

# LCI\_Areas\_HighRskPopulation\_LifeExp

AAABatt

2023-04-25

```
#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
###
library(tidyverse)

## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.2      v readr      2.1.4
## v forcats    1.0.0      v stringr    1.5.0
## v ggplot2    3.4.2      v tibble     3.2.1
## v lubridate  1.9.2      v tidyr      1.3.0
## v purrr      1.0.1
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x 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)
```

```

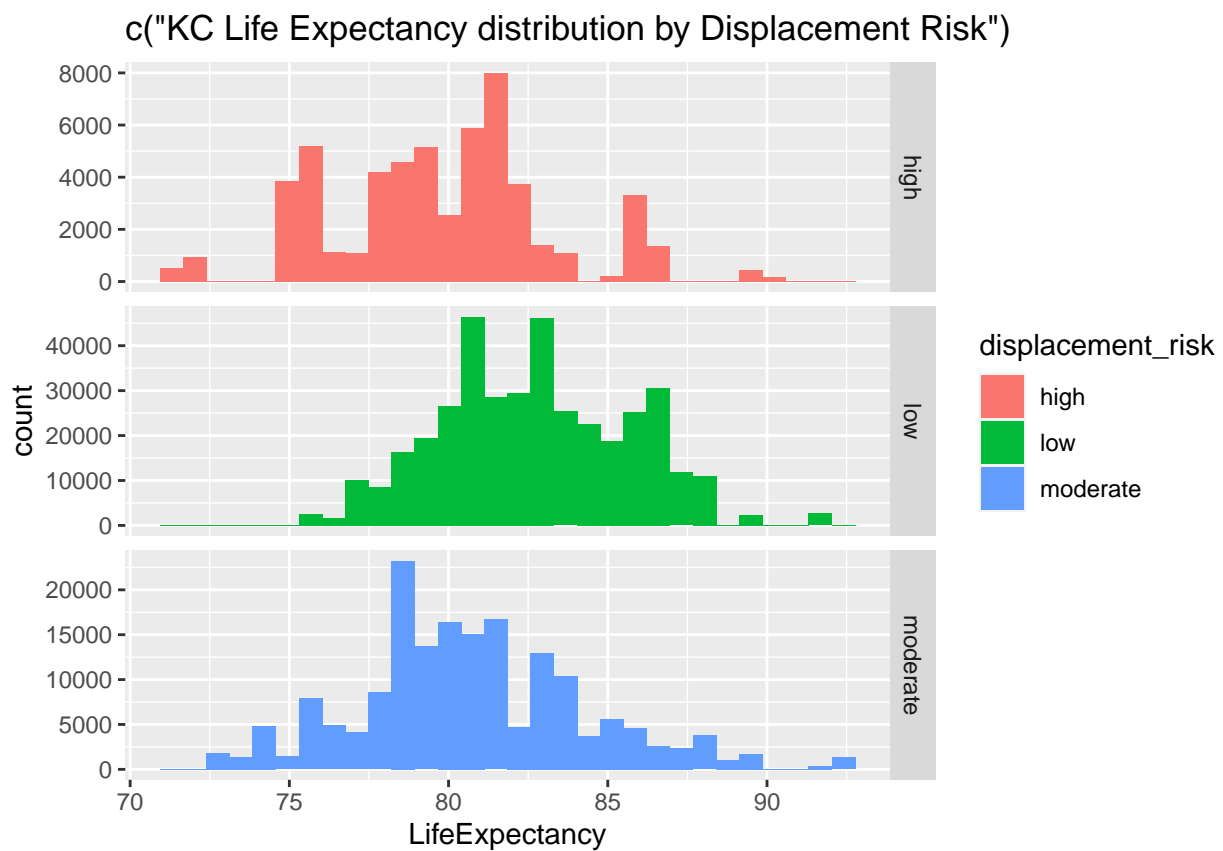
HighDisplcRsk<-filter(df,
  displacement_risk==c("high"))

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")) +
  geom_histogram(bins = 30,show.legend = T)+
  facet_grid(displacement_risk~.,scales="free")
print(hstoplt)

```

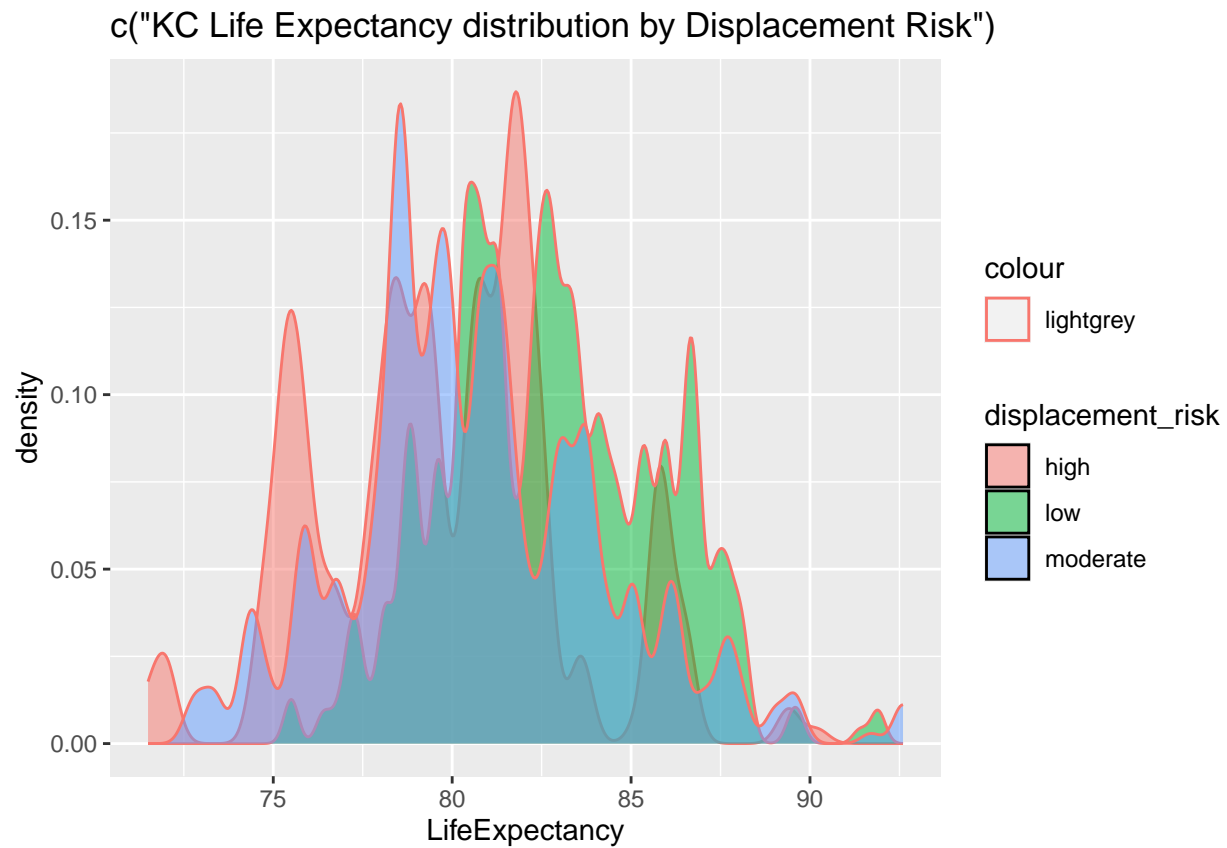


```

#
#
#
#
#Density plots for Life Expectancy distribution by Displacement Group KC

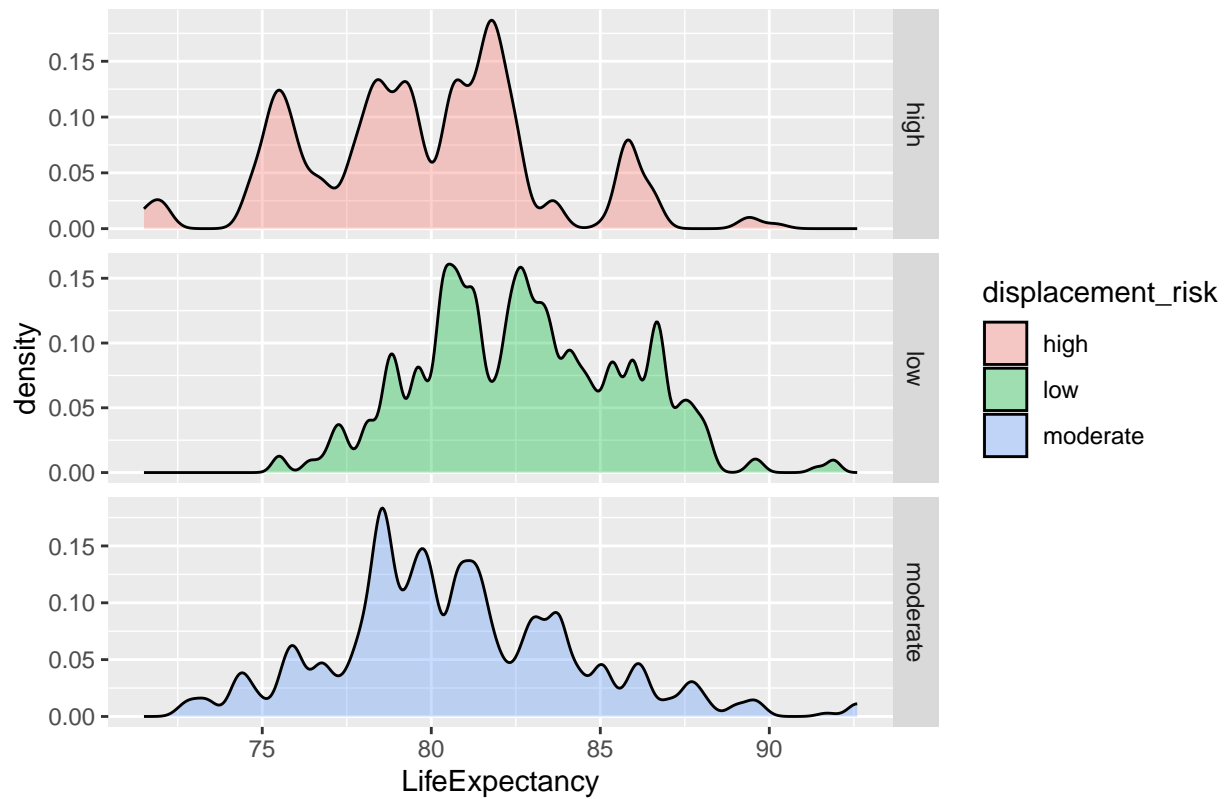
```

```
dnstyplt<-df %>% na.omit() %>% ggplot(aes(x = LifeExpectancy,
colour="lightgrey",fill=displacement_risk,
title=c("KC Life Expectancy distribution by Displacement Risk")) +
geom_density(alpha=0.5)
print(dnstyplt)
```

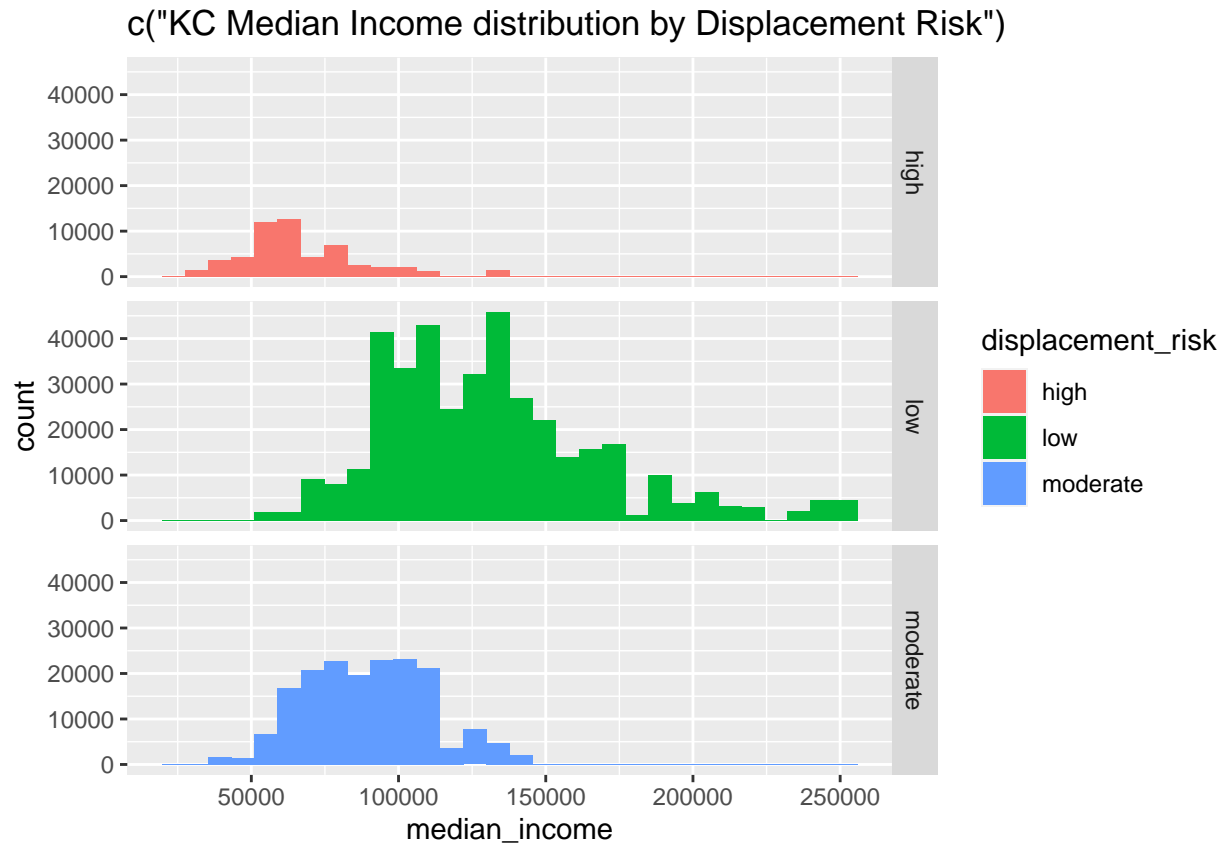


```
#
dnstyplt1<-df %>% na.omit() %>% ggplot(aes(x = LifeExpectancy,
fill=displacement_risk,
title=c("KC Life Expectancy distribution by Displacement Risk")) +
geom_density(alpha=0.35)+
facet_grid(displacement_risk~.,scales="free")
print(dnstyplt1)
```

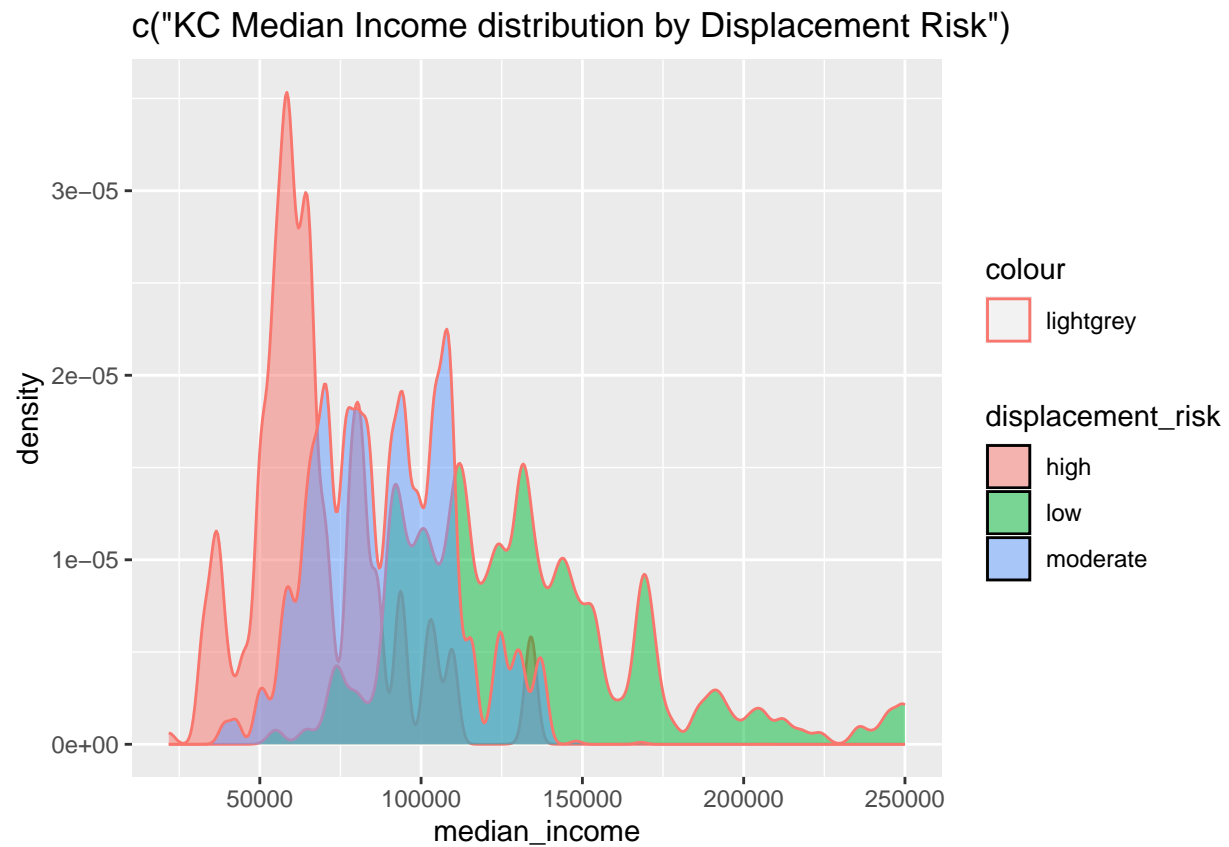
c("KC Life Expectancy distribution by Displacement Risk")



```
#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")) +
  geom_histogram(bins = 30,show.legend = T)+
  facet_grid(displacement_risk~.)
print(hstopltM)
```

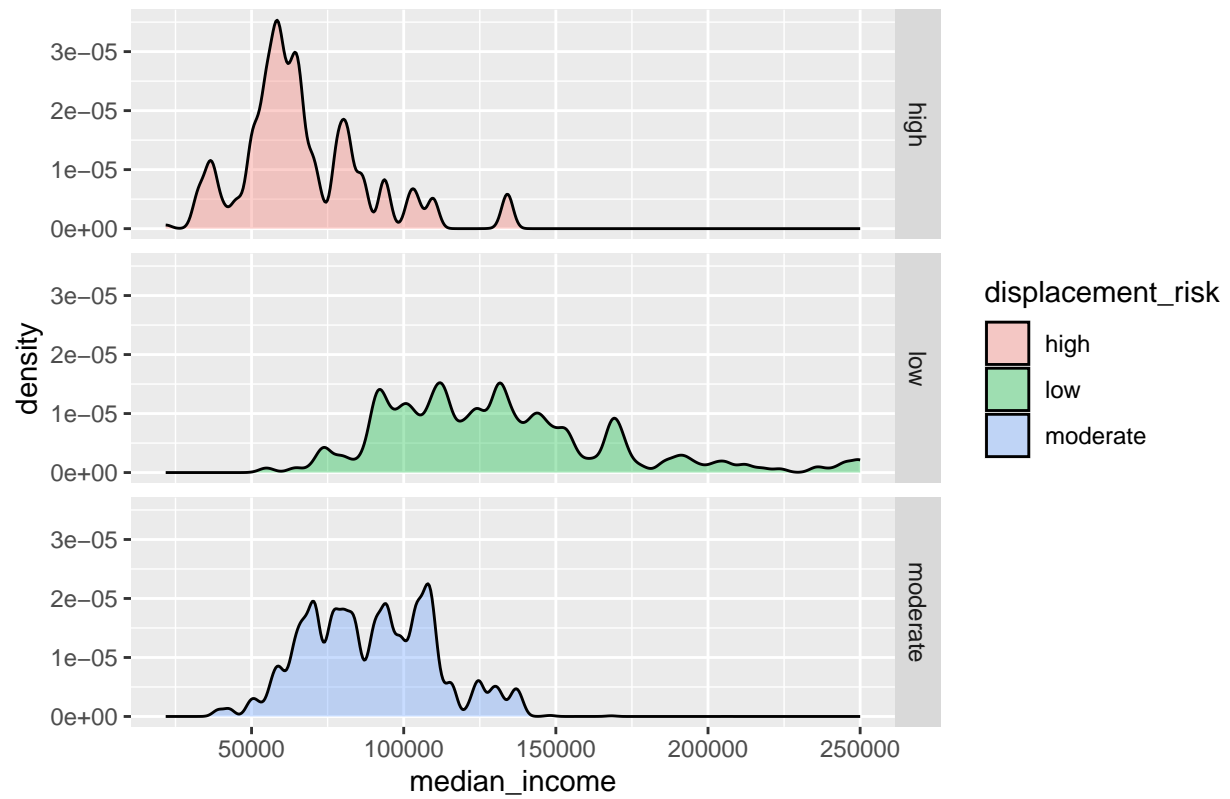


```
#
#
#
#
#Density plots
dnstyp1tM<-df %>% na.omit() %>% ggplot(aes(x = median_income,
      colour="lightgrey",fill=displacement_risk,
      title=c("KC Median Income distribution by Displacement Risk")) +
  geom_density(alpha=0.5)
print(dnstyp1tM)
```



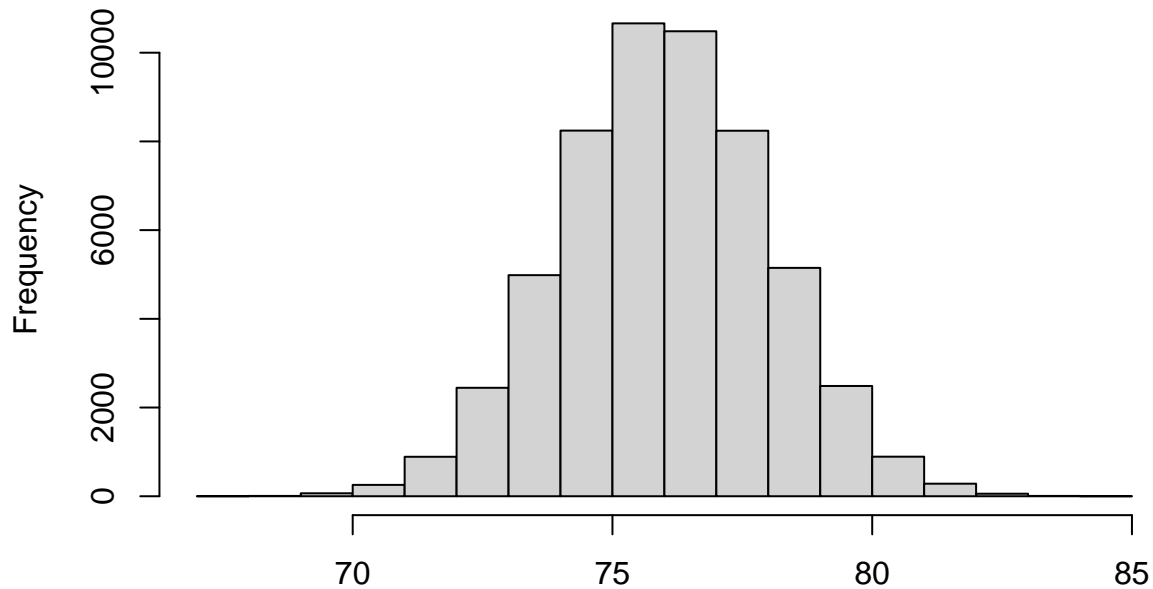
```
#
dnstyp1tM1<-df %>% na.omit() %>% ggplot(aes(x = median_income,
                                             fill=displacement_risk,
                                             title=c("KC Median Income distribution by Displacement Risk"))) +
  geom_density(alpha=0.35)+
  facet_grid(displacement_risk~.,)
print(dnstyp1tM1)
```

c("KC Median Income distribution by Displacement Risk")



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

**Histogram of .**



```
##Student's T-test for testing difference of means between sample and population
#assumes normal distribution, independence, and as an, a priori, declares the alpha (significance level)
#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
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_pctl	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,~
## $ 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,~
## $ 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	0.00000000	0.03655728	0.00143926		
##	56044	22110.310	0.00000000	0.03655728	0.00143926		
##	56045	68685.927	0.00000000	0.03655728	0.00143926		
##	56046	6998227.286	0.00000000	0.03655728	0.00143926		
##	56047	20830769.463	0.00000000	0.03655728	0.00143926		
##	56048	51218.747	0.00000000	0.03655728	0.00143926		
##	56049	54400.290	0.00000000	0.03655728	0.00143926		
##	56050	98212.405	0.00000000	0.03655728	0.00143926		
##	56051	45961.222	0.00000000	0.03655728	0.00143926		
##	56052	136351.973	0.00000000	0.03655728	0.00143926		
##	56053	8158.324	0.00000000	0.03655728	0.00143926		
##	56054	156852.708	0.00000000	0.03655728	0.00143926		
##	56055	14328.325	0.00000000	0.03655728	0.00143926		
##	56056	16466.486	0.00000000	0.03655728	0.00143926		
##	56057	148552.624	0.00000000	0.03655728	0.00143926		
##	56058	174998.408	0.00000000	0.03655728	0.00143926		
##	56059	249740.575	0.00000000	0.03655728	0.00143926		
##	56060	307677.375	0.00000000	0.03655728	0.00143926		
##	56061	56400.952	0.00000000	0.03655728	0.00143926		
##	56062	44023.749	0.00000000	0.03655728	0.00143926		
##	56063	16274.895	0.00000000	0.03655728	0.00143926		
##	56064	121520.612	0.00000000	0.03655728	0.00143926		
##	56065	9879.074	0.00000000	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
##
##      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_pctl	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_pctl 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> 530330300005, 530330300005, 530330300005, 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
##	27372	0.1945422	72	0.00255754	high
##	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
##	27377	0.1945422	72	0.00255754	high
##	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
```

```
## 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
##
```

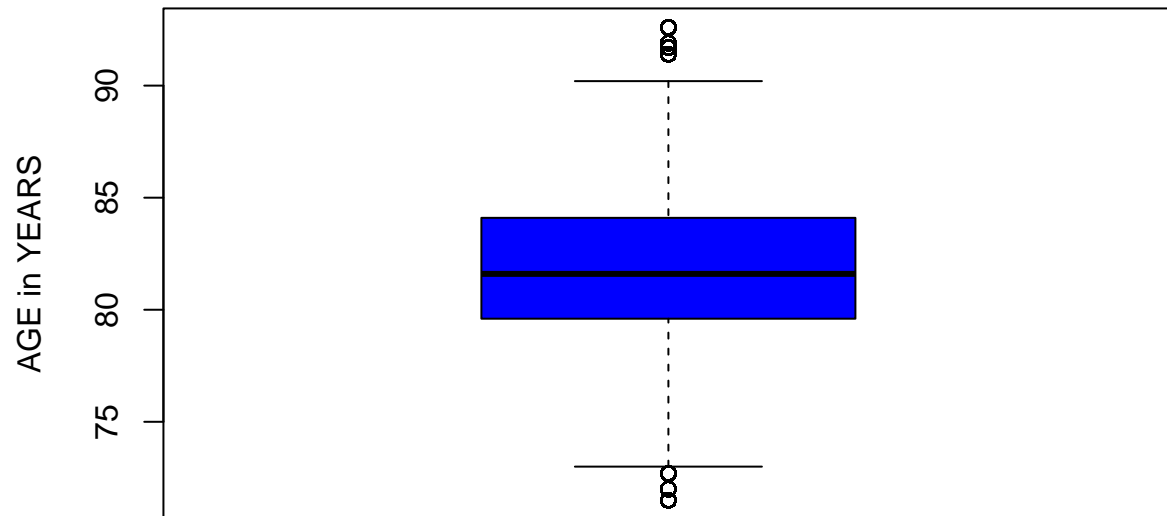
```
# Boxplot of Life Expectancy LCI Areas
```

```
# KC,WA 2023
```

```
#
```

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

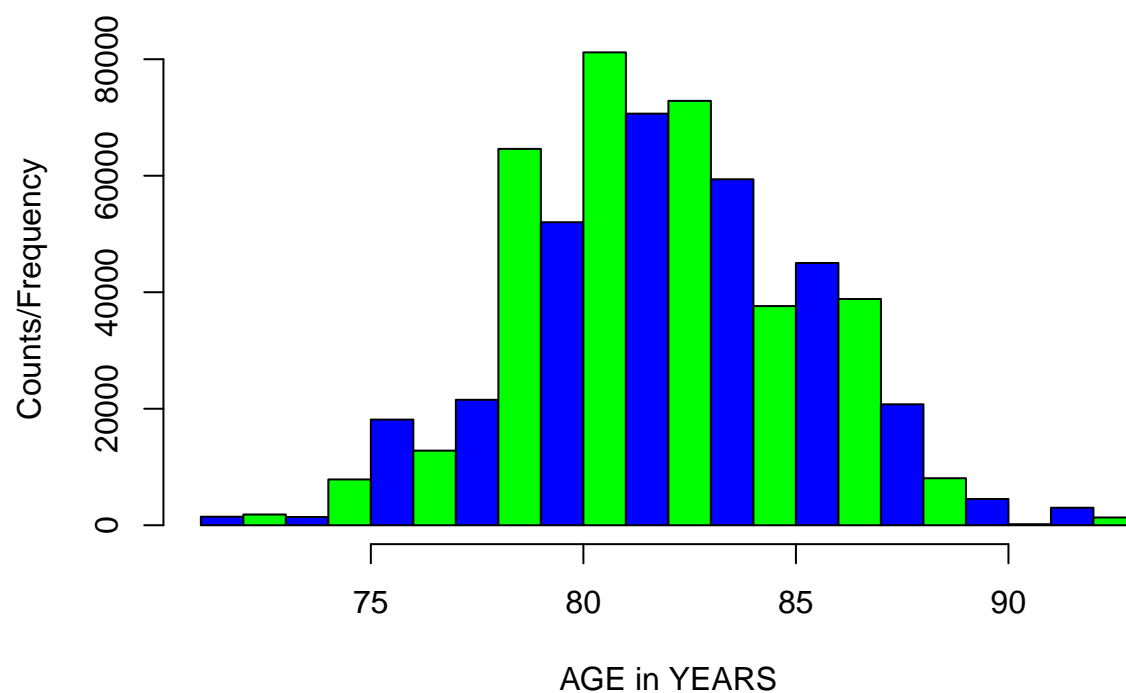
## Boxplot of Life Expectancy LCI Areas KC,WA 2023



```
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"))
```



## Life Expectancy by LCI Areas KC,WA 2023



```
#
#
#
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
```