Proxmap Drafts

2021-07-13

Let's start by importing the sample data:

```
##                                         NAME              ADDRESS      CITY
## 1 NORTH YAVAPAI COMMUNITY HEALTH SERVICES INC   304 W Cedar St\xca  SELIGMAN
## 2                   NATUROPATHS INTERNATIONAL       3011 N WEST ST FLAGSTAFF
## 3                       FSP HEALTH MINISTRIES 1371 E Los Olivos Dr  SAN LUIS
##   STATE  ZIP5
## 1    AZ 86337
## 2    AZ 86004
## 3    AZ 85349
```

```
##                                                       NAME
## 1                       Arizona Deparment of Health Services
## 2 Maricopa County Department of Public Health Administration
## 3                                    Arizona Health Deparment
##               ADDRESS    CITY STATE ZIP.CODE
## 1      150 N 18th Ave Phoenix    AZ    85007
## 2  4041 N Central Ave Phoenix    AZ    85012
## 3 1645 E Roosevelt St Phoenix    AZ    85006
```

```
##                                      LIBNAME                  ADDRESS
## 1 FT. MCDOWELL YAVAPAI NATION TRIBAL LIBRARY 16708 N FORT MCDOWELL RD
## 2               KAIBAB PAIUTE TRIBAL LIBRARY      1 N PIPE SPRINGS RD
## 3                           SAN LUCY LIBRARY               1125 C ST
##            CITY   ZIP
## 1 FORT MCDOWELL 85264
## 2      FREDONIA 86022
## 3     GILA BEND 85337
```

The non-ASCII characters (I see one in ADDRESS) are going to be a problem so let's convert now.

NAME	ADDRESS	CITY	STATE	ZIP5
NORTH YAVAPAI COMMUNITY HEALTH SERVICES INC	304 W Cedar St	SELIGMAN	AZ	86337
NATUROPATHS INTERNATIONAL	3011 N WEST ST	FLAGSTAFF	AZ	86004
FSP HEALTH MINISTRIES	1371 E Los Olivos Dr	SAN LUIS	AZ	85349

No need to have the data in separate tables so let's combine them.
But first, let's create a new variable to track the type of site.

```
##                                         NAME        ADDRESS     CITY STATE
## 1 NORTH YAVAPAI COMMUNITY HEALTH SERVICES INC 304 W Cedar St SELIGMAN    AZ
```

```
##     ZIP        type
## 1 86337 Free Clinic
```

And now let's check our data types and get rid of inconsistent capitalization:

```
## # A tibble: 60 x 6
##    NAME                          ADDRESS          CITY       STATE ZIP   type
##    <chr>                         <chr>            <chr>      <chr> <chr> <fct>
##  1 North Yavapai Community Hea~ 304 W Cedar St   Seligman   AZ    86337 Free Cl~
##  2 Naturopaths International    3011 N West St   Flagstaff  AZ    86004 Free Cl~
##  3 Fsp Health Ministries        1371 E Los Oliv~ San Luis   AZ    85349 Free Cl~
##  4 Clinica Central              1515 E Missouri~ Phoenix    AZ    85014 Free Cl~
##  5 Black Canyon Community Heal~ 19251 E Oasis Dr Black Cyn~ AZ    85324 Free Cl~
##  6 Tucson Community Cares Inc   Po Box 15146     Tucson     AZ    85708 Free Cl~
##  7 Sun Health Services          Po Box 6030      Sun City ~ AZ    85376 Free Cl~
##  8 West Thunderbird Community ~ 4530 W Thunderb~ Glendale   AZ    85306 Free Cl~
##  9 Primacy Health Group Founda~ 346 E Palm Ln    Phoenix    AZ    85004 Free Cl~
## 10 Alternative Intervention Re~ 705 S El Dorado  Mesa       AZ    85202 Free Cl~
## # ... with 50 more rows
```

Ok. Now that the data are neat, we can get on to the fun stuff...

There are a couple of simple ways to map the great state of Arizona:

```
usmap <- states() # Download USA maps deom US Census Bureau
azmap <- usmap[usmap$NAME=="Arizona",] # Limit ourselves to AZ
plot(azmap, max.plot=1)
```

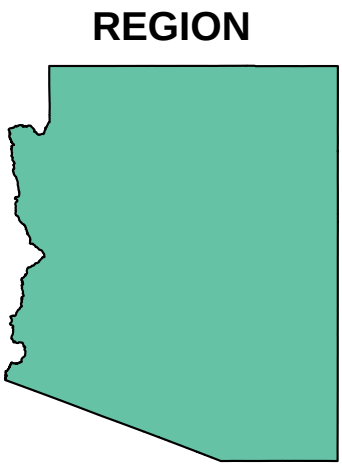

Figure 1: Simple map of Arizona

```
azzipsmap <- zctas(year=2010,state="Arizona")
plot(azzipsmap, max.plot=1)
```

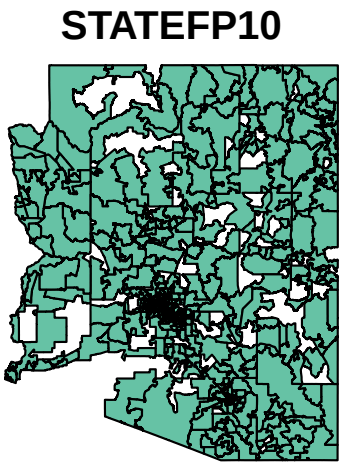

Figure 2: Map of Arizona ZIP codes

It gets even more interesting (Bless the US Census Bureau!)

```
nat <- native_areas()
AZnat <- sf::st_intersection(azmap,nat)
plot(AZnat, max.plot=1)
```

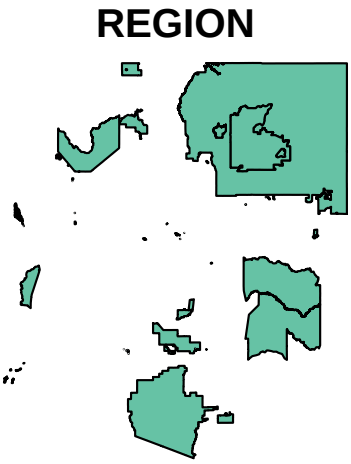

Figure 3: Native Areas in Arizona

```
tribcen <- tribal_census_tracts()
AZtrib <- sf::st_intersection(azmap,tribcen)
plot(AZtrib, max.plot=1)
```

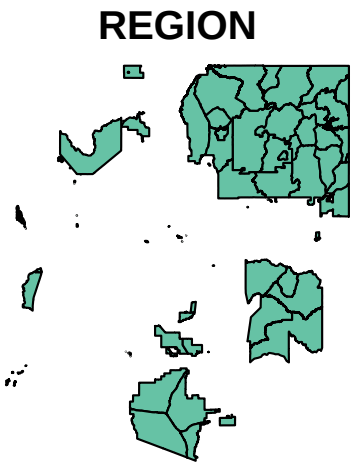

Figure 4: Tribal Census tracts in Arizona

To be continued!!!