

Mapping more data

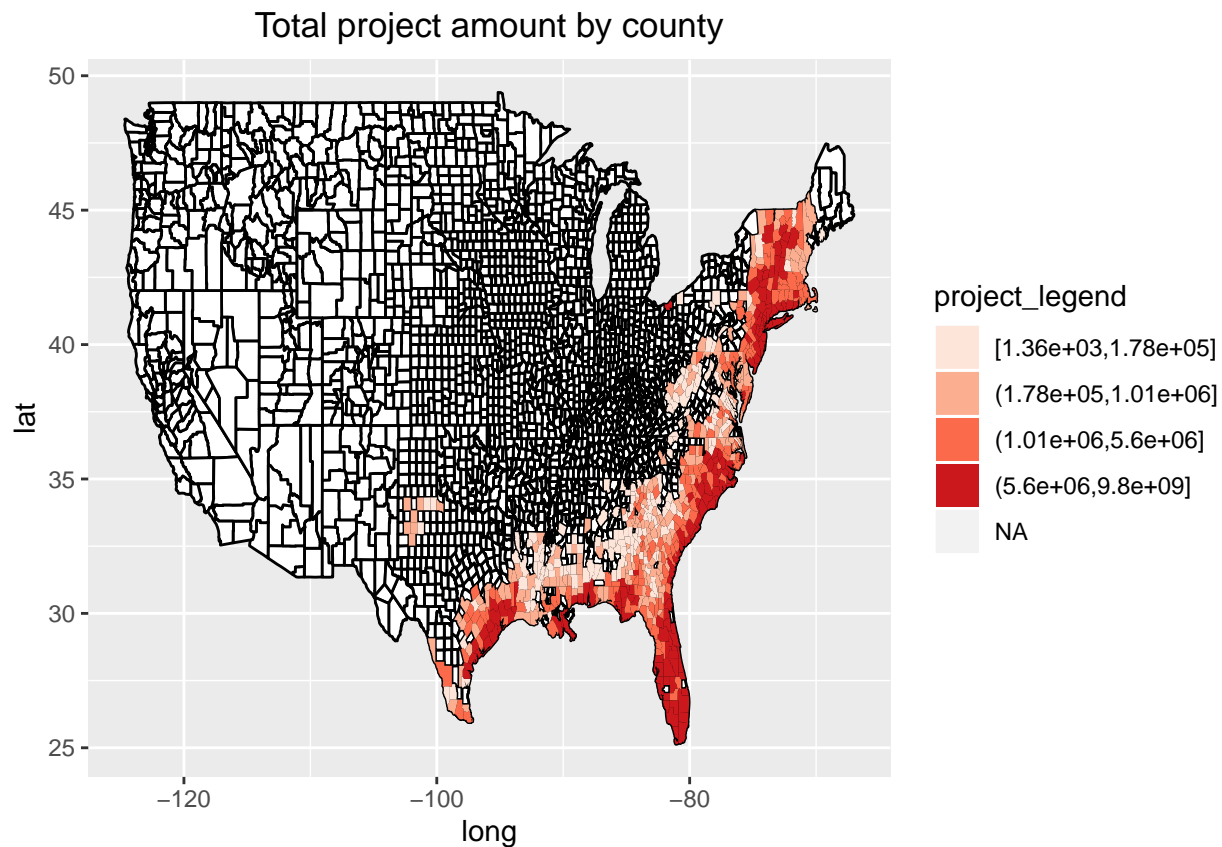
Haoyu Li

11/8/2020

```
damage<-read.csv("PublicAssistanceFundedProjectsDetails.csv")
damage_hurricane<-damage%>%filter(incidentType=="Hurricane")
damage_hurricane$declarationDate<-as.Date(damage_hurricane$declarationDate)
damage_hurricane<-damage_hurricane%>%filter(declarationDate>="2009-01-01"&declarationDate<="2018-12-31")

#data cleaning
county<-map_data("county")
county_state<-damage_hurricane%>%group_by(state,county)%>%summarise(total_project=sum(projectAmount),total_project_legend=project_legend)
county_state$county<-tolower(county_state$county)
county_state$state<-tolower(county_state$state)
colnames(county_state)[1]<-"region"
colnames(county_state)[2]<-"subregion"
#join county map to current hurricane map
county%>%right_join(county_state,by=c("region","subregion"))->total_map
#total_map<-total_map%>%group_by(subregion,group)%>%summarise(long=mean(long),lat=mean(lat),total_project=total_project)

#making maps for total project
total_map$project_legend<-total_map$total_project%>%cut(breaks=c(1.356e+03,1.781e+05,1.012e+06,5.603e+06))
ggplot()+
  geom_polygon(data=county,aes(long,lat,group=group),colour="black",fill="white")+
  geom_polygon(data=total_map,aes(long,lat,group=group,fill=project_legend))+
  scale_fill_brewer(palette="Reds")+
  ggtitle("Total project amount by county")+
  theme(plot.title=element_text(hjust=0.5))
```



```
#scale_fill_continuous(low='white',high='blue',name='project amount')
```

```
#for total federal share obligated
```

```
total_map$federal_legend<-total_map$total_federal%>%cut(breaks=c(1.356e+03,1.781e+05,1.012e+06,5.603e+06))
```

```
ggplot()+
```

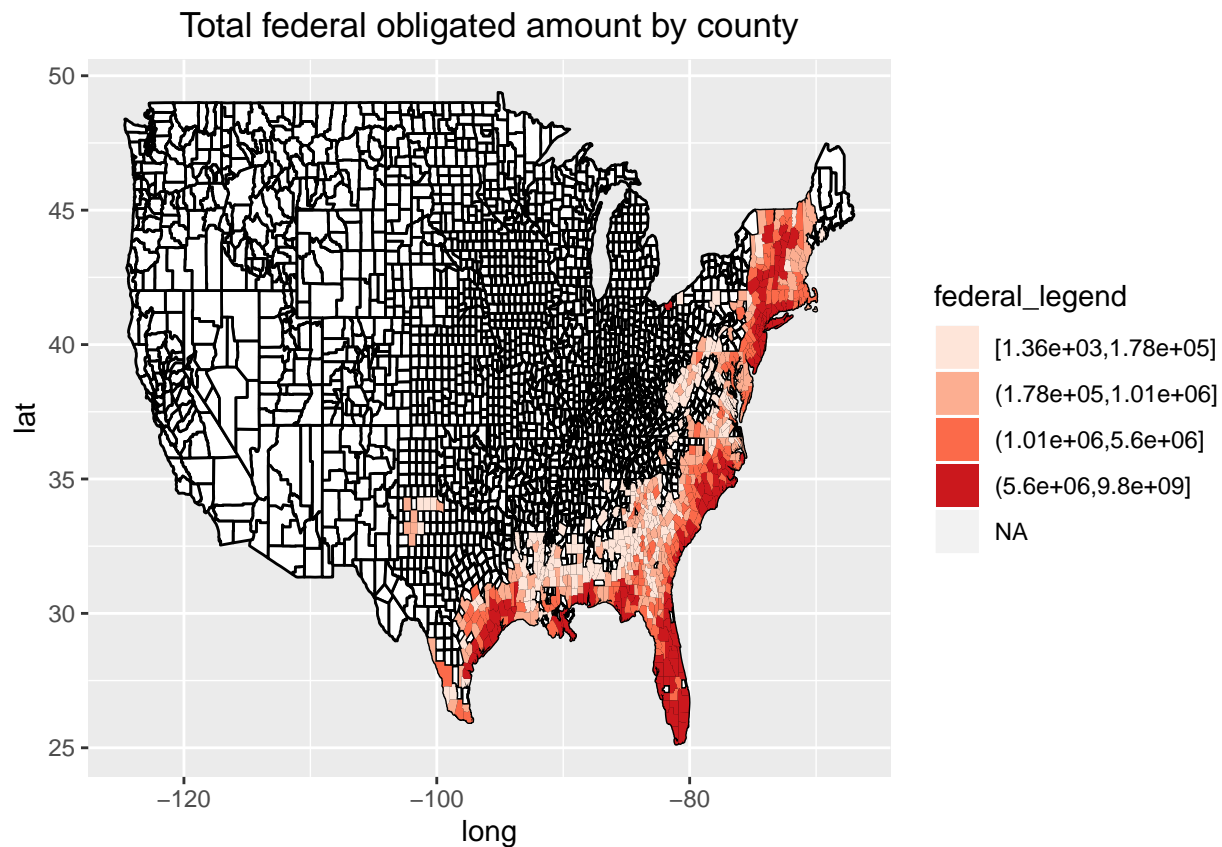
```
  geom_polygon(data=county,aes(long,lat,group=group),colour="black",fill="white")+
```

```
  geom_polygon(data=total_map,aes(long,lat,group=group,fill=federal_legend))+
```

```
  scale_fill_brewer(palette="Reds")+
```

```
  ggtitle("Total federal obligated amount by county")+
```

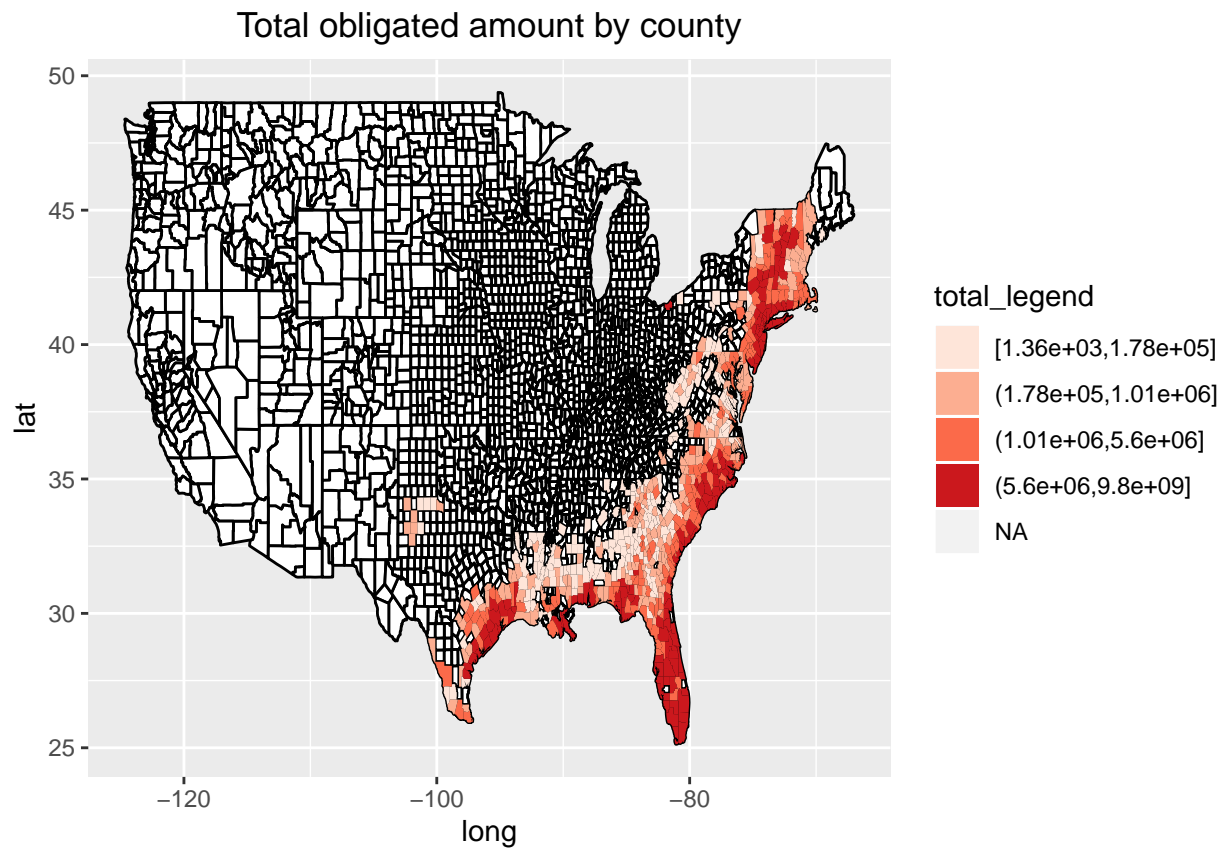
```
  theme(plot.title=element_text(hjust=0.5))
```



```
#scale_fill_continuous(low='white',high='blue',name='project amount')
```

```
#for total obligated
```

```
total_map$total_legend<-total_map$total_total%>%cut(breaks=c(1.356e+03,1.781e+05,1.012e+06,5.603e+06,9.8e+09))
ggplot()+
  geom_polygon(data=county,aes(long,lat,group=group),colour="black",fill="white")+
  geom_polygon(data=total_map,aes(long,lat,group=group,fill=total_legend))+
  scale_fill_brewer(palette="Reds")+
  ggtitle("Total obligated amount by county")+
  theme(plot.title=element_text(hjust=0.5))
```



```
#scale_fill_continuous(low='white',high='blue',name='project amount')
```