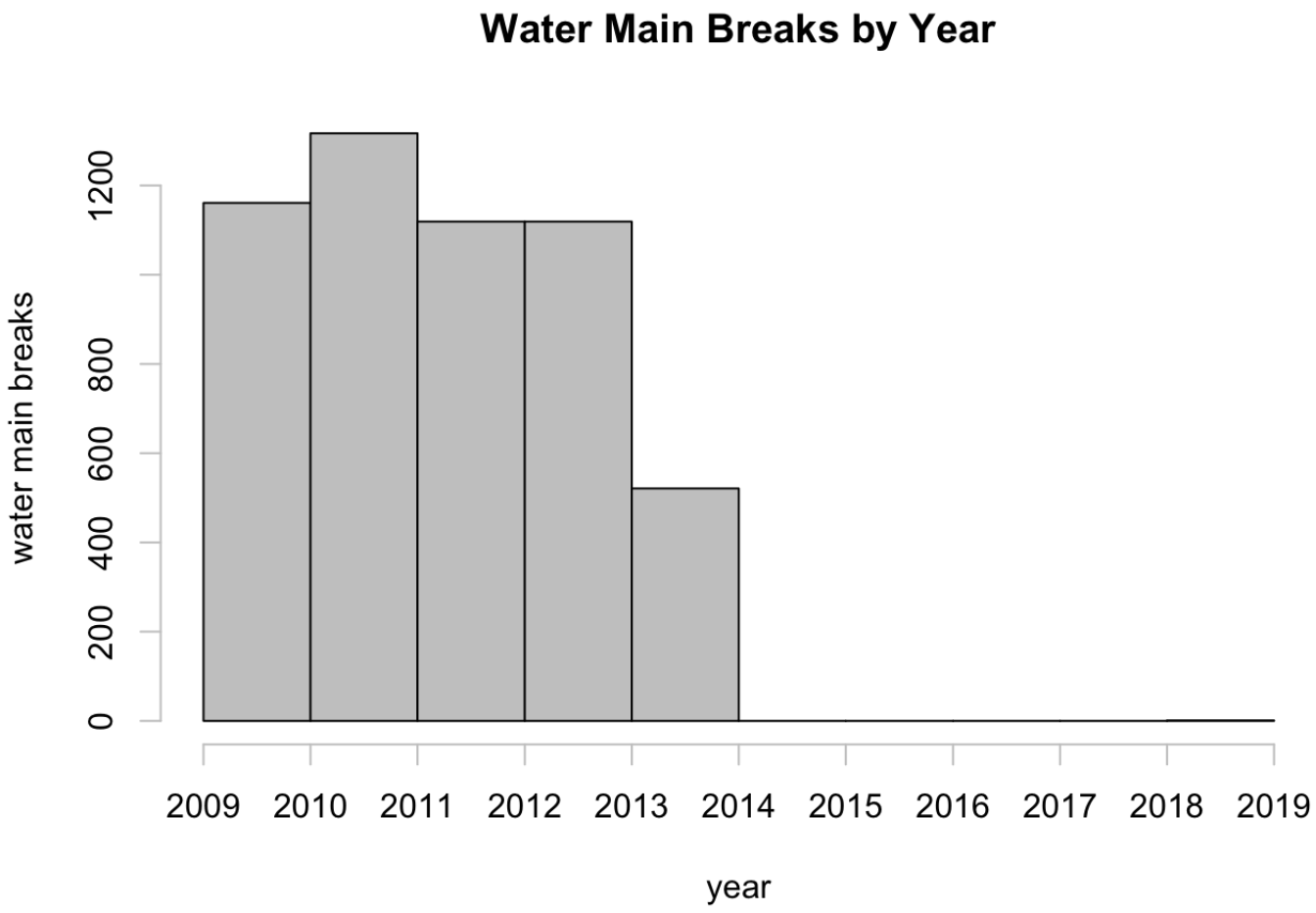
Water Main Data

Here are three graphs that help break down our water main data. Here's how the pipes broke, by year:

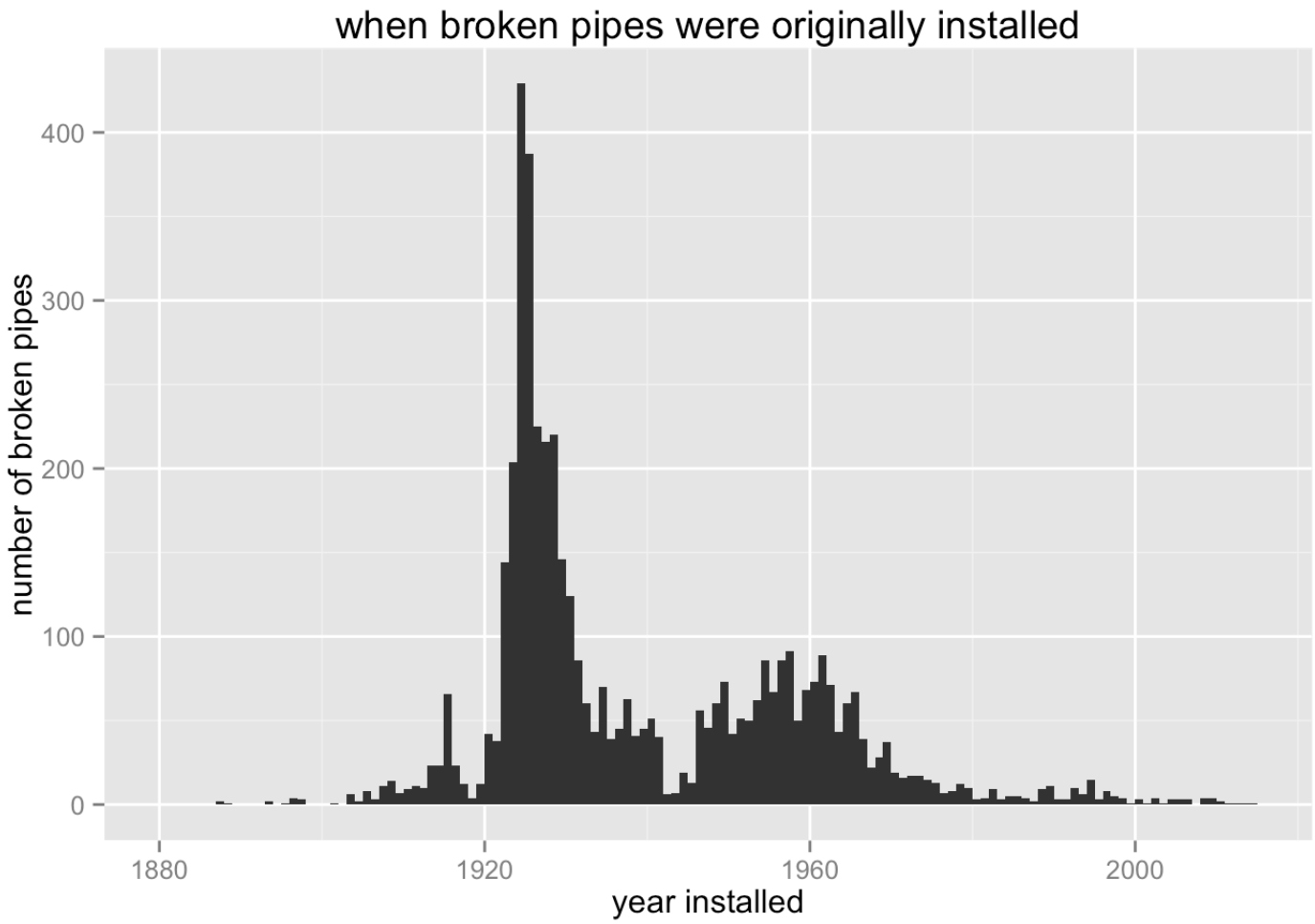


…and it's WAY down this year (though this year only gets to early November in the data). Wonder why.

This is a little confusing to look at, but it's basically saying that four of the six biggest days for pipe breaks came in early December 2011. I checked the weather back then, and it wasn't raining…so what happened?

```
## 12/06/11 12/08/11 01/02/13 12/07/11 12/09/11 01/03/12 12/31/12 01/10/11
##       21       21       19       18       18       17       17       16
## 01/13/11  (Other)
##       16     5075
```

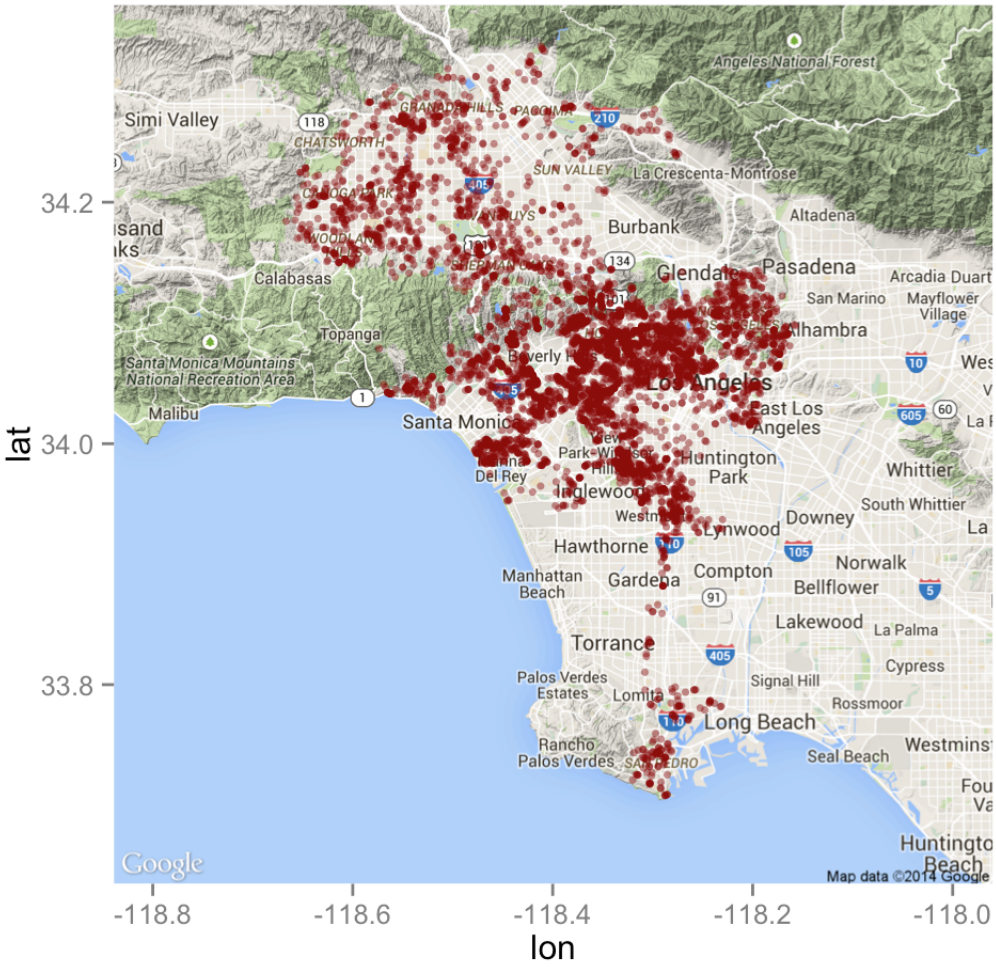
Here's when those pipes originally broke. Notice that LOTS of them are from the roaring 20's; aging infrastructure seems to be at the heart of the issue



And here's where they broke, the deeper red means that more reports of broken pipes from that area. Should give you a rough idea of locations (you can ignore the notes before the map)

```
## Map from URL : http://maps.googleapis.com/maps/api/staticmap?center=34,-118.4&zoom=10&size
=%20640x640&scale=%202&maptype=terrain&sensor=false
## Google Maps API Terms of Service : http://developers.google.com/maps/terms
```

```
## Warning: Removed 345 rows containing missing values (geom_point).
```


lat
34.2
34.0
33.8
-118.8
-118.6
-118.4
-118.2
-118.0
lon
Angeles National Forest
Simi Valley
CHATSWORTH
SUN VALLEY
La Crescenta-Montrose
Altadena
Burbank
Glendale
Pasadena
Arcadia
San Marino
Mayflower Village
Alhambra
Calabasas
Topanga
Santa Monica Mountains National Recreation Area
Malibu
Santa Monica
Los Angeles
East Los Angeles
Huntington Park
Whittier
South Whittier
Downey
Lynwood
Inglewood
Hawthorne
Manhattan Beach
Gardena
Compton
Norwalk
Bellflower
Lakewood
La Palma
Torrance
Cypress
Palos Verdes Estates
Lomita
Signal Hill
Rossmoor
Long Beach
Rancho Palos Verdes
Seal Beach
Google
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