283887 low  
## 20 87.3 0.9283887 low  
## 21 87.3 0.9283887 low  
## 22 87.3 0.9283887 low  
## 23 87.3 0.9283887 low  
## 24 87.3 0.9283887 low  
## 25 87.3 0.9283887 low  
## 26 87.3 0.9283887 low  
## 27 87.3 0.9283887 low  
## 28 87.3 0.9283887 low  
## 29 87.3 0.9283887 low  
## 30 87.3 0.9283887 low

AbovMuLifeExp %>% arrange(desc(c(median\_income))) %>% tail(30) %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 594366 547284 98105 21781 1.04040404 530330053052 53033005305  
## 594367 547285 98105 21781 0.09458218 530330053052 53033005305  
## 594368 547286 98105 21781 0.24756657 530330053052 53033005305  
## 594369 547287 98105 21781 0.20202020 530330053051 53033005305  
## 594370 547288 98195 21781 1.71900826 530330053051 53033005305  
## 594371 547289 98195 21781 0.45268595 530330053051 53033005305  
## 594372 547290 98105 21781 0.26182277 530330053051 53033005305  
## 594373 547291 98105 21781 0.18916437 530330053051 53033005305  
## 594374 547292 98105 21781 0.09458218 530330053051 53033005305  
## 594375 547293 98105 21781 0.18916437 530330053051 53033005305  
## 594376 547294 98105 21781 0.09458218 530330053051 53033005305  
## 594377 547295 98105 21781 0.09458218 530330053051 53033005305  
## 594378 547296 98105 21781 0.09458218 530330053051 53033005305  
## 594379 547297 98105 21781 0.09458218 530330053051 53033005305  
## 594380 547298 98105 21781 0.09458218 530330053051 53033005305  
## 594381 547299 98105 21781 0.09458218 530330053051 53033005305  
## 594382 547300 98105 21781 0.07704315 530330053051 53033005305  
## 594383 547301 98105 21781 0.17272727 530330053051 53033005305  
## 594384 547302 98105 21781 0.09458218 530330053051 53033005305  
## 594385 547303 98105 21781 0.09458218 530330053051 53033005305  
## 594386 547304 98105 21781 0.56749311 530330053051 53033005305  
## 594387 547305 98105 21781 0.09458218 530330053051 53033005305  
## 594388 547306 98105 21781 0.09458218 530330053051 53033005305  
## 594389 547307 98105 21781 0.66207529 530330053051 53033005305  
## 594390 547308 98105 21781 0.28374655 530330053051 53033005305  
## 594391 547309 98105 21781 0.17649219 530330053051 53033005305  
## 594392 438577 98070 NA NA 530339901000 53033990100  
## 594393 522429 98070 NA NA 530339901000 53033990100  
## 594394 560573 98023 NA NA 530339901000 53033990100  
## 594395 620313 98023 NA NA 530339901000 53033990100  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 594366 45326.634 0.1560178 0.06793961 0  
## 594367 4120.717 0.1560178 0.06793961 0  
## 594368 10764.227 0.1560178 0.06793961 0  
## 594369 8801.910 0.1560178 0.06793961 0  
## 594370 73953.994 0.1560178 0.06793961 0  
## 594371 19721.481 0.1560178 0.06793961 0  
## 594372 11460.327 0.1560178 0.06793961 0  
## 594373 8238.204 0.1560178 0.06793961 0  
## 594374 4118.577 0.1560178 0.06793961 0  
## 594375 8237.218 0.1560178 0.06793961 0  
## 594376 4118.565 0.1560178 0.06793961 0  
## 594377 4118.537 0.1560178 0.06793961 0  
## 594378 4118.377 0.1560178 0.06793961 0  
## 594379 4118.418 0.1560178 0.06793961 0  
## 594380 4118.430 0.1560178 0.06793961 0  
## 594381 4118.361 0.1560178 0.06793961 0  
## 594382 3316.404 0.1560178 0.06793961 0  
## 594383 7572.110 0.1560178 0.06793961 0  
## 594384 4120.298 0.1560178 0.06793961 0  
## 594385 4120.230 0.1560178 0.06793961 0  
## 594386 24720.594 0.1560178 0.06793961 0  
## 594387 4119.979 0.1560178 0.06793961 0  
## 594388 4120.702 0.1560178 0.06793961 0  
## 594389 28840.841 0.1560178 0.06793961 0  
## 594390 12360.807 0.1560178 0.06793961 0  
## 594391 7670.759 0.1560178 0.06793961 0  
## 594392 6561614.220 NA NA NA  
## 594393 10695646.908 NA NA NA  
## 594394 8226147.044 NA NA NA  
## 594395 11710970.625 NA NA NA  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 594366 0.0230312 89.4 0.9769821 high  
## 594367 0.0230312 89.4 0.9769821 high  
## 594368 0.0230312 89.4 0.9769821 high  
## 594369 0.0230312 89.4 0.9769821 high  
## 594370 0.0230312 89.4 0.9769821 high  
## 594371 0.0230312 89.4 0.9769821 high  
## 594372 0.0230312 89.4 0.9769821 high  
## 594373 0.0230312 89.4 0.9769821 high  
## 594374 0.0230312 89.4 0.9769821 high  
## 594375 0.0230312 89.4 0.9769821 high  
## 594376 0.0230312 89.4 0.9769821 high  
## 594377 0.0230312 89.4 0.9769821 high  
## 594378 0.0230312 89.4 0.9769821 high  
## 594379 0.0230312 89.4 0.9769821 high  
## 594380 0.0230312 89.4 0.9769821 high  
## 594381 0.0230312 89.4 0.9769821 high  
## 594382 0.0230312 89.4 0.9769821 high  
## 594383 0.0230312 89.4 0.9769821 high  
## 594384 0.0230312 89.4 0.9769821 high  
## 594385 0.0230312 89.4 0.9769821 high  
## 594386 0.0230312 89.4 0.9769821 high  
## 594387 0.0230312 89.4 0.9769821 high  
## 594388 0.0230312 89.4 0.9769821 high  
## 594389 0.0230312 89.4 0.9769821 high  
## 594390 0.0230312 89.4 0.9769821 high  
## 594391 0.0230312 89.4 0.9769821 high  
## 594392 NA 81.8 0.5140665 low  
## 594393 NA 80.8 0.3964194 low  
## 594394 NA 79.0 0.2199489 low  
## 594395 NA 81.1 0.4347826 low

#summary of aboveMuLifeExp  
summary(AbovMuLifeExp) %>% as.array()%>% View()  
summary(AbovMuLifeExp) %>% as.array() %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES   
## 1 : 1 98042 : 17295 Min. : 21781 Min. : 0.000   
## 2 : 1 98115 : 16647 1st Qu.: 90750 1st Qu.: 0.126   
## 3 : 1 98052 : 15482 Median :109684 Median : 0.187   
## 4 : 1 98103 : 15370 Mean :115888 Mean : 1.861   
## 5 : 1 98038 : 14183 3rd Qu.:135845 3rd Qu.: 0.311   
## 6 : 1 98118 : 14162 Max. :250001 Max. :1753.326   
## (Other):594389 (Other):501256 NA's :4 NA's :8142   
## GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area   
## 530330315021: 2419 53033027702: 4180 Min. : 0   
## 530330328003: 2216 53033031603: 4064 1st Qu.: 5467   
## 530330316033: 2212 53033031502: 3968 Median : 8196   
## 530330277023: 1467 53033027701: 3825 Mean : 95929   
## 530330277021: 1426 53033032800: 3758 3rd Qu.: 13837   
## 530330277022: 1287 53033032704: 3345 Max. :76565294   
## (Other) :583368 (Other) :571255   
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct   
## Min. :0.00000 Min. :0.006559 Min. :0.000000 Min. :0.000000   
## 1st Qu.:0.01280 1st Qu.:0.064260 1st Qu.:0.000000 1st Qu.:0.006439   
## Median :0.03375 Median :0.088893 Median :0.000307 Median :0.021029   
## Mean :0.04742 Mean :0.093952 Mean :0.003248 Mean :0.031606   
## 3rd Qu.:0.06744 3rd Qu.:0.117751 3rd Qu.:0.004219 3rd Qu.:0.045023   
## Max. :0.39582 Max. :0.321429 Max. :0.062806 Max. :0.273118   
## NA's :4 NA's :4 NA's :4 NA's :4   
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## Min. :76.20 Min. :0.07673 : 0   
## 1st Qu.:80.00 1st Qu.:0.31714 high : 44582   
## Median :81.80 Median :0.51407 low :390310   
## Mean :82.25 Mean :0.52768 moderate:159503   
## 3rd Qu.:84.30 3rd Qu.:0.74936   
## Max. :92.60 Max. :1.00000   
##

# Below Mu (mu=76) Life Expectancy   
#BelowMuLifeExp  
#1 KCA Acres  
BelowMuLifeExp %>% arrange(desc(c(KCA\_ACRES))) %>% glimpse() %>% head(30) %>% print()

## Rows: 27,383  
## Columns: 14  
## $ OBJECTID <fct> 391283, 543144, 432694, 438944, 560723, 421867,…  
## $ ZIP5 <fct> 98092, 98022, 98001, 98032, 98022, 98047, 98092…  
## $ median\_income <int> 65673, 91375, 57731, 75611, 91375, 57731, 91375…  
## $ KCA\_ACRES <dbl> 137.43519, 130.17998, 127.85865, 116.58361, 107…  
## $ GEO\_ID\_GRP <fct> 530330311023, 530330312025, 530330308011, 53033…  
## $ GEO\_ID\_TRT <fct> 53033031102, 53033031202, 53033030801, 53033029…  
## $ Shape\_Area <dbl> 5986684, 5896630, 5685237, 5078422, 4382184, 45…  
## $ limitedEng\_pct <dbl> 0.05909091, 0.00000000, 0.14935065, 0.08055291,…  
## $ disabled\_pct <dbl> 0.18193632, 0.13638437, 0.11894673, 0.07716306,…  
## $ disabled\_uninsured\_pct <dbl> 0.00194932, 0.01033906, 0.00771792, 0.00000000,…  
## $ foodstamp\_pct <dbl> 0.10681818, 0.09980334, 0.08395176, 0.06863680,…  
## $ LifeExpectancy <dbl> 74.9, 75.5, 71.5, 75.7, 75.5, 71.5, 75.5, 74.9,…  
## $ life\_exp\_pctle <dbl> 0.02557545, 0.04092072, 0.00000000, 0.05115090,…  
## $ displacement\_risk <fct> moderate, low, high, moderate, low, high, low, …  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 391283 98092 65673 137.43519 530330311023 53033031102 5986684  
## 2 543144 98022 91375 130.17998 530330312025 53033031202 5896630  
## 3 432694 98001 57731 127.85865 530330308011 53033030801 5685237  
## 4 438944 98032 75611 116.58361 530330292052 53033029205 5078422  
## 5 560723 98022 91375 107.00000 530330312024 53033031202 4382184  
## 6 421867 98047 57731 102.28526 530330308011 53033030801 4590024  
## 7 333726 98092 91375 101.60914 530330312022 53033031202 4426094  
## 8 463868 98002 72378 99.73999 530330311011 53033031101 3929372  
## 9 404658 98022 91375 98.40000 530330312023 53033031202 4538440  
## 10 551217 98022 91375 97.72998 530330312024 53033031202 4307024  
## 11 409946 98022 91375 92.00009 530330312023 53033031202 4007524  
## 12 432674 98001 57731 90.41506 530330308011 53033030801 3911696  
## 13 628148 98002 32283 86.86001 530330305011 53033030501 3895667  
## 14 348352 98022 91375 79.91490 530330312024 53033031202 3449341  
## 15 605261 98022 91375 77.90000 530330312024 53033031202 3445632  
## 16 499674 98155 98806 75.37991 530330211003 53033021100 3286731  
## 17 499644 98155 98806 72.10000 530330211003 53033021100 3142544  
## 18 421766 98022 91375 71.09059 530330312023 53033031202 3076622  
## 19 391281 98092 111563 70.73586 530330310003 53033031000 3081263  
## 20 620725 98092 91375 66.09720 530330312025 53033031202 2879163  
## 21 567958 98003 51442 63.62022 530330300061 53033030006 2771385  
## 22 457081 98092 72378 62.65985 530330311013 53033031101 2730893  
## 23 495288 98003 39277 60.56747 530330303141 53033030314 2632368  
## 24 550560 98032 35819 60.40000 530330292061 53033029206 2627468  
## 25 446153 98092 72378 59.20999 530330311013 53033031101 2384449  
## 26 627360 98032 35819 58.76035 530330292061 53033029206 2561167  
## 27 410018 98092 91375 55.83999 530330312021 53033031202 2302528  
## 28 550577 98032 35819 54.23999 530330292061 53033029206 2361404  
## 29 410017 98092 91375 53.35611 530330312021 53033031202 2324192  
## 30 432677 98001 57731 52.51001 530330308011 53033030801 2287343  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.05909091 0.18193632 0.00194932 0.10681818  
## 2 0.00000000 0.13638437 0.01033906 0.09980334  
## 3 0.14935065 0.11894673 0.00771792 0.08395176  
## 4 0.08055291 0.07716306 0.00000000 0.06863680  
## 5 0.00000000 0.13638437 0.01033906 0.09980334  
## 6 0.14935065 0.11894673 0.00771792 0.08395176  
## 7 0.00000000 0.13638437 0.01033906 0.09980334  
## 8 0.01394422 0.13702624 0.00515811 0.11288181  
## 9 0.00000000 0.13638437 0.01033906 0.09980334  
## 10 0.00000000 0.13638437 0.01033906 0.09980334  
## 11 0.00000000 0.13638437 0.01033906 0.09980334  
## 12 0.14935065 0.11894673 0.00771792 0.08395176  
## 13 0.05457746 0.26726163 0.00000000 0.19454225  
## 14 0.00000000 0.13638437 0.01033906 0.09980334  
## 15 0.00000000 0.13638437 0.01033906 0.09980334  
## 16 0.06215385 0.07305081 0.00351206 0.02769231  
## 17 0.06215385 0.07305081 0.00351206 0.02769231  
## 18 0.00000000 0.13638437 0.01033906 0.09980334  
## 19 0.01128266 0.05837209 0.00000000 0.00000000  
## 20 0.00000000 0.13638437 0.01033906 0.09980334  
## 21 0.15756036 0.15887635 0.02624914 0.18614994  
## 22 0.01394422 0.13702624 0.00515811 0.11288181  
## 23 0.12935741 0.18124436 0.00000000 0.05459891  
## 24 0.13662791 0.19528762 0.03481214 0.18120155  
## 25 0.01394422 0.13702624 0.00515811 0.11288181  
## 26 0.13662791 0.19528762 0.03481214 0.18120155  
## 27 0.00000000 0.13638437 0.01033906 0.09980334  
## 28 0.13662791 0.19528762 0.03481214 0.18120155  
## 29 0.00000000 0.13638437 0.01033906 0.09980334  
## 30 0.14935065 0.11894673 0.00771792 0.08395176  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 74.9 0.02557545 moderate  
## 2 75.5 0.04092072 low  
## 3 71.5 0.00000000 high  
## 4 75.7 0.05115090 moderate  
## 5 75.5 0.04092072 low  
## 6 71.5 0.00000000 high  
## 7 75.5 0.04092072 low  
## 8 74.9 0.02557545 moderate  
## 9 75.5 0.04092072 low  
## 10 75.5 0.04092072 low  
## 11 75.5 0.04092072 low  
## 12 71.5 0.00000000 high  
## 13 72.0 0.00255754 high  
## 14 75.5 0.04092072 low  
## 15 75.5 0.04092072 low  
## 16 74.4 0.01534527 moderate  
## 17 74.4 0.01534527 moderate  
## 18 75.5 0.04092072 low  
## 19 74.9 0.02557545 moderate  
## 20 75.5 0.04092072 low  
## 21 74.7 0.02046036 high  
## 22 74.9 0.02557545 moderate  
## 23 75.7 0.05115090 moderate  
## 24 75.7 0.05115090 high  
## 25 74.9 0.02557545 moderate  
## 26 75.7 0.05115090 high  
## 27 75.5 0.04092072 low  
## 28 75.7 0.05115090 high  
## 29 75.5 0.04092072 low  
## 30 71.5 0.00000000 high

BelowMuLifeExp %>% arrange(desc(c(KCA\_ACRES))) %>% glimpse() %>% tail(30) %>% print()

## Rows: 27,383  
## Columns: 14  
## $ OBJECTID <fct> 391283, 543144, 432694, 438944, 560723, 421867,…  
## $ ZIP5 <fct> 98092, 98022, 98001, 98032, 98022, 98047, 98092…  
## $ median\_income <int> 65673, 91375, 57731, 75611, 91375, 57731, 91375…  
## $ KCA\_ACRES <dbl> 137.43519, 130.17998, 127.85865, 116.58361, 107…  
## $ GEO\_ID\_GRP <fct> 530330311023, 530330312025, 530330308011, 53033…  
## $ GEO\_ID\_TRT <fct> 53033031102, 53033031202, 53033030801, 53033029…  
## $ Shape\_Area <dbl> 5986684, 5896630, 5685237, 5078422, 4382184, 45…  
## $ limitedEng\_pct <dbl> 0.05909091, 0.00000000, 0.14935065, 0.08055291,…  
## $ disabled\_pct <dbl> 0.18193632, 0.13638437, 0.11894673, 0.07716306,…  
## $ disabled\_uninsured\_pct <dbl> 0.00194932, 0.01033906, 0.00771792, 0.00000000,…  
## $ foodstamp\_pct <dbl> 0.10681818, 0.09980334, 0.08395176, 0.06863680,…  
## $ LifeExpectancy <dbl> 74.9, 75.5, 71.5, 75.7, 75.5, 71.5, 75.5, 74.9,…  
## $ life\_exp\_pctle <dbl> 0.02557545, 0.04092072, 0.00000000, 0.05115090,…  
## $ displacement\_risk <fct> moderate, low, high, moderate, low, high, low, …  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 27354 556867 98092 94461 NA 530330312073 53033031207  
## 27355 560464 98092 94461 NA 530330312071 53033031207  
## 27356 567583 98092 94461 NA 530330312072 53033031207  
## 27357 567732 98003 51442 NA 530330300061 53033030006  
## 27358 567999 98022 91375 NA 530330312024 53033031202  
## 27359 568000 98022 91375 NA 530330312024 53033031202  
## 27360 570277 98003 64304 NA 530330302033 53033030203  
## 27361 573432 98092 73825 NA 530330312082 53033031208  
## 27362 573433 98002 73825 NA 530330312081 53033031208  
## 27363 573466 98003 64304 NA 530330302031 53033030203  
## 27364 573747 98022 91375 NA 530330312025 53033031202  
## 27365 573890 98003 56694 NA 530330302043 53033030204  
## 27366 580052 98031 35819 NA 530330292061 53033029206  
## 27367 587106 98031 35819 NA 530330292061 53033029206  
## 27368 589692 98198 52418 NA 530330289025 53033028902  
## 27369 590176 98168 61200 NA 530330280003 53033028000  
## 27370 590752 98003 51442 NA 530330300062 53033030006  
## 27371 590753 98003 51442 NA 530330300062 53033030006  
## 27372 590754 98003 51442 NA 530330300062 53033030006  
## 27373 599615 98003 75893 NA 530330300052 53033030005  
## 27374 604870 98042 94461 NA 530330312071 53033031207  
## 27375 606706 98003 75893 NA 530330300051 53033030005  
## 27376 610029 98003 56694 NA 530330302042 53033030204  
## 27377 611298 98047 90469 NA 530330309012 53033030901  
## 27378 614005 98022 91375 NA 530330312023 53033031202  
## 27379 614111 98092 91375 NA 530330312025 53033031202  
## 27380 614112 98092 91375 NA 530330312025 53033031202  
## 27381 617753 98001 90469 NA 530330309013 53033030901  
## 27382 620281 98001 32283 NA 530330305011 53033030501  
## 27383 620913 98023 79236 NA 530330303123 53033030312  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 27354 3618.6645 0.05736434 0.12352516 0.00000000  
## 27355 695.2776 0.05736434 0.12352516 0.00000000  
## 27356 28212.3592 0.05736434 0.12352516 0.00000000  
## 27357 445022.3715 0.15756036 0.15887635 0.02624914  
## 27358 39619.7184 0.00000000 0.13638437 0.01033906  
## 27359 42344.6554 0.00000000 0.13638437 0.01033906  
## 27360 39264.9977 0.08542320 0.10878418 0.05584642  
## 27361 18416.7976 0.13083451 0.06892779 0.00328228  
## 27362 510821.3014 0.13083451 0.06892779 0.00328228  
## 27363 56420.4578 0.08542320 0.10878418 0.05584642  
## 27364 3186.2970 0.00000000 0.13638437 0.01033906  
## 27365 8681.3252 0.23367953 0.18561302 0.00761355  
## 27366 8095.2068 0.13662791 0.19528762 0.03481214  
## 27367 113682.3577 0.13662791 0.19528762 0.03481214  
## 27368 7865.0191 0.04432133 0.08592911 0.00552401  
## 27369 276.0434 0.15028571 0.15453162 0.00152141  
## 27370 11266.5699 0.15756036 0.15887635 0.02624914  
## 27371 4970.1204 0.15756036 0.15887635 0.02624914  
## 27372 3522.4739 0.15756036 0.15887635 0.02624914  
## 27373 6877.0041 0.05819209 0.08041896 0.00337298  
## 27374 58969.3023 0.05736434 0.12352516 0.00000000  
## 27375 1758.0446 0.05819209 0.08041896 0.00337298  
## 27376 2878.2836 0.23367953 0.18561302 0.00761355  
## 27377 3618.9973 0.01484716 0.11189694 0.00530437  
## 27378 17568.0208 0.00000000 0.13638437 0.01033906  
## 27379 9847766.8700 0.00000000 0.13638437 0.01033906  
## 27380 43738.7318 0.00000000 0.13638437 0.01033906  
## 27381 1534.9518 0.01484716 0.11189694 0.00530437  
## 27382 60495.9897 0.05457746 0.26726163 0.00000000  
## 27383 7375.7482 0.01928375 0.10321821 0.00392465  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 27354 0.13178295 74.2 0.01278772 moderate  
## 27355 0.13178295 74.2 0.01278772 moderate  
## 27356 0.13178295 74.2 0.01278772 moderate  
## 27357 0.18614994 74.7 0.02046036 high  
## 27358 0.09980334 75.5 0.04092072 low  
## 27359 0.09980334 75.5 0.04092072 low  
## 27360 0.04937304 74.5 0.01790281 moderate  
## 27361 0.06082037 74.2 0.01278772 moderate  
## 27362 0.06082037 74.2 0.01278772 moderate  
## 27363 0.04937304 74.5 0.01790281 moderate  
## 27364 0.09980334 75.5 0.04092072 low  
## 27365 0.13575668 74.5 0.01790281 moderate  
## 27366 0.18120155 75.7 0.05115090 high  
## 27367 0.18120155 75.7 0.05115090 high  
## 27368 0.04709141 75.5 0.04092072 high  
## 27369 0.07657143 75.7 0.05115090 high  
## 27370 0.18614994 74.7 0.02046036 high  
## 27371 0.18614994 74.7 0.02046036 high  
## 27372 0.18614994 74.7 0.02046036 high  
## 27373 0.04293785 75.9 0.06649616 moderate  
## 27374 0.13178295 74.2 0.01278772 moderate  
## 27375 0.04293785 75.9 0.06649616 moderate  
## 27376 0.13575668 74.5 0.01790281 moderate  
## 27377 0.06375546 73.4 0.01023018 moderate  
## 27378 0.09980334 75.5 0.04092072 low  
## 27379 0.09980334 75.5 0.04092072 low  
## 27380 0.09980334 75.5 0.04092072 low  
## 27381 0.06375546 73.4 0.01023018 moderate  
## 27382 0.19454225 72.0 0.00255754 high  
## 27383 0.06170799 75.6 0.04603581 moderate

#2 Life Exp  
BelowMuLifeExp %>% arrange(desc(c(LifeExpectancy))) %>% glimpse() %>% head(30) %>% print()

## Rows: 27,383  
## Columns: 14  
## $ OBJECTID <fct> 16291, 16292, 16293, 16294, 16295, 16296, 16297…  
## $ ZIP5 <fct> 98003, 98003, 98003, 98003, 98003, 98003, 98003…  
## $ median\_income <int> 75893, 75893, 75893, 75893, 75893, 75893, 75893…  
## $ KCA\_ACRES <dbl> NA, NA, NA, NA, 0.1077594, 0.2232094, 0.2346878…  
## $ GEO\_ID\_GRP <fct> 530330300052, 530330300053, 530330300053, 53033…  
## $ GEO\_ID\_TRT <fct> 53033030005, 53033030005, 53033030005, 53033030…  
## $ Shape\_Area <dbl> 804.3993, 1668.6606, 9298.2003, 19008.2327, 466…  
## $ limitedEng\_pct <dbl> 0.05819209, 0.05819209, 0.05819209, 0.05819209,…  
## $ disabled\_pct <dbl> 0.08041896, 0.08041896, 0.08041896, 0.08041896,…  
## $ disabled\_uninsured\_pct <dbl> 0.00337298, 0.00337298, 0.00337298, 0.00337298,…  
## $ foodstamp\_pct <dbl> 0.04293785, 0.04293785, 0.04293785, 0.04293785,…  
## $ LifeExpectancy <dbl> 75.9, 75.9, 75.9, 75.9, 75.9, 75.9, 75.9, 75.9,…  
## $ life\_exp\_pctle <dbl> 0.06649616, 0.06649616, 0.06649616, 0.06649616,…  
## $ displacement\_risk <fct> moderate, moderate, moderate, moderate, moderat…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 16291 98003 75893 NA 530330300052 53033030005 804.3993  
## 2 16292 98003 75893 NA 530330300053 53033030005 1668.6606  
## 3 16293 98003 75893 NA 530330300053 53033030005 9298.2003  
## 4 16294 98003 75893 NA 530330300053 53033030005 19008.2327  
## 5 16295 98003 75893 0.1077594 530330300052 53033030005 4660.4562  
## 6 16296 98003 75893 0.2232094 530330300052 53033030005 9722.1541  
## 7 16297 98003 75893 0.2346878 530330300052 53033030005 10226.6796  
## 8 16298 98003 75893 0.1921947 530330300052 53033030005 8376.2910  
## 9 16299 98003 75893 0.2049816 530330300052 53033030005 8933.1614  
## 10 16300 98003 75893 0.2047980 530330300052 53033030005 8917.5748  
## 11 16301 98003 75893 0.2046602 530330300052 53033030005 8860.9375  
## 12 16302 98003 75893 0.2047521 530330300052 53033030005 8852.0439  
## 13 18076 98198 60792 NA 530330290033 53033029003 2378.5273  
## 14 18078 98198 60792 0.2272727 530330290033 53033029003 9837.5994  
## 15 18079 98198 60792 0.2272727 530330290033 53033029003 9636.2595  
## 16 18080 98198 60792 0.1928375 530330290033 53033029003 8309.4560  
## 17 18081 98198 60792 0.1928375 530330290033 53033029003 8340.2893  
## 18 18082 98198 60792 0.2582645 530330290033 53033029003 11280.8294  
## 19 18083 98198 60792 0.2582645 530330290033 53033029003 11270.8887  
## 20 18084 98198 60792 0.2066116 530330290033 53033029003 8996.6695  
## 21 18085 98198 60792 0.2272727 530330290033 53033029003 9841.1889  
## 22 18086 98198 60792 0.7231405 530330290033 53033029003 31757.8994  
## 23 18087 98198 60792 0.1797521 530330290033 53033029003 7590.4877  
## 24 18088 98198 60792 0.1798668 530330290033 53033029003 7819.5046  
## 25 18089 98198 60792 0.2203857 530330290033 53033029003 9075.3888  
## 26 18090 98198 60792 0.2341598 530330290033 53033029003 9863.4330  
## 27 18091 98198 60792 0.2754821 530330290033 53033029003 11405.3614  
## 28 18092 98198 60792 0.2754821 530330290033 53033029003 11264.1917  
## 29 18093 98198 60792 0.1542700 530330290033 53033029003 8221.8225  
## 30 18094 98198 60792 0.1658861 530330290033 53033029003 7111.9834  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.05819209 0.08041896 0.00337298 0.04293785  
## 2 0.05819209 0.08041896 0.00337298 0.04293785  
## 3 0.05819209 0.08041896 0.00337298 0.04293785  
## 4 0.05819209 0.08041896 0.00337298 0.04293785  
## 5 0.05819209 0.08041896 0.00337298 0.04293785  
## 6 0.05819209 0.08041896 0.00337298 0.04293785  
## 7 0.05819209 0.08041896 0.00337298 0.04293785  
## 8 0.05819209 0.08041896 0.00337298 0.04293785  
## 9 0.05819209 0.08041896 0.00337298 0.04293785  
## 10 0.05819209 0.08041896 0.00337298 0.04293785  
## 11 0.05819209 0.08041896 0.00337298 0.04293785  
## 12 0.05819209 0.08041896 0.00337298 0.04293785  
## 13 0.13557780 0.13747646 0.00000000 0.07506824  
## 14 0.13557780 0.13747646 0.00000000 0.07506824  
## 15 0.13557780 0.13747646 0.00000000 0.07506824  
## 16 0.13557780 0.13747646 0.00000000 0.07506824  
## 17 0.13557780 0.13747646 0.00000000 0.07506824  
## 18 0.13557780 0.13747646 0.00000000 0.07506824  
## 19 0.13557780 0.13747646 0.00000000 0.07506824  
## 20 0.13557780 0.13747646 0.00000000 0.07506824  
## 21 0.13557780 0.13747646 0.00000000 0.07506824  
## 22 0.13557780 0.13747646 0.00000000 0.07506824  
## 23 0.13557780 0.13747646 0.00000000 0.07506824  
## 24 0.13557780 0.13747646 0.00000000 0.07506824  
## 25 0.13557780 0.13747646 0.00000000 0.07506824  
## 26 0.13557780 0.13747646 0.00000000 0.07506824  
## 27 0.13557780 0.13747646 0.00000000 0.07506824  
## 28 0.13557780 0.13747646 0.00000000 0.07506824  
## 29 0.13557780 0.13747646 0.00000000 0.07506824  
## 30 0.13557780 0.13747646 0.00000000 0.07506824  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 75.9 0.06649616 moderate  
## 2 75.9 0.06649616 moderate  
## 3 75.9 0.06649616 moderate  
## 4 75.9 0.06649616 moderate  
## 5 75.9 0.06649616 moderate  
## 6 75.9 0.06649616 moderate  
## 7 75.9 0.06649616 moderate  
## 8 75.9 0.06649616 moderate  
## 9 75.9 0.06649616 moderate  
## 10 75.9 0.06649616 moderate  
## 11 75.9 0.06649616 moderate  
## 12 75.9 0.06649616 moderate  
## 13 75.9 0.06649616 moderate  
## 14 75.9 0.06649616 moderate  
## 15 75.9 0.06649616 moderate  
## 16 75.9 0.06649616 moderate  
## 17 75.9 0.06649616 moderate  
## 18 75.9 0.06649616 moderate  
## 19 75.9 0.06649616 moderate  
## 20 75.9 0.06649616 moderate  
## 21 75.9 0.06649616 moderate  
## 22 75.9 0.06649616 moderate  
## 23 75.9 0.06649616 moderate  
## 24 75.9 0.06649616 moderate  
## 25 75.9 0.06649616 moderate  
## 26 75.9 0.06649616 moderate  
## 27 75.9 0.06649616 moderate  
## 28 75.9 0.06649616 moderate  
## 29 75.9 0.06649616 moderate  
## 30 75.9 0.06649616 moderate

BelowMuLifeExp %>% arrange(desc(c(LifeExpectancy))) %>% glimpse() %>% tail(30) %>% print()

## Rows: 27,383  
## Columns: 14  
## $ OBJECTID <fct> 16291, 16292, 16293, 16294, 16295, 16296, 16297…  
## $ ZIP5 <fct> 98003, 98003, 98003, 98003, 98003, 98003, 98003…  
## $ median\_income <int> 75893, 75893, 75893, 75893, 75893, 75893, 75893…  
## $ KCA\_ACRES <dbl> NA, NA, NA, NA, 0.1077594, 0.2232094, 0.2346878…  
## $ GEO\_ID\_GRP <fct> 530330300052, 530330300053, 530330300053, 53033…  
## $ GEO\_ID\_TRT <fct> 53033030005, 53033030005, 53033030005, 53033030…  
## $ Shape\_Area <dbl> 804.3993, 1668.6606, 9298.2003, 19008.2327, 466…  
## $ limitedEng\_pct <dbl> 0.05819209, 0.05819209, 0.05819209, 0.05819209,…  
## $ disabled\_pct <dbl> 0.08041896, 0.08041896, 0.08041896, 0.08041896,…  
## $ disabled\_uninsured\_pct <dbl> 0.00337298, 0.00337298, 0.00337298, 0.00337298,…  
## $ foodstamp\_pct <dbl> 0.04293785, 0.04293785, 0.04293785, 0.04293785,…  
## $ LifeExpectancy <dbl> 75.9, 75.9, 75.9, 75.9, 75.9, 75.9, 75.9, 75.9,…  
## $ life\_exp\_pctle <dbl> 0.06649616, 0.06649616, 0.06649616, 0.06649616,…  
## $ displacement\_risk <fct> moderate, moderate, moderate, moderate, moderat…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 27354 606377 98001 57731 1.6626263 530330308011 53033030801  
## 27355 606378 98001 57731 0.8015151 530330308011 53033030801  
## 27356 606379 98001 57731 3.6016988 530330308011 53033030801  
## 27357 606381 98001 57731 8.3870523 530330308011 53033030801  
## 27358 606382 98001 57731 11.9445363 530330308011 53033030801  
## 27359 606383 98001 57731 2.1349862 530330308011 53033030801  
## 27360 606384 98001 57731 3.6707989 530330308011 53033030801  
## 27361 606385 98001 57731 0.6581956 530330308011 53033030801  
## 27362 606386 98001 57731 1.1395546 530330308011 53033030801  
## 27363 606387 98001 57731 0.9780532 530330308011 53033030801  
## 27364 606388 98001 57731 1.0637282 530330308011 53033030801  
## 27365 606389 98001 57731 1.6620294 530330308011 53033030801  
## 27366 606390 98001 57731 2.5035124 530330308011 53033030801  
## 27367 606391 98001 57731 6.6509871 530330308011 53033030801  
## 27368 606661 98002 57731 0.2066116 530330308014 53033030801  
## 27369 606662 98002 57731 0.2616162 530330308014 53033030801  
## 27370 606663 98002 57731 0.1695822 530330308014 53033030801  
## 27371 606664 98002 57731 0.1694904 530330308014 53033030801  
## 27372 606665 98002 57731 0.1605831 530330308014 53033030801  
## 27373 606666 98002 57731 0.9454775 530330308014 53033030801  
## 27374 606667 98002 57731 0.2066116 530330308014 53033030801  
## 27375 606668 98002 57731 0.2066116 530330308014 53033030801  
## 27376 606669 98002 57731 0.2066116 530330308014 53033030801  
## 27377 609725 98002 57731 0.2373049 530330308011 53033030801  
## 27378 609726 98002 57731 0.2212121 530330308011 53033030801  
## 27379 609727 98002 57731 0.2655418 530330308011 53033030801  
## 27380 609728 98002 57731 0.2623508 530330308011 53033030801  
## 27381 624054 98002 57731 1.1215794 530330308012 53033030801  
## 27382 624055 98002 57731 3.8027089 530330308012 53033030801  
## 27383 624056 98002 57731 5.0600092 530330308012 53033030801  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 27354 72443.377 0.1493507 0.1189467 0.00771792  
## 27355 35334.417 0.1493507 0.1189467 0.00771792  
## 27356 156739.993 0.1493507 0.1189467 0.00771792  
## 27357 365312.070 0.1493507 0.1189467 0.00771792  
## 27358 520782.021 0.1493507 0.1189467 0.00771792  
## 27359 92291.408 0.1493507 0.1189467 0.00771792  
## 27360 159223.622 0.1493507 0.1189467 0.00771792  
## 27361 28105.216 0.1493507 0.1189467 0.00771792  
## 27362 75505.361 0.1493507 0.1189467 0.00771792  
## 27363 42554.960 0.1493507 0.1189467 0.00771792  
## 27364 46339.297 0.1493507 0.1189467 0.00771792  
## 27365 72472.180 0.1493507 0.1189467 0.00771792  
## 27366 109140.717 0.1493507 0.1189467 0.00771792  
## 27367 289659.014 0.1493507 0.1189467 0.00771792  
## 27368 8999.976 0.1493507 0.1189467 0.00771792  
## 27369 11395.709 0.1493507 0.1189467 0.00771792  
## 27370 8179.472 0.1493507 0.1189467 0.00771792  
## 27371 8165.917 0.1493507 0.1189467 0.00771792  
## 27372 8281.954 0.1493507 0.1189467 0.00771792  
## 27373 43865.187 0.1493507 0.1189467 0.00771792  
## 27374 9000.024 0.1493507 0.1189467 0.00771792  
## 27375 8999.961 0.1493507 0.1189467 0.00771792  
## 27376 9000.053 0.1493507 0.1189467 0.00771792  
## 27377 10540.450 0.1493507 0.1189467 0.00771792  
## 27378 9608.265 0.1493507 0.1189467 0.00771792  
## 27379 11564.920 0.1493507 0.1189467 0.00771792  
## 27380 11426.141 0.1493507 0.1189467 0.00771792  
## 27381 48856.161 0.1493507 0.1189467 0.00771792  
## 27382 165644.265 0.1493507 0.1189467 0.00771792  
## 27383 221560.800 0.1493507 0.1189467 0.00771792  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 27354 0.08395176 71.5 0 high  
## 27355 0.08395176 71.5 0 high  
## 27356 0.08395176 71.5 0 high  
## 27357 0.08395176 71.5 0 high  
## 27358 0.08395176 71.5 0 high  
## 27359 0.08395176 71.5 0 high  
## 27360 0.08395176 71.5 0 high  
## 27361 0.08395176 71.5 0 high  
## 27362 0.08395176 71.5 0 high  
## 27363 0.08395176 71.5 0 high  
## 27364 0.08395176 71.5 0 high  
## 27365 0.08395176 71.5 0 high  
## 27366 0.08395176 71.5 0 high  
## 27367 0.08395176 71.5 0 high  
## 27368 0.08395176 71.5 0 high  
## 27369 0.08395176 71.5 0 high  
## 27370 0.08395176 71.5 0 high  
## 27371 0.08395176 71.5 0 high  
## 27372 0.08395176 71.5 0 high  
## 27373 0.08395176 71.5 0 high  
## 27374 0.08395176 71.5 0 high  
## 27375 0.08395176 71.5 0 high  
## 27376 0.08395176 71.5 0 high  
## 27377 0.08395176 71.5 0 high  
## 27378 0.08395176 71.5 0 high  
## 27379 0.08395176 71.5 0 high  
## 27380 0.08395176 71.5 0 high  
## 27381 0.08395176 71.5 0 high  
## 27382 0.08395176 71.5 0 high  
## 27383 0.08395176 71.5 0 high

#3 median income  
BelowMuLifeExp %>% arrange(desc(c(median\_income))) %>% glimpse() %>% head(30) %>% print()

## Rows: 27,383  
## Columns: 14  
## $ OBJECTID <fct> 142350, 142352, 142353, 142356, 391281, 80520, …  
## $ ZIP5 <fct> 98092, 98092, 98092, 98092, 98092, 98155, 98155…  
## $ median\_income <int> 113424, 113424, 113424, 113424, 111563, 98806, …  
## $ KCA\_ACRES <dbl> 10.4699954, 10.7899908, 10.0299816, 12.4622130,…  
## $ GEO\_ID\_GRP <fct> 530330316033, 530330316033, 530330316033, 53033…  
## $ GEO\_ID\_TRT <fct> 53033031603, 53033031603, 53033031603, 53033031…  
## $ Shape\_Area <dbl> 457067.822, 468048.783, 435588.331, 540368.511,…  
## $ limitedEng\_pct <dbl> 0.02806019, 0.02806019, 0.02806019, 0.02806019,…  
## $ disabled\_pct <dbl> 0.13079925, 0.13079925, 0.13079925, 0.13079925,…  
## $ disabled\_uninsured\_pct <dbl> 0.03902298, 0.03902298, 0.03902298, 0.03902298,…  
## $ foodstamp\_pct <dbl> 0.05368036, 0.05368036, 0.05368036, 0.05368036,…  
## $ LifeExpectancy <dbl> 75.5, 75.5, 75.5, 75.5, 74.9, 74.4, 74.4, 74.4,…  
## $ life\_exp\_pctle <dbl> 0.04092072, 0.04092072, 0.04092072, 0.04092072,…  
## $ displacement\_risk <fct> low, low, low, low, moderate, moderate, moderat…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area  
## 1 142350 98092 113424 10.4699954 530330316033 53033031603 457067.822  
## 2 142352 98092 113424 10.7899908 530330316033 53033031603 468048.783  
## 3 142353 98092 113424 10.0299816 530330316033 53033031603 435588.331  
## 4 142356 98092 113424 12.4622130 530330316033 53033031603 540368.511  
## 5 391281 98092 111563 70.7358586 530330310003 53033031000 3081262.966  
## 6 80520 98155 98806 0.8104224 530330211002 53033021100 35295.297  
## 7 127273 98155 98806 0.1721763 530330211002 53033021100 7499.673  
## 8 127274 98155 98806 0.1198347 530330211002 53033021100 5275.584  
## 9 127275 98155 98806 0.1707989 530330211002 53033021100 7453.665  
## 10 127276 98155 98806 0.1707989 530330211002 53033021100 7451.458  
## 11 127277 98155 98806 0.1707989 530330211002 53033021100 7449.588  
## 12 127278 98155 98806 0.1707989 530330211002 53033021100 7447.393  
## 13 127279 98155 98806 0.1707989 530330211002 53033021100 7445.241  
## 14 127280 98155 98806 0.1707989 530330211002 53033021100 7443.374  
## 15 127281 98155 98806 0.1707989 530330211002 53033021100 7441.113  
## 16 127282 98155 98806 0.1707989 530330211002 53033021100 7439.167  
## 17 127283 98155 98806 0.1707989 530330211002 53033021100 7437.078  
## 18 127284 98155 98806 0.1707989 530330211002 53033021100 7435.002  
## 19 127285 98155 98806 0.1470845 530330211002 53033021100 6383.898  
## 20 127286 98155 98806 0.1470386 530330211002 53033021100 6383.001  
## 21 127287 98155 98806 0.1469697 530330211002 53033021100 6382.012  
## 22 127288 98155 98806 0.1469008 530330211002 53033021100 6381.087  
## 23 127289 98155 98806 0.1707989 530330211002 53033021100 7434.960  
## 24 127290 98155 98806 0.1707989 530330211002 53033021100 7437.093  
## 25 127291 98155 98806 0.2561983 530330211002 53033021100 11291.437  
## 26 127292 98155 98806 0.2561983 530330211002 53033021100 11032.408  
## 27 127293 98155 98806 0.1707989 530330211002 53033021100 7445.295  
## 28 127294 98155 98806 0.1707989 530330211002 53033021100 7447.429  
## 29 127295 98155 98806 0.1707989 530330211002 53033021100 7449.503  
## 30 127296 98155 98806 0.1707989 530330211002 53033021100 7451.456  
## limitedEng\_pct disabled\_pct disabled\_uninsured\_pct foodstamp\_pct  
## 1 0.02806019 0.13079925 0.03902298 0.05368036  
## 2 0.02806019 0.13079925 0.03902298 0.05368036  
## 3 0.02806019 0.13079925 0.03902298 0.05368036  
## 4 0.02806019 0.13079925 0.03902298 0.05368036  
## 5 0.01128266 0.05837209 0.00000000 0.00000000  
## 6 0.06215385 0.07305081 0.00351206 0.02769231  
## 7 0.06215385 0.07305081 0.00351206 0.02769231  
## 8 0.06215385 0.07305081 0.00351206 0.02769231  
## 9 0.06215385 0.07305081 0.00351206 0.02769231  
## 10 0.06215385 0.07305081 0.00351206 0.02769231  
## 11 0.06215385 0.07305081 0.00351206 0.02769231  
## 12 0.06215385 0.07305081 0.00351206 0.02769231  
## 13 0.06215385 0.07305081 0.00351206 0.02769231  
## 14 0.06215385 0.07305081 0.00351206 0.02769231  
## 15 0.06215385 0.07305081 0.00351206 0.02769231  
## 16 0.06215385 0.07305081 0.00351206 0.02769231  
## 17 0.06215385 0.07305081 0.00351206 0.02769231  
## 18 0.06215385 0.07305081 0.00351206 0.02769231  
## 19 0.06215385 0.07305081 0.00351206 0.02769231  
## 20 0.06215385 0.07305081 0.00351206 0.02769231  
## 21 0.06215385 0.07305081 0.00351206 0.02769231  
## 22 0.06215385 0.07305081 0.00351206 0.02769231  
## 23 0.06215385 0.07305081 0.00351206 0.02769231  
## 24 0.06215385 0.07305081 0.00351206 0.02769231  
## 25 0.06215385 0.07305081 0.00351206 0.02769231  
## 26 0.06215385 0.07305081 0.00351206 0.02769231  
## 27 0.06215385 0.07305081 0.00351206 0.02769231  
## 28 0.06215385 0.07305081 0.00351206 0.02769231  
## 29 0.06215385 0.07305081 0.00351206 0.02769231  
## 30 0.06215385 0.07305081 0.00351206 0.02769231  
## LifeExpectancy life\_exp\_pctle displacement\_risk  
## 1 75.5 0.04092072 low  
## 2 75.5 0.04092072 low  
## 3 75.5 0.04092072 low  
## 4 75.5 0.04092072 low  
## 5 74.9 0.02557545 moderate  
## 6 74.4 0.01534527 moderate  
## 7 74.4 0.01534527 moderate  
## 8 74.4 0.01534527 moderate  
## 9 74.4 0.01534527 moderate  
## 10 74.4 0.01534527 moderate  
## 11 74.4 0.01534527 moderate  
## 12 74.4 0.01534527 moderate  
## 13 74.4 0.01534527 moderate  
## 14 74.4 0.01534527 moderate  
## 15 74.4 0.01534527 moderate  
## 16 74.4 0.01534527 moderate  
## 17 74.4 0.01534527 moderate  
## 18 74.4 0.01534527 moderate  
## 19 74.4 0.01534527 moderate  
## 20 74.4 0.01534527 moderate  
## 21 74.4 0.01534527 moderate  
## 22 74.4 0.01534527 moderate  
## 23 74.4 0.01534527 moderate  
## 24 74.4 0.01534527 moderate  
## 25 74.4 0.01534527 moderate  
## 26 74.4 0.01534527 moderate  
## 27 74.4 0.01534527 moderate  
## 28 74.4 0.01534527 moderate  
## 29 74.4 0.01534527 moderate  
## 30 74.4 0.01534527 moderate

BelowMuLifeExp %>% arrange(desc(c(median\_income))) %>% glimpse() %>% tail(30) %>% print()

## Rows: 27,383  
## Columns: 14  
## $ OBJECTID <fct> 142350, 142352, 142353, 142356, 391281, 80520, …  
## $ ZIP5 <fct> 98092, 98092, 98092, 98092, 98092, 98155, 98155…  
## $ median\_income <int> 113424, 113424, 113424, 113424, 111563, 98806, …  
## $ KCA\_ACRES <dbl> 10.4699954, 10.7899908, 10.0299816, 12.4622130,…  
## $ GEO\_ID\_GRP <fct> 530330316033, 530330316033, 530330316033, 53033…  
## $ GEO\_ID\_TRT <fct> 53033031603, 53033031603, 53033031603, 53033031…  
## $ Shape\_Area <dbl> 457067.822, 468048.783, 435588.331, 540368.511,…  
## $ limitedEng\_pct <dbl> 0.02806019, 0.02806019, 0.02806019, 0.02806019,…  
## $ disabled\_pct <dbl> 0.13079925, 0.13079925, 0.13079925, 0.13079925,…  
## $ disabled\_uninsured\_pct <dbl> 0.03902298, 0.03902298, 0.03902298, 0.03902298,…  
## $ foodstamp\_pct <dbl> 0.05368036, 0.05368036, 0.05368036, 0.05368036,…  
## $ LifeExpectancy <dbl> 75.5, 75.5, 75.5, 75.5, 74.9, 74.4, 74.4, 74.4,…  
## $ life\_exp\_pctle <dbl> 0.04092072, 0.04092072, 0.04092072, 0.04092072,…  
## $ displacement\_risk <fct> low, low, low, low, moderate, moderate, moderat…  
## OBJECTID ZIP5 median\_income KCA\_ACRES GEO\_ID\_GRP GEO\_ID\_TRT  
## 27354 628124 98002 32283 0.6526630 530330305011 53033030501  
## 27355 628125 98002 32283 0.4227732 530330305011 53033030501  
## 27356 628126 98001 32283 1.0295684 530330305012 53033030501  
## 27357 628127 98002 32283 0.8634986 530330305012 53033030501  
## 27358 628128 98002 32283 0.6198347 530330305011 53033030501  
## 27359 628129 98002 32283 0.5303030 530330305011 53033030501  
## 27360 628130 98002 32283 1.0189394 530330305011 53033030501  
## 27361 628131 98002 32283 0.8723600 530330305011 53033030501  
## 27362 628132 98002 32283 0.3012626 530330305011 53033030501  
## 27363 628133 98002 32283 1.5293618 530330305011 53033030501  
## 27364 628134 98002 32283 1.1867768 530330305012 53033030501  
## 27365 628135 98002 32283 0.6382691 530330305012 53033030501  
## 27366 628136 98002 32283 6.1999770 530330305011 53033030501  
## 27367 628137 98002 32283 2.8932048 530330305011 53033030501  
## 27368 628138 98002 32283 0.8264463 530330305011 53033030501  
## 27369 628139 98002 32283 0.9403352 530330305011 53033030501  
## 27370 628140 98002 32283 0.6311295 530330305011 53033030501  
## 27371 628141 98002 32283 0.7109275 530330305011 53033030501  
## 27372 628142 98002 32283 0.9223140 530330305011 53033030501  
## 27373 628143 98002 32283 1.5410239 530330305011 53033030501  
## 27374 628144 98002 32283 0.6467631 530330305011 53033030501  
## 27375 628145 98002 32283 0.6198347 530330305012 53033030501  
## 27376 628146 98001 32283 14.6807622 530330305011 53033030501  
## 27377 628147 98002 32283 15.6121442 530330305011 53033030501  
## 27378 628148 98002 32283 86.8600092 530330305011 53033030501  
## 27379 628149 98002 32283 0.7024793 530330305011 53033030501  
## 27380 628150 98002 32283 2.3936180 530330305011 53033030501  
## 27381 628151 98002 32283 1.9496786 530330305011 53033030501  
## 27382 628152 98002 32283 0.6198347 530330305012 53033030501  
## 27383 628153 98002 32283 0.4672176 530330305011 53033030501  
## Shape\_Area limitedEng\_pct disabled\_pct disabled\_uninsured\_pct  
## 27354 28427.20 0.05457746 0.2672616 0  
## 27355 20165.92 0.05457746 0.2672616 0  
## 27356 44975.48 0.05457746 0.2672616 0  
## 27357 37573.71 0.05457746 0.2672616 0  
## 27358 27000.36 0.05457746 0.2672616 0  
## 27359 26231.71 0.05457746 0.2672616 0  
## 27360 43631.61 0.05457746 0.2672616 0  
## 27361 37841.93 0.05457746 0.2672616 0  
## 27362 13124.22 0.05457746 0.2672616 0  
## 27363 66618.93 0.05457746 0.2672616 0  
## 27364 51695.77 0.05457746 0.2672616 0  
## 27365 27803.59 0.05457746 0.2672616 0  
## 27366 268451.27 0.05457746 0.2672616 0  
## 27367 123959.06 0.05457746 0.2672616 0  
## 27368 36001.09 0.05457746 0.2672616 0  
## 27369 40960.93 0.05457746 0.2672616 0  
## 27370 27493.34 0.05457746 0.2672616 0  
## 27371 30481.18 0.05457746 0.2672616 0  
## 27372 41010.99 0.05457746 0.2672616 0  
## 27373 67127.38 0.05457746 0.2672616 0  
## 27374 28718.33 0.05457746 0.2672616 0  
## 27375 26930.63 0.05457746 0.2672616 0  
## 27376 639494.22 0.05457746 0.2672616 0  
## 27377 670004.32 0.05457746 0.2672616 0  
## 27378 3895667.04 0.05457746 0.2672616 0  
## 27379 30601.17 0.05457746 0.2672616 0  
## 27380 103865.66 0.05457746 0.2672616 0  
## 27381 89163.03 0.05457746 0.2672616 0  
## 27382 26999.83 0.05457746 0.2672616 0  
## 27383 20573.41 0.05457746 0.2672616 0  
## foodstamp\_pct LifeExpectancy life\_exp\_pctle displacement\_risk  
## 27354 0.1945422 72 0.00255754 high  
## 27355 0.1945422 72 0.00255754 high  
## 27356 0.1945422 72 0.00255754 high  
## 27357 0.1945422 72 0.00255754 high  
## 27358 0.1945422 72 0.00255754 high  
## 27359 0.1945422 72 0.00255754 high  
## 27360 0.1945422 72 0.00255754 high  
## 27361 0.1945422 72 0.00255754 high  
## 27362 0.1945422 72 0.00255754 high  
## 27363 0.1945422 72 0.00255754 high  
## 27364 0.1945422 72 0.00255754 high  
## 27365 0.1945422 72 0.00255754 high  
## 27366 0.1945422 72 0.00255754 high  
## 27367 0.1945422 72 0.00255754 high  
## 27368 0.1945422 72 0.00255754 high  
## 27369 0.1945422 72 0.00255754 high  
## 27370 0.1945422 72 0.00255754 high  
## 27371 0.1945422 72 0.00255754 high  
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## 27373 0.1945422 72 0.00255754 high  
## 27374 0.1945422 72 0.00255754 high  
## 27375 0.1945422 72 0.00255754 high  
## 27376 0.1945422 72 0.00255754 high  
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## 27378 0.1945422 72 0.00255754 high  
## 27379 0.1945422 72 0.00255754 high  
## 27380 0.1945422 72 0.00255754 high  
## 27381 0.1945422 72 0.00255754 high  
## 27382 0.1945422 72 0.00255754 high  
## 27383 0.1945422 72 0.00255754 high

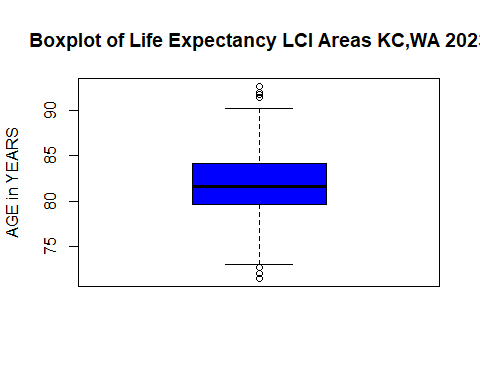
#summary of BelowMuLifeExp  
summary(BelowMuLifeExp) %>% as.array()

## OBJECTID ZIP5 median\_income KCA\_ACRES   
## 190 : 1 98003 :4854 Min. : 32283 Min. : 0.0000   
## 191 : 1 98092 :3771 1st Qu.: 56694 1st Qu.: 0.1676   
## 192 : 1 98002 :3347 Median : 64304 Median : 0.2075   
## 193 : 1 98198 :2933 Mean : 67072 Mean : 1.2944   
## 194 : 1 98001 :1864 3rd Qu.: 79236 3rd Qu.: 0.4343   
## 195 : 1 98032 :1541 Max. :113424 Max. :137.4352   
## (Other):27377 (Other):9073 NA's :264   
## GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area limitedEng\_pct   
## 530330292061: 846 53033031202: 2559 Min. : 5 Min. :0.00000   
## 530330305011: 794 53033030901: 1415 1st Qu.: 7331 1st Qu.:0.04814   
## 530330308022: 770 53033021100: 1396 Median : 9078 Median :0.06215   
## 530330312021: 690 53033029003: 1377 Mean : 57401 Mean :0.09199   
## 530330211001: 635 53033030312: 1249 3rd Qu.: 19132 3rd Qu.:0.14132   
## 530330300052: 609 53033011402: 1246 Max. :9847767 Max. :0.34582   
## (Other) :23039 (Other) :18141   
## disabled\_pct disabled\_uninsured\_pct foodstamp\_pct LifeExpectancy   
## Min. :0.05744 Min. :0.000000 Min. :0.00000 Min. :71.50   
## 1st Qu.:0.10878 1st Qu.:0.001949 1st Qu.:0.06082 1st Qu.:74.40   
## Median :0.12805 Median :0.003925 Median :0.08425 Median :75.20   
## Mean :0.13290 Mean :0.007339 Mean :0.09364 Mean :74.78   
## 3rd Qu.:0.15453 3rd Qu.:0.007614 3rd Qu.:0.12576 3rd Qu.:75.60   
## Max. :0.26726 Max. :0.060963 Max. :0.19454 Max. :75.90   
##   
## life\_exp\_pctle displacement\_risk  
## Min. :0.00000 : 0   
## 1st Qu.:0.01535 high : 9003   
## Median :0.03069 low : 2563   
## Mean :0.03176 moderate:15817   
## 3rd Qu.:0.04604   
## Max. :0.06650   
##

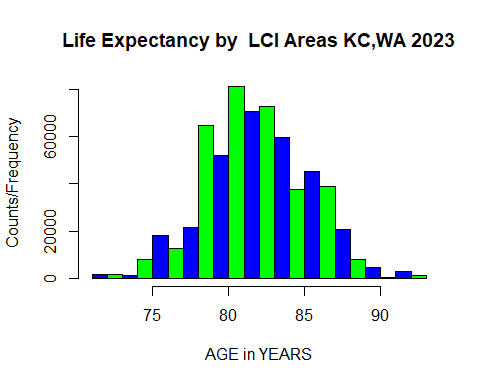
summary(BelowMuLifeExp) %>% as.array() %>% print()

## OBJECTID ZIP5 median\_income KCA\_ACRES   
## 190 : 1 98003 :4854 Min. : 32283 Min. : 0.0000   
## 191 : 1 98092 :3771 1st Qu.: 56694 1st Qu.: 0.1676   
## 192 : 1 98002 :3347 Median : 64304 Median : 0.2075   
## 193 : 1 98198 :2933 Mean : 67072 Mean : 1.2944   
## 194 : 1 98001 :1864 3rd Qu.: 79236 3rd Qu.: 0.4343   
## 195 : 1 98032 :1541 Max. :113424 Max. :137.4352   
## (Other):27377 (Other):9073 NA's :264   
## GEO\_ID\_GRP GEO\_ID\_TRT Shape\_Area limitedEng\_pct   
## 530330292061: 846 53033031202: 2559 Min. : 5 Min. :0.00000   
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## Median :0.03069 low : 2563   
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## 3rd Qu.:0.04604   
## Max. :0.06650   
##

# Boxplot of Life Expectancy LCI Areas   
# KC,WA 2023  
#   
boxplot(x=c(df$LifeExpectancy),col="blue",fill='blue',main = c("Boxplot of Life Expectancy LCI Areas KC,WA 2023"),  
 ylab=c("AGE in YEARS"),xlab=c())



hst<-hist(df$LifeExpectancy,col=c("blue","green"),main = c("Life Expectancy by LCI Areas KC,WA 2023"),  
 xlab=c("AGE in YEARS"),ylab=c("Counts/Frequency"))



#  
#  
#  
628174\*47

## [1] 29524178

summary(df$LifeExpectancy)

## Min. 1st Qu. Median Mean 3rd Qu. Max. NA's   
## 71.50 79.60 81.60 81.89 84.10 92.60 3050